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OFFICE OF WEST VIRGINIA SECRETARY OF STATE

NOTICE OF AGENCY ADOPTION OF A PROCEDURAL OR INTERPRETIVE RULE OR A LEGISLATIVE RULE EXEMPT FROM LEGISLATIVE REVIEW

AGENCY: West Virginia Board of Education TITLE NUMBER: 126

CITE AUTHORITY: W.Va. Const., Article XII, §2 and W.Va. Code §18-2-5

RULE TYPE: PROCEDURAL _____ INTERPRETIVE _____

EXEMPT LEGISLATIVE RULE X

CITE STATUTE(s) GRANTING EXEMPTION FROM LEGISLATIVE REVIEW
W.Va. Code §§29A-3B-1, et seq.; W.Va. Board of Education v. Hechler 180 W.Va. 451; 376 S.E.2d 839 (1988)

AMENDMENT TO AN EXISTING RULE: YES X, NO ____

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 44

TITLE OF RULE BEING AMENDED: Instructional Goals and Objectives for West Virginia Schools (2520)

IF NO, SERIES NUMBER OF NEW RULE BEING ADOPTED: _____

TITLE OF RULE BEING ADOPTED: _____

THE ABOVE RULE IS HEREBY ADOPTED AND FILED WITH THE SECRETARY OF STATE. THE EFFECTIVE DATE OF THIS RULE IS August 20, 1997.

Cynthia E. Evans

$2.60 (w/out manual)
$75.00 (w/manual)

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TITLE 126
LEGISLATIVE RULE
BOARD OF EDUCATION

SERIES 44
INSTRUCTIONAL GOALS AND OBJECTIVES FOR WEST VIRGINIA SCHOOLS (2520)

§126-44-1. General.

1.1. Scope. -- West Virginia Board of Education Policy 2520 provides a definition of, a delivery system for, and an assessment and accountability system for, a thorough and efficient education for West Virginia public school students. This policy defines the instructional goals and objectives for the programs of study required by Policy 2520 and establishes a standardized format for them.

1.2. Authority. -- W.Va. Constitution, Article XII, §2, and W.Va. Code §18-2-5.

1.3. Filing Date. -- July 21, 1997.

1.4. Effective Date. -- August 20, 1997.

1.5. Repeal of former rule. -- This legislative rule repeals and replaces WV 126CSR44 (Policy 2520) and repeals WV 126CSR44A (Policy 2520.06), WV 126CSR44B (Policy 2520.01) and WV 126CSR44F (Policy 2520.10).

§126-44-2. Purpose and Format.

2.1. This policy defines the instructional goals and objectives for the programs of study required by Policy 2520 in English language arts, mathematics, science, social studies, health, dance, music, theatre, visual art and geography. The instructional goals and objectives for all other programs of study required by Policy 2520 are being rewritten and will be available as quickly as possible.

2.2. The instructional goals and objectives for all programs of study required by Policy 2520 shall be developed, approved, and published in the format used for the current revision of the instructional goals and objectives for English language arts, mathematics, science, social studies, health, dance, music, theatre, visual art and geography. All of the new instructional goals and objectives will be compiled together into one document.

§126-44-3. Incorporation by Reference.

3.1. A copy of 126CSR44, Instructional Goals and Objectives for West Virginia Schools (Policy 2520), is attached. Copies may be obtained in the Office of the Secretary of State and in the West Virginia Department of Education, Office of Instructional Services.

§126-44-4. Summary of the Instructional Goals and Objectives.

4.1. Summary of the Instructional Goals and Objectives: The West Virginia Board of Education has the responsibility for establishing high quality educational standards pertaining to all education programs (W.Va. Code §18-9A-22). The instructional goals and objectives provide a focus for teachers to teach and students to learn those skills and competencies essential for future success in the workplace or in further education. The document includes: instructional goals for English language arts, mathematics, social studies, science, health, dance, music, theatre, visual art, geography, process/workplace skills; program charts for K-2, 3-4, 5-8, and 9-12; instructional practices for K-12; a document guide; instructional objectives that reflect a rigorous and challenging curriculum, the objectives assessed on the state standardized test, process/workplace objectives and computer/technology objectives for each grade level in each program of study. The K-6 objectives (music and visual art) are correlated with objectives for the core subjects in grades K-6. Process/workplace skills are noted for grades 7-12 with the ◊ symbol. Supplementary materials (glossaries, lists of resources, and the K-8 dance and theatre objectives with their correlations) will be made available in a separate document.

EXECUTIVE SUMMARY
WEST VIRGINIA BOARD OF EDUCATION

POLICY NUMBER AND TITLE Policy 2520
Instructional Goals and Objectives

PUBLIC COMMENT PERIOD ENDED June 13, 1997

BACKGROUND

West Virginia Board of Education Policy 2520 defines the instructional goals and objectives for the programs of study required by Policy 2510 and establishes a standardized format for them.

PURPOSE

The purpose of this policy is to set forth a focused and well-defined curriculum K-12 that incorporates what students should know and be able to do. These proposed instructional goals and objectives shall become the vehicle for teachers to focus and target their instruction toward critical skills.

The Instructional Goals and Objectives incorporated by reference into Policy 2520 are hereby amended by the addition of programs of study in dance, music, theatre, visual art, health education, and geography (within the social studies program of study). These instructional goals and objectives are correlated with the core curriculum, include process workplace skills, and define challenging and rigorous subject matter for all students. A partnership of teachers, principals, county administrators, college and university faculty, Department of Education representatives, business, professional musicians, and community members collaborated in the production of these instructional goals and objectives.

COMMENTS

The Instructional Goals and Objectives have been revised based upon comment forms submitted by individuals and groups. All proposed revisions to the Instructional Goals and Objectives as placed on comment are indicated by underlines and strike-throughs. The proposed revisions for dance, music, theatre, and visual art clarify items and/or are editorial in nature. The revisions for health education included the deletion of one objective, the addition of one objective, and editing for clarification.

No revisions were made in the geography program of study.

KEN HECHLER
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(Plus all the volunteer help we can get)

STATE OF WEST VIRGINIA
SECRETARY OF STATE

Building 1, Suite 157-K
1900 Kanawha Blvd., East
Charleston, WV 25305-0770

TO: Carolyn Meadows ~~VIRGINIA HARRIS~~

AGENCY: EDUCATION

FROM: JUDY COOPER, DIRECTOR, ADMINISTRATIVE LAW DIVISION

DATE: September 9, 1997

THE ATTACHED RULE FILED BY YOUR AGENCY HAS BEEN ENTERED INTO OUR COMPUTER SYSTEM. PLEASE REVIEW, PROOF AND RETURN IT WITH ANY CORRECTIONS. IF THERE ARE NO CORRECTIONS, PLEASE SIGN THIS MEMO AND RETURN IT TO THIS OFFICE. YOU WILL BE SENT A FINAL VERSION OF THE RULE FOR YOUR RECORDS.

PLEASE RETURN EITHER THE CORRECTED RULE OR THIS FORM WITHIN TEN (10) WORKING DAYS OF THE DATE YOU RECEIVED THIS REQUEST. CALL IF YOU HAVE ANY QUESTIONS.

SERIES: 44 TITLE: 126 EDUCATION

* THE ATTACHED RULE HAS BEEN REVIEWED AND IS CORRECT.

SIGNED: Carolyn Meadows

TITLE OF PERSON SIGNING: Director, Office of Instructional Services

DATE: September 11, 1997

****

* THE ATTACHED RULE HAS BEEN REVIEWED AND NEEDS CORRECTING. THE CORRECTIONS HAVE BEEN MARKED.

SIGNED: _____

TITLE OF PERSON SIGNING: _____

DATE: _____

NOTE: IF YOU ARE NOT THE PERSON WHO HANDLES THIS RULE, PLEASE FORWARD TO THE CORRECT PERSON.

TITLE 126
LEGISLATIVE RULE
BOARD OF EDUCATION

SERIES 44
INSTRUCTIONAL GOALS AND OBJECTIVES FOR WEST VIRGINIA SCHOOLS (2520)

§126-44-1. General.

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EDITOR'S NOTE: THE INSTRUCTIONAL GOALS AND OBJECTIVES FOR WV SCHOOLS MANUAL IS AVAILABLE UPON REQUEST IN THE SECRETARY OF STATE'S OFFICE.

Instructional Goals and Objectives for West Virginia Schools

Henry R. Marockie
State Superintendent of Schools
West Virginia Department of Education



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1996-97

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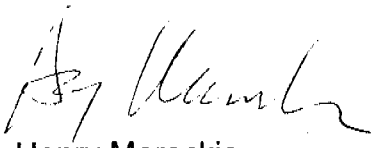
Foreword

The West Virginia Board of Education is pleased to present the Criteria of Excellence: Instructional Goals and Objectives for use in promoting student success throughout the state. Senate Bill 300 challenges all state educators to develop a school system that fosters higher student achievement by combining a rigorous academic program with a realistic understanding of work place expectations. To meet the mandate of this legislation, a partnership of teachers, principals, county administrators, college and university faculty, State Department of Education representatives, and business and community members collaborated in the production of this document.

English language arts, mathematics, science and social studies are the four basic cornerstone subjects from which the total learning system of a school, county or state evolves. Mastery of grade level objectives in these core areas is essential for students' future success.

The process of developing a strong learning system begins with the clearly stated instructional goals and objectives contained in this document. These instructional goals and objectives are challenging and rigorous with content based on sound educational research. Educators on the county and school levels will use the goals and objectives contained in the Criteria of Excellence: Instructional Goals and Objectives to design innovative academic programs, select high quality instructional materials and provide targeted staff development.

Working together, educators, students, parents and business leaders can secure a future full of promise and productivity for all children in West Virginia.



Henry Marockie
State Superintendent of Schools

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English Language Arts Instructional Goals

The English Language Arts curriculum promotes student proficiency in understanding and expressing meaning. Today's global economy and technology-driven society demand people who can communicate, express, and exchange ideas in a variety of forms for different audiences and medias. All careers require people to use language to work individually and cooperatively; to analyze and interpret information; to solve problems; and to make decisions.

Students will study a wide range of classic and contemporary works to build an understanding of the culture and history of a democratic society. They will approach writing tasks systematically and will use the writing process appropriately. When they create text, they will apply knowledge of structure, study skills, editing, usage, spelling, and punctuation. Students must recognize connections among the English Language Arts. Growth in one of the English Language Arts areas will promote growth in the other areas.

Language

All students will make progress toward mastery of grammar, mechanics, and usage of standard English in their writing and speaking. They will master parts of speech, will determine relationships between and among those parts, and will correctly apply these rules for speaking and writing. Students will work individually and/or cooperatively to evaluate and edit material.

Listening/Speaking

Students will listen and speak effectively to exchange ideas and opinions for a variety of purposes, audiences, and medias. Strong listening and speaking skills ultimately enhance their personal, academic, and occupational lives. Many reading comprehension and literary appreciation skills are first learned through listening and speaking.

Spelling

Students will acquire vocabulary through spelling instruction. Students will spell and pronounce words correctly and will apply strategies to spell unknown words across the curriculum.

Reading

Initial reading instruction will emphasize learning to read by establishing the concept, sound, and structure of print. A transition will then begin toward reading to learn. Students will use reading strategies that will assist them in achieving personal goals to succeed in society. Comprehension and critical reading skills are essential and will be developed through all grades by reading selections from various genres.

Study Skills

Students will work individually or as members of a team to acquire, integrate, store, and retrieve information from different sources. Research skills will be constantly taught and reinforced at all grade levels. Instruction will lead the student to complete oral and written presentations that exhibit interaction and consensus within a group. All study skills will provide the necessary competency for students to become lifelong learners.

Writing

All students will work toward error-free compositions with increasing command of the conventions of composition. These compositions will include narrative, informative, and persuasive writing. Students will use an appropriate writing process (pre-writing, drafting, revising, editing, and publishing) to express and communicate ideas. They will demonstrate continuous progress toward keyboarding, word processing, and writing legibly in penmanship.

Mathematics Instructional Goals

The mathematics curriculum at all levels is currently undergoing significant change. Many of these changes have arisen as a response to the need to better prepare students for college, other post-secondary education, and gainful employment. Today's global and computer-driven society demands workers with thinking skills who can master new technologies, solve problems by employing a variety of strategies, and explain concepts and procedures based on mathematical reasoning. All students are to value mathematics, become confident in their ability to do mathematics, become mathematical problem solvers, communicate mathematically, and learn to reason mathematically.

Mathematical Problem Solving

Students in grades K-12 will become competent problem solvers. The incorporation of the problem solving process is a focus of all instruction in mathematics. Learners will work individually or cooperatively to investigate mathematical content, formulate problems, and solve problems using real-life data. Problem solving strategies include: modeling, making a list, estimating; guessing and checking; patterning; working backwards; using formulas; making and/or using tables, charts, and diagrams; brainstorming, and solving simpler problems.

Mathematical Communication

Students in grades K-12 will have multiple opportunities to develop communication skills in mathematics. Students will regularly reflect upon their learning, formulate conclusions, and express mathematical ideas. The students' understanding of mathematics will be clarified through reading, writing, speaking, and listening. Students will use the language of mathematics, including specialized vocabulary and symbols, to represent and describe mathematical ideas, generalizations, and relationships.

Mathematical Reasoning

The development of critical thinking skills is essential for a genuine understanding of mathematics. Students will regularly be asked to extend ideas, make conjectures, generalize, clarify by example, identify alternate problem solving strategies, and justify solutions. Students will apply deductive and inductive reasoning in a variety of problem solving situations. The student will recognize reasoning as a process that can grow out of every mathematical activity.

Mathematical Connections

Students will recognize connections among concepts and procedures within the various branches of mathematics and with other disciplines. Recognizing these connections reinforces the importance of the mathematical content.

Algebraic and Geometric Concepts

Algebraic and geometric concepts will be taught in all grade levels so that all students are well prepared for the requirement of Algebra and Geometry at the high school level.

Social Studies Instructional Goals

Social studies at all levels integrate the social sciences and humanities to promote civic competence and participation. The curriculum should be dynamic in order to prepare students for a society where change is rapid and constant. The realities of a globally interdependent world require students to understand their historical roots and draw upon historical knowledge. Students must learn to solve problems facing their own communities as well as emerging global issues. The curriculum must provide opportunities for students to develop skills in making not only personal choices but also economic choices based on limited resources. Students need preparation to face persistent dilemmas in our democracy. All students need to be confident in their ability to be lifelong learners, to enter and adapt to a changing world of work and further the goals of democracy.

Civics and Government

Students in K-12 will develop competencies essential for informed, responsible, civic behavior. Instruction should allow students to understand the need for authority and government and the exercise of rights and responsibilities. Students must learn and practice intellectual and participation skills essential for an involved citizenry. This will involve articulating ideas, taking and defending positions, building coalitions, negotiating, compromising, seeking consensus, making decisions, and resolving problems. In order to develop these skills, the curriculum must extend beyond the school to include experiences in the workplace and service in the community.

Economics

Students will learn to make informed economic choices in a growing global economy through mastery of the economics objectives. Learners will investigate economic principles and their application to historical situations. Then learners will work cooperatively and individually to analyze how basic economic principles affect their daily lives by examining real problems and situations. The economic principles should include an understanding of scarcity and choice, productivity, markets and prices, supply and demand, competition, role of government, international trade factors, and consumer decisions.

Geography

Students will learn that geography is the science of space and place on Earth's surface through mastery of the geography objectives. Its subject matter is the physical and human phenomena that make up the world's environments and places. The students will be able to describe the changing patterns of places in words, maps, and geographics, to explain how these patterns come to be, and to analyze their meaning. The students' continuing quest is to understand the physical and cultural features of places and their natural settings on the surface of Earth.

History

Students in K-12, study history to gain a sense of order and time. Through understanding the results and consequences of human decisions and actions, students will develop historical concepts and will examine the past and its relationship to the present. Students will analyze how individuals, groups, and nations have shaped cultural heritages. Through the study of history, students will learn about states, nations, locations, settlements, formations, governments, economic developments, and cultural heritage. In order to develop a historical perspective, students must be challenged to see causal relationships, to evaluate problem solving techniques and to recognize the value of history in preparing for the future.

Science Instructional Goals

Scientific literacy for all students is the fundamental goal of the science curriculum. All West Virginia children must be prepared to live and work productively in a highly scientific, technological world. Economic competitiveness is dependant on an educated, trained workforce that understands why and how things work. Students must learn to make evidence-based decisions in their personal lives and on societal issues. Drawing upon the National Science Education Standards, the goals of Project 2061, and the tenets of the Scope, Sequence, and Coordination Project, the science curriculum delineates what students must know, understand, and be able to do. Inquiry-based science instruction is emphasized throughout the K-12 curriculum.

Nature of Science

Students will develop an understanding of the nature of science which encompasses the understanding and the practice of scientific inquiry; the acquisition and the nature of scientific knowledge; and the comprehension of scientific endeavors.

Scientific Attitudes/Habits of Mind

Through cultivation of scientific attitudes (i.e., demand for verification, test for validation, display of curiosity), students will develop an understanding of the limits of science and to evaluate scientific advances and technological applications as they impact society. Through the participation in the scientific enterprise, students will construct their knowledge about the natural and designed world.

Scientific Processes/Thinking Skills

Students will develop and demonstrate the scientific processes for investigating the world. They will utilize critical thinking skills to make decisions based on evidence and employ appropriate strategies to solve problems. The processes of science used to construct knowledge not only help students find meaning in science, but also assist students in the development of important life management and work skills. Ample opportunities are needed for students to develop the scientific skills such as formulating questions; making predictions; designing experiments; making observations; classifying, organizing, and analyzing data; drawing conclusions; and evaluating results.

Laboratory Investigations/Hands-On Learning

Scientific inquiry is as a pathway to knowledge. Students acquire skills for learning and gain knowledge of the natural world from direct observation, interaction, and concrete manipulation of the tools and the materials of science. Students will engage in active inquiries, investigations, and hands-on activities a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills.

Science Themes and Subject Matter

Through the integration of the fields of science and the development of unifying themes, students will be able to see that interrelationships among biology, chemistry, physics, and the earth sciences. Scientifically literate students will make connections in the formal education setting and will apply their knowledge and skills to daily life experiences. Science themes - systems, changes, and models - provide students with unifying conceptual schemes that increase their understanding of the natural world.

Science History

Science is a human endeavor. Studying historical and current discoveries of scientists and scientific milestones provide students with information about how discoveries have influenced current scientific thought and advances. Scientifically literate students will realize the contributions of diverse cultures, past and present scientists and society in general.

Science, Technology, and Society

Understanding science and technology in the context of personal and social perspectives are critical issues in preparing students to take an active and responsible role in society. To live and work in the highly scientific and technological world of the twenty-first century, students must be able to identify problems and design, implement, and evaluate solutions. Students must comprehend the inherent link between science and technology and their impact on society.

Process/Workplace Goals

In addition to the core academic areas of English language arts, mathematics, science and social studies, six key areas of process skills have been identified. These are essential skills students need for successful entry into work or post-secondary education. The ability to solve problems, communicate successfully, work with others, apply sound judgement, establish clear objectives for advancing career interest and utilize technology to assist with specific tasks. Throughout the 7 - 12 curricula the ◊ mark those academic learning objectives that particularly lend themselves to the development of process skills. The instructional practices section of this document also incorporates practices that support the development of these skills. The six goals are as follows:

Problem Solving
These process skills reflect one's ability to organize, plan, reason, and use information to solve problems. Time management; the ability to prioritize; understanding cause and effect relationships; and evaluating, summarizing, and communicating information are skills embedded throughout the core subjects K-12.

Communication
Effective communication is fundamental to achieving a desired result whether in the workplace or advancing one's education. The goal is to communicate effectively both orally and in writing. Correct grammar, punctuation, spelling and an extensive vocabulary equip students to deal effectively with various audiences, publics and individuals. Listening is also a significant skill in the area of communication.

Working With Others
The development of these skills gives the individual the ability to: function in both leadership and non-leadership roles, to deal with conflict effectively, to motivate individuals or teams of people, to understand the concept of "customer service", to participate in work-related decisions and acknowledge the contributions of others.

Technology
The ability to understand and utilize technology to solve problems is a mandate in today's world. Students will learn to: set-up and operate computer equipment and assorted peripherals, use on-line sources to obtain or exchange information; select and use multiple software packages; and demonstrate skills in the use of word processing, databases, spread sheets, graphics and telecommunications.

Self Management
Students will acquire the attributes of motivation, promptness, perseverance, honesty and reliability in word and action. Well developed self management skills also reflect pride in work effort, attention to detail and accuracy and a focus on personal wellness and grooming.

Career Development
This area establishes a process to assist students in planning and preparing for a career. The formal initiation begins at the end of eighth grade when the student, the parents, and counselor begin assessing and discussing the students career interest and choose some corresponding career clusters to be explored in grades nine and ten. Upon completion of the tenth grade, students, parents and the counselor select a career major. Flexibility for changing clusters and majors remains throughout. Another objective is to assist students in developing and reviewing career goals and plans, to evaluate personal interest and aptitudes, to master skills needed to prepare job applications, resumes, cover and follow-up letters and to speak with confidence and composure about one's own skills and qualifications in an interview setting. A culminating step in the area of career development is the workplace experience that all students will have during ninth through twelfth grades.

Process/Workplace Objectives

Although these objectives are reflected throughout the core subjects K-12 and identified with a ◇ in grades 7-12, a listing of highly focused process skill objectives provides additional guidance for teachers in developing experiences and opportunities for students. These objectives may also be used by the school and employer to determine if the workplace experience merits awarding unit(s) of credit.

Problem Solving

PW.1 systematically analyze the component parts of a given situation or process and then plan, organize, and implement a concept to improve that situation or process

PW.2 given a set of rules, directions, or instructions, apply them to solve a problem or accomplish a task

PW.3 given multiple tasks, prioritize them according to importance and prepare a time frame and schedule to accomplish the tasks

PW.4 identify and analyze a problem by stating causes and effects

PW.5 given an event or activity, identify the resources needed and develop a plan of action

PW.6 provided several sources of information relative to the workplace assignment, evaluate the information for reliability, completeness and applicability

PW.7 establish a procedure and method for maintaining and retaining information relative to the workplace assignment

PW.8 demonstrate an understanding of oral, visual, and written information by summarizing it and following through with appropriate action

Communication

PW.9 use correct grammar when speaking and writing

PW.10 use correct punctuation, spelling, vocabulary and grammar in all written work

PW.11 given a situation or circumstance, take a position and communicate ideas to justify the position

PW.12 compose correspondence for a variety of audiences that is grammatically correct, easily understood, and reflects all necessary information

PW.13 using multi-media, prepare an oral presentation that has a specific message, that is effective and then alter the presentation for a different audience

PW.14 perform a task after listening to oral information

PW.15 use active listening and observation skills to understand the positions of others, and use verbal and nonverbal cues from others to communicate effectively in return

Working With Others

PW.16 understand what it takes to develop an effective team, including team rules, behavior norms, team roles, communications, and decision-making practices

PW.17 given an assignment with two or more individuals, use encouragement, persuasion, motivation, and other effective communication skills to complete the assignment

PW.18 perform effectively in both leadership and non-leadership roles

PW.19 placed in situations of conflict, demonstrate ability to mediate and resolve the conflict

PW.20 analyze verbal and non-verbal communication from others involved in a given situation or process (e.g., supervisors, peers, customers) then take appropriate action

PW.21 provide effective, corrective, and positive feedback to others in the appropriate situation

PW.22 given a complaint, understand the appropriate policies and practices for dealing with the situation and take appropriate action

PW.23 understand the different functional areas in an organization (such as represented in an organizational chart) and clearly identify the role assumed by each area and the relationship each role has to the total organization

PW.24 be able to participate effectively in making group decisions, and be able to support those decisions to measure progress and take actions to meet those goals

PW.25 given a circumstance where there is a difference of opinion, demonstrate the ability to recognize those differences and work toward a consensus

Technology

PW.26 demonstrate the ability to set up computer equipment
PW.27 demonstrate the ability to operate computer equipment
PW.28 demonstrate the ability to obtain and exchange information by using on-line sources
PW.29 demonstrate the ability to select and use multiple software packages for specific purposes
PW.30 demonstrate the ability to use word processing
PW.31 demonstrate the ability to create and use databases, spreadsheets, and graphics
PW.32 demonstrate the ability to use telecommunications
PW.33 given a problem, assignment, or task, select and use the appropriate technology and procedures for a resolution or solution

Self Management

PW.34 understand what is expected of a person in a given situation or process, and be able to clarify, modify, and/or meet those expectations
PW.35 be punctual with appointments and completion of work assignments, and be able to handle appropriately unavoidable delays
PW.36 stay with an assignment or task to completion
PW.37 demonstrate self-motivation
PW.38 work independently without direct supervision
PW.39 take steps appropriate to developing or implementing new ideas or concepts to improve a given situation or process
PW.40 choose ethical courses of action and exhibit honesty and reliability in words and action
PW.41 given a fixed amount of funds, create a budget and demonstrate the ability to balance the amount of funds that are deposited and withdrawn
PW.42 dress appropriately to maximize personal effectiveness and safety in various settings (e.g., work, school, community functions)
PW.43 demonstrate sound safety practices and respond appropriately to emergencies
PW.44 be able to check the details and quality of one's work and to take action to correct mistakes

Career Development

PW.45 establish career clusters and majors with the guidance of parents and counselors at the end of eighth and tenth grades taking into consideration self assessment and career assessment data (e.g., ACT Explore)
PW.46 identify multiple career options and establish goals toward the pursuit of the selected career path
PW.47 prepare a job or college application, résumé, and write appropriate cover and follow-up letters
PW.48 practice interview strategies concentrating on speaking clearly and correctly, speaking with confidence about one's own skills and qualifications as they relate to the specific situation
PW.49 provide community service and assesses entrepreneurial opportunities that exist within the community, the region, the state or the nation.
PW.50 discuss with the workplace supervisor the legal and labor issues associated with the job assignment (e.g., ninth through twelfth grade students)

Early Childhood K-2

These core programs of study shall be taught daily with a reteach component ensuring mastery of the instructional objectives. Reteaching is to occur daily for those students needing more help.

English Language Arts
Mathematics

These required programs of study may be taught as separate or integrated programs but need not be taught daily.

Science
Social Studies
Art
Music
Physical Education
Health

Components of career awareness and the application of technology shall be included during instruction in all subjects.

Students demonstrating mastery of instructional grade level objectives in the programs of study are to be provided the opportunity to advance to the next grade level objectives.

Early Childhood 3-4

These core programs of study shall be taught daily with a reteach component ensuring mastery of the instructional objectives. Science and Social Studies may be taught as separate or integrated programs. Reteaching is to occur daily for those students needing more help.

English Language Arts
Mathematics
Science
Social Studies

These required programs of study may be taught as separate or integrated programs but need not be taught daily.

Art
Music
Physical Education
Health

Components of career awareness and the application of technology shall be included during instruction in all subjects.

Students demonstrating mastery of instructional grade level objectives in the programs of study are to be provided the opportunity to advance to the next grade level objectives.

Middle Childhood 5-8

These core programs of study shall be taught daily with a reteach component ensuring mastery of the instructional objectives. Schools implementing alternative schedules will provide equivalent instructional time for these programs of study.

English Language Arts
Mathematics
Science
Social Studies

These required programs of study shall be taught at each grade level each year as separate subjects.

Art
Music*
Physical Education
Health

These required programs of study shall be taught annually.

Career Exploration**
Developmental Guidance***
Foreign Language****

Career awareness and the application of technology shall be taught in all programs of study. Students demonstrating mastery of instructional grade level objectives in the subjects are to be provided the opportunity to advance to the next grade level objectives.

* Choral and instrumental music must be offered no later than grade six.

** These experiences based on instructional goals and objectives must be provided to students during grades seven or eight beginning the fall of 1998, and may be integrated or taught as a separate course. Where feasible, consideration should be given to using modular technology education labs to enhance career exploration.

*** This may be integrated or taught as a separate course.

**** Beginning the fall term of 1998, all counties are encouraged to offer two years of foreign language for students in grades seven and eight. Beginning the fall of 2002, all counties will be required to offer two years of foreign language for students in grades seven and eight.

Elective offerings not based on West Virginia Board of Education Instructional Goals and Objectives must have written goals and objectives approved by the county board of education.

Adolescent 9 - 12

These graduation requirements for grades 9 - 12 become effective for students entering grade 9 in the 1999 - 2000 school year.

Requirements for Graduation

English Language Arts
4 courses
English 9, 10, 11, 12

Mathematics*
3 courses
Two of the three credits will be Algebra I and above.

Science
3 courses
Coordinated and Thematic Science 9, Coordinated and Thematic Science 10, and one course above Coordinated Thematic Science 10 level.

Social Studies
3 courses
United States to 1900, World Studies to 1900, and Twentieth Century

Physical Education/Wellness
1 course

Health
1 course

The Arts
1 course

Career Majors**
4 courses (Career majors are to be determined at the local school or county level.)

Electives
4 courses (chosen from the school's offerings of electives)

Work-based Learning***
(Work-based Learning will be determined at the local level.)

Credits for these courses are to be awarded based upon demonstrated mastery of the instructional objectives.

Students demonstrating mastery of instructional grade level objectives in the subjects are to be provided the opportunity to advance to the next grade level objectives.

* Successful completion of the objectives for Applied Math I and II is equivalent to an Algebra I credit. Applied Geometry may be substituted for a formal course of geometry.

** Prior to students selecting career majors, opportunities for career decision making orientation must be provided.

*** The decision regarding credit for the experiences at grades 9 - 12 will also be made at the local level.

All students are strongly encouraged to complete two courses in a foreign language.

Elective offerings not based on West Virginia Board of Education Instructional Goals and Objectives must have written goals and objectives approved by the county board of education.

Core Electives
Adolescent 9-12

ENGLISH LANGUAGE ARTS, MATHEMATICS, SCIENCE AND SOCIAL STUDIES

English Language Arts

Drama
Theater
Journalism
Mass Media
Television
Film
Speech
Creative Writing
Technical Writing
Desk Top Publishing
AP English
English College Courses

Mathematics*

Applied Mathematics I*
Applied Mathematics II*
Geometry/Applied Geometry*
Algebra II*
Trigonometry
Probability and Statistics
Pre-Calculus
Discrete Mathematics
Algebra/Geometry Preparation
Algebra Support
AP Mathematics
Mathematics College Courses

Science**

Biology Eleven/Twelve
Chemistry Eleven/Twelve
Chemistry - Technical/Conceptual
Environmental Earth Science
Eleven/Twelve
Human Anatomy & Physiology
Physics Eleven/Twelve
Physics - Technical/Conceptual
AP Science
Science College Courses

Social Studies

Civics/Government***
Economics***
Geography
AP Social Studies
Social Studies College Courses

* Indicates math courses required to be offered. Schools must offer four courses in mathematics at a level above Algebra I.

** A minimum of one advanced course for each of the four fields of science (Biological Sciences, Chemistry, Environmental Earth Sciences, and Physics) must be offered.

*** Required to be offered.

Elective offerings not based on West Virginia Board of Education Instructional Goals and Objectives must have written goals and objectives approved by the county board of education.

Non-Core Electives 9-12

The instructional objectives for these electives will be submitted to the State Board for approval within the next six months.

The Arts

Electives must be offered to accommodate four sequential levels of student achievement in music (both instrumental and choral) and visual art (general art and/or studio art). Electives must be offered in at least one level of student achievement in dance and theatre beginning with the 1998-99 school year. Electives must be offered to accommodate four sequential levels of student achievement in dance and theatre beginning with the 2001-02 school year. Additional elective offerings may be made available based upon student need and interest.

Career Clusters and Majors

Career cluster options must be made available to students to ensure that students understand the breadth and scope of careers in the world of work. Required career major courses and required electives within the majors will be determined by county boards of education. Career majors must reflect, where appropriate, professional, skilled, and entry level components.

Driver Education

A minimum of one course must be offered.

Family and Consumer Science

Two elective offerings which include instructional goals and objectives that teach parenting skills to meet the stipulations of West Virginia Code §61-8-9A must be offered.

Foreign Language

A minimum of two levels of one foreign language will be required to be offered. Languages to be offered will be determined by county boards of education.

Health

Elective offerings may be made available based upon student need and interest.

Physical Education

Elective offerings may be made available based upon student need and interest.

Note: Elective offerings not based on West Virginia Board of Education Instructional Goals and Objectives must have written goals and objectives approved by the county boards of education.

Kindergarten - Twelve Instructional Practices

IP.1 continually monitor students' daily work, provide feedback to students on progress, and reteach skills before introducing new ones

IP.2 provide opportunities for students demonstrating grade level mastery of skills to advance to the next grade level of skills

IP.3 include in the structure of the lesson preteaching, reviewing of prerequisite learning, sharing the objectives, presenting new material in small steps with practice after each step and checking for understanding; then after initial instruction provide guided practice under direct teacher supervision, assign homework to reinforce classroom learning, and conduct periodic reviews

IP.4 increase time for teaching and learning by establishing rules, procedures and consequences and communicating them to students; enforcing behavioral expectations consistently and uniformly; planning lessons well in advance; reducing transition time between lessons and activities; setting an appropriate pace in teaching the lesson; giving students alternate or ongoing assignments; using "self- instructional" activities; giving additional work that builds desired skills; and making instructions focused and clear

IP.5 match instructional methodologies to learning styles; differences in students' achievement levels; and emotional, social, and physical characteristics of students

IP.6 encourage students to think systematically, critically, and analytically about issues and events by using effective questioning techniques and other strategies (e.g., the Socratic method, "what if" questions, graphic organizers, creating a time capsule, human timeline, or opinion continuum)

IP.7 make teaching student-centered, utilizing a variety of participatory strategies and materials. (e.g., cooperative learning, role playing, small group exploration, manipulatives, calculators)

IP.8 provide feedback to students on homework assignments through grades, comments, and/or discussion

IP.9 establish a grading procedure that reflects assessment of the required instructional objectives; passing status is not to be awarded through extra credit: a variety of assessments may be used in determining grades (e.g., teacher-made tests, research projects, performance assessments, presentations)

IP.10 use a variety of print sources in teaching, practicing, and extending concepts (e.g., primary historical documents, literature, current periodicals, technical manuals, Internet, reference materials)

IP.11 incorporate writing into all curricular areas with essays, diaries, journals, logs, research papers, position papers, poetry, fiction, newspaper articles, letters

IP.12 encourage students to engage in presentations to their peers and to adults in such activities as debates, panel discussions, mock legislatures, model United Nations, Social Studies and Science Fairs, press conferences, plays, oral interpretation of prose, or poetry and student produced videos. Give students practice in communicating their knowledge and in expressing and accepting feedback both positive and negative

IP.13 show students linkages among all the subject areas by organizing theme-oriented projects, by co-teaching with a colleague, and/or by integrating skills from other content areas (e.g., data collection and graphing in a social studies assignment, journal writing as part of a chemistry experiment)

IP.14 provide constant opportunities for students to use classroom knowledge and skills in addressing local, national, and international issues; and give students the opportunity to correspond and interact with adults from the community, national and international pen pals, and citizens from other countries

IP.15 teach students how to work effectively on a team by assuming both leadership and non-leadership roles, by understanding differences of opinion, by dealing appropriately with conflict, and by motivating and acknowledging others' contributions

IP.16 help students understand their individual roles in larger organizations (e.g., team,

class, school) as active participants in decision making, accepting supervision, and cooperating with authority. Provide practice in effective work habits as part of instruction and assist students in realizing that it is their job to learn, so that students become "workers" in their own education

IP.17 use classroom management techniques (e.g., in the formulation of rules and procedures) to foster cooperation, self-control, independence, perseverance, honesty, and reliability in word and action in students. Recognize the potential of each individual learner and his/her worth as a human being; model for students what is expected of them

IP.18 build skills and encourage attitudes in students which will lead to life-long learning by setting goals, reading independently, researching, assessing one's own progress, and developing pride in a high quality of work

IP.19 teach the state identified instructional objectives using appropriate correlated material

IP.20 alternate instructional strategies within each lesson and use computers and other technologies to provide creative instructional opportunities in all subjects for students individually and in groups

IP.21 integrate and interrelate academic and technical content when appropriate

IP.22 work and plan with other teachers and use professional judgements in delivery classroom instruction

Document Guide

- **Boldface font** indicates the objectives that will be assessed on the state standardized test.
- Subscripted numerical notations ($6.28_{7,8}$) indicate the objective will be assessed at additional grade level(s).
- ◊ notation indicates the objective is a workplace readiness skill.

Kindergarten
English Language Arts

The kindergarten student will be immersed in a language rich environment to develop oral language skills and appreciation for the English Language Arts. Kindergarten teachers will engage students by providing them opportunities to participate in meaningful activities and roles throughout the entire curriculum where the English Language Arts are the foundation for all learning. The English Language Arts will challenge students to extend and to elaborate upon what others have said, developing higher-order thinking skills.

Listening/Speaking

K.1 listen to a variety of literary forms, including stories and poems

K.2 participate in choral speaking, reciting poems, rhymes, songs, and stories with repeated patterns and creative dramatics

K.3 use words to describe/name people, places, things, and number words

K.4 use words to describe actions

K.5 restate and follow one-step and two-step directions

K.6 follow implicit rules for conversation (e.g., taking turns, staying on topic, utilizing communication technologies)

K.7 use appropriate voice level, phrasing, sentence structure, and intonation in speaking

K.8 participate in discussions about learning

K.9 differentiate between a word and a sentence

K.10 substitute words in a rhyming pattern

K.11 identify high, low, near, far, soft, and loud sounds

K.12 hear, say, and manipulate phonemes of spoken language (e.g., divide words into phonemes and blend phonemes into words)

K.13 demonstrate appropriate listening behaviors (e.g., resist distractions, stay alert, hands/feet quiet, eyes on speaker, take responsibility for success of communication)

Reading Comprehension

K.14 read literary work by national and international authors to include, but not to be limited to: fairy tales, science fiction, tall tales, and poetry

K.15 use one-to-one correspondence

K.16 use eye/hand coordination

K.17 use left to right progression

K.18 recognize likenesses and differences in objects, pictures, and designs

K.19 match similar objects

K.20 classify objects and pictures

K.21 recognize upper and lower case letters of the alphabet and their sounds

K.22 reproduce, from auditory clues and memory, lower and upper case letter symbols

K.23 **recognize and match pictures with the same consonants/sounds in initial word positions**

K.24 **recognize sound-letter correspondence including beginning consonants, two-letter consonant blends, and two-letter consonant digraphs-all in the initial word positions**

K.25 **recognize and match two-letter consonant blends in initial word positions**

K.26 **recognize and match two-letter consonant digraphs in initial word position**

K.27 recognize and reproduce own name

K.28 recognize colors and color names

K.29 **comprehend concept of positional words (e.g., above, behind, between)**

K.30 understand the concept of a story (e.g., beginning, middle, end)

K.31 recognize real and unreal
K.32 recognize and use rhyming words
K.33$_{1,2,3,4,5,8,9}$ **determine sequence of events**
K.34 **complete sentences by choosing correct picture for meaning with beginning letters supplied**
K.35 **understand concepts of past, present, and future**
K.36$_{2,3,4,5,6,9,11}$ **predict situations that might occur based upon text of a story**
K.37$_{2,3,4,5,6,7,8,9,11}$ **understand and relate to feelings of characters in a story**
K.38$_{1,2,3,4,5,6,7,8,9}$ **understand and identify the main idea in a story**
K.39$_{1,2}$ **use illustrations and oral text to comprehend both literally and interpretively**

Reading Vocabulary

K.40 participate in discussions about learning to include appropriate voice level, phrasing, sentence structure, and intonation
K.41 recognize colors and color names, positional words, and rhyming words

Writing

K.42 use directionality (e.g, left/right, top/bottom, up/down)
K.43 use dominant hand with correct paper position
K.44 hold pencil correctly
K.45 assume and maintain appropriate posture
K.46 use appropriate stroke formation
K.47 print upper/lower case letters correctly
K.48 align writing (e.g., keeps on baseline)
K.49 uses uniform spacing between letters and words
K.50 demonstrates uniformity when writing letters
K.51 write numerals 0-9 correctly
K.52 evaluate handwriting
K.53 begin to use the five steps for process writing (e.g., prewrite, draft, revise, edit, and publish) to begin forming words, phrases, and/or sentences
K.54 use electronic editing tools and traditional editing strategies for words not detected by electronic tools in computer generated work (e.g., proper nouns, in and inn [homophone])

Spelling

K.55 recognize and differentiate among initial and final sounds
K.56 reproduce designs, shapes, numerals, letters, etc. accurately in a predetermined sequence
K.57 produce the graphic symbols for consonant sound spellings

Language

K.58$_{1,2,3,4,5,6,7,8,9,10,11}$ capitalize months of the year, days of the week, names of people, first word in a sentence, and the pronoun "I"
K.59$_{1,2,3,4}$ comprehend and identify correct uses of punctuation: period, question mark, and exclamation point

Study Skills

K.60 acquire organizational skills to manage school materials and personal time management
K.61$_{3,4,6,7,9,11}$ become familiar with reference sources (e.g., dictionary/glossary, encyclopedia, newspapers)
K.62 interpret information from graphic sources (e.g., charts, graphs)
K.63 become familiar with test-taking strategies (e.g., listen closely, make careful choices, do your best)

Computer/Technology

K.64 use appropriate software to practice and master Kindergarten English language arts instructional objectives
K.65 on a keyboard, use the letters of his/her name and/or numbers to "Log On"
K.66 on a keyboard, use special function keys such as "Return/Enter, space bar, and Esc"

K.67 select a program from a menu
K.68 use a mouse to "point and click"
K.69 identify the uses of technology at work and play
K.70 identify various components of a computer (e.g., monitor, keyboard, CPU, disk drive, printer, etc)

Kindergarten Mathematics

The Kindergarten objectives emphasize the use of manipulatives, concrete materials, and appropriate technology so that students explore and develop ideas that are fundamental to the study of mathematics: number, counting, ordering, comparing, classifying, patterning, shape, size, position, numeration, measuring, and problem solving. The emphasis is on experience and growth in mathematics.

Number Theory and Number Sense

K.1 count forward to 100 and backward from 10 with and without objects
K.2 **given a set containing ten or fewer concrete items: tell how many are in the set; select the corresponding numeral from a given set; trace over the numeral using tactile materials; identify and describe one set as having more or fewer or the same number of members as the other set, using the concept of one-to-one correspondence; identify one more and one less than a given number; identify missing numbers in a sequence**
K.3 recognize patterns of counting by fives and tens, using concrete objects and/or a calculator
K.4 given an ordered set of three objects, indicate the ordered position of each item, from left to right, right to left, top to bottom, and bottom to top
K.5 determine the value of a collection of pennies whose total value is less than twenty cents
K.6 estimate the number of objects in a group of twenty or less and count to determine the reasonableness of the estimate
$K.7_{1,2}$ **identify ordinal positions first through tenth**

Fractions and Decimals

K.8 participate in experiences that demonstrate a need for using fractions (e.g., sharing a graham cracker)
K.9 identify and name halves and wholes using concrete models

Whole Number Operations and Computations

$K.10_{1}$ **model addition and subtraction of whole numbers with a total of twelve or less using objects, using a number line, by counting-on, or writing the corresponding number sentence**
$K.11_{1}$ **use addition and subtraction of whole numbers in one and two step problems**

Patterns and Relationships

K.12 sort and classify objects according to similar attributes (e.g., number, size, shape, thickness, and color)
$K.13_{1,2}$ **identify, describe, and extend a pattern found in common objects, sounds, and movements**
K.14 develop and justify own rules for classifying a group of objects

Geometry and Spatial Sense

K.15 use physical materials to construct, identify, and classify basic geometric shapes: circle, triangle, square, and rectangle

K.16 identify basic geometric shapes in the environment

K.17$_{1,2,3,4}$ identify representations of plane geometric figures (circle, triangle, square, rectangle) regardless of their position and orientation in space

K.18 describe spatial relationships: inside/outside, top/bottom, before/after, over/under, and left/right

K.19 **estimate the number of objects needed to fill an empty space**

K.20 **identify the separate parts used in making a whole object**

Measurement

K.21$_{1,2}$ estimate the size of an object and compare objects with respect to a given attribute (e.g., length and weight)

K.22$_{1,2,3,4,5,6,7,8}$ **use standard and non-standard units of measure to find the length of an object**

K.23 order sets of objects by length

K.24$_{1,2,3,4}$ **compare two objects or events, using direct comparison and nonstandard units of measure according to one or more of the following attributes: length, height, weight, temperature and volume. (Examples of non-standard units include: foot length, hand span, pencil, paper clips, blocks, etc)**

K.25 name the days of the week and the seasons of the year

K.26 read time to the nearest hour using both an analog and digital clock

K.27 identify penny, nickel, dime, quarter, and dollar

Probability and Statistics

K.28 collect and organize data as a group project

K.29$_{1,2,3,4}$ construct graphs using objects and pictures

Computer and Technology

K.30 use appropriate software to practice and master Kindergarten instructional objectives in mathematics

K.31 on a keyboard, use the letters of his/her name and or numbers to "Log On"

K.32 on a keyboard, use special function keys such as "return/enter, space bar, and esc"

K.33 select a program from a menu

K.34 use a mouse to "point and click"

K.35 identify the uses of technology at work and play

K.36 use a calculator to count by fives and tens

K.37 identify various components of a computer (e.g., monitor, keyboard, CPU, disk drive, printer, etc)

Kindergarten Social Studies

The kindergarten objectives include an introduction to the lives of interesting people in history. Basic concepts involving historical time sequence, geographic direction, and economic choices are integrated in the program of study. The social studies program begins the formal introduction of what constitutes the good citizen of the United States. Citizenship education will include the importance of following rules and of respecting the rights of people. The program includes the concepts of self-control, honesty, courage, justice, and leadership.

Civics

K.1 demonstrate an understanding that being a good citizen involves taking turns and sharing, taking responsibility for doing daily chores, taking care of personal things (pencils, clothing, books), and showing respect for what belongs to others

K.2 identify examples of honesty, courage, and patriotism

K.3$_{3,4}$ identify traditional patriotic

symbols such as state and national flags and be given the opportunity to participate in patriotic activities such as reciting the Pledge of Allegiance and standing for the National Anthem

K.4 identify the need for rules, authority figures, and the consequences for breaking rules; practice conflict resolution

K.5 explain the importance of safety precautions in everyday life

K.6 explain why citizens voluntarily contribute their time and talents to the community

K.7 identify situations in which rules and leadership are needed

K.8 demonstrate appropriate behaviors and expectations in school-related experiences

K.9 evaluate likely consequences of school-related behaviors and expectations to determine if actions are responsible or irresponsible

Economics

K.10 identify occupations within the local community

K.11 identify economic concepts, including the difference between basic needs (food, shelter, and clothing) and wants (luxuries), the exchanging of money for goods and services, and examples of saving money for the future

Geography

K.12 given locations on the United States map, demonstrate knowledge of left/right and up/down by placing colored stars appropriately in response to teacher instructions

K.13 given a United States map, identify land masses versus bodies of water

K.14 compare and contrast characteristics of life in the city and country

K.15 identify community symbols (e.g., traffic signs, traffic lights, street and highway markers) and map symbols (e.g., legend references to land, water, roads and cities)

K.16 name the days of the week

K.17 name the four seasons and describe the characteristics of each season

History

K.18 explore the past through stories of people, pictures, songs, holidays, customs, traditions, and legends

K.19 sequence time, space, people, and events as they relate to the student's own life

K.20 begin to identify sources of information to answer questions

K.21 build a sense of empathy toward other times and cultures

Study Skills

K.22 collect, organize, and present data in physical form (e.g., symbols, pictures, graphs, charts, tables)

Computer/Technology

K.23 use appropriate software to practice and master kindergarten instructional objectives in social studies

K.24 on a keyboard, use the letters of his/her name and/or numbers to "Log On"

K.25 on a keyboard, use special function keys such as "Return/Enter, space bar, and Esc"

K.26 select a program from a menu

K.27 use a mouse to "point and click"

K.28 identify the uses of technology at home and play

K.29 identify various components of a computer (e.g., monitor, keyboard, CPU, disk drive, mouse, printer)

Kindergarten Science

The Coordinated and Thematic Science (CATS) Kindergarten objectives emphasize the process skills. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. CATS Kindergarten enhances the child's natural curiosity about the environment and augments the awe and wonder of inquiries and discoveries using the senses and by hands on manipulation of objects to build a strong foundation of concepts blended with safety principles.

Nature of Science

K.1 perceive science as the human's search for an understanding of the world by asking questions about themselves and their world (e.g., make qualitative observations about one's own physical characteristics, recognize arms, legs, head, eyes, ears, etc., make observations about things found in nature, clouds, animals, plants, etc., compare size, shape, and structure of living things)

K.2 define science as a search for answers about themselves and their world (e.g., recognize the roles of people involved in science careers)

K.3 explore objects and events (e.g., make qualitative observations using the five senses, identify changes in nature)

K.4 probe deeply into natural phenomena by asking and answering questions about the environment (e.g., animals, plants, stars, weather)

K.5 use a variety of communication techniques (e.g., pictures, models, graphs)

K.6 realize that science is never finished by observing changes in the environment (e.g., weather cycles, plant and animal cycles)

K.7 recognize that a solution to one scientific problem often creates new problems (e.g., recycling)

Scientific Attitudes/Habits of Mind

K.8 ask and answer questions to further an appreciation and joy of discovery of the natural world

K.9 demonstrate innate curiosity, initiative, and creativity by asking questions about the environment (e.g., day/night, weather conditions, living things)

K.10 be in awe and wonder of the patterns, variations, and interactions of natural objects in the environment (e.g., tree, leaves, animal structures, sun and shadow)

K.11 trust observations and accept results of personal discoveries (e.g., use five senses)

K.12 listen to and be tolerant of different viewpoints (e.g., working in groups, communicate what is perceived)

K.13 continue probing phenomena until questions are resolved (e.g., properties of living and non-living things, effects of weather)

K.14 regard science as an integrated whole and a part of daily life

K.15 recognize that scientists work alone and in groups (e.g., visit scientists at work, work in groups to make simple models)

Scientific Processes/Thinking Skills

K.16 develop observational skills (e.g., use of senses)

K.17 collect and record information in a variety of ways (e.g., drawings, weather calendar, graphs)

K.18 use a variety of classification systems (e.g., sorting by color, shape, size, texture)

K.19 make predictions based on personal observations (e.g., clouds-rain, cold weather-snow, bud-flowers, metamorphosis of butterflies)

K.20 use mathematical skills in investigations (e.g., ordering, sequencing, counting, measuring)

K.21 participate in drawing conclusions and making decisions

K.22 use decision making skills in daily life (e.g., selecting clothes for weather conditions)

Laboratory Investigations/Hands-On Learning

K.23 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

K.24 use scientific instruments and everyday materials to investigate the natural world (e.g., hand lens, metric ruler, balance, thermometer, magnets, computers)

K.25 use safe and proper techniques for handling, manipulating, and caring for science materials (e.g., follow safety rules, maintain a clean work area, treat living organisms humanely)

Science Themes and Subject Matter

K.26 develop an understanding of the scientific themes of systems, changes, and models (e.g., systems are made of parts which interact with one another; change occurs gradually, repetitively, or randomly; models are representations of real things)

K.27 understand that the study of living and non-living things in the natural world integrates living organisms, earth materials, and physical properties of matter

K.28 establish connections across the curriculum (e.g., integrate science with mathematics, social studies, language arts, arts, and/or physical education)

K.29$_{3,4,5}$ compare, sort, and group objects according to size, shape, color, weight, texture and buoyancy- *systems*

K.30$_{3,4,5,6}$ using the five senses, identify living and non-living things- *systems*

K.31$_{3,4,5,7,9}$ observe water can be a liquid or a solid (e.g., rain, snow)- *changes*

K.32 observe the properties of plants and animals (e.g., movement, growth)- *systems*

K.33$_{3,4,5,6,7}$ observe changes in plants and animals (e.g., animal baby to adult, seed to plant)- *changes*

K.34$_{3,5,7,9}$ observe models of plants and animals in different environments (e.g., terrariums, aquariums, animals and plants in a forest, pond, field)- *models*

K.35 understand the terms hot and cold, warm and cool- *systems*

K.36$_{5}$ demonstrate that heat can be created by rubbing hands together- *systems*

K.37$_{3,5,6,8,10}$ discover magnetic properties of objects- *systems*

K.38 recognize the effects of energy on the environment (e.g, light, heat)- *systems*

K.39 observe the effects of gravity (e.g., objects)- *changes*

K.40$_{3,5,6,8,10,11}$ observe various particle sizes (e.g., crushing a sugar cube)- *changes*

K.41 explore changes in energy (e.g., hot/cold, light/dark, loud/soft)- *changes*

K.42 show that objects can be moved in different ways (e.g., straight, circular, fast, and slow)- *models*

K.43 observe, record, and compare the length of time it takes to travel from one place to another (e.g., faster/slower)- *changes*

K.44 using a color chart, identify the

colors- *models*

K.45 observe clouds and know that there are different kinds- *systems*

K.46$_{3}$ observe the effects of wind- *systems*

K.47$_{3}$ name and describe the four seasons- *systems*

K.48$_{3,5,8}$ observe the weather and describe it in general terms- *systems*

K.49$_{3}$ observe air temperature changes during the day- *changes*

K.50$_{3}$ observe and graph daily changes in weather- *changes*

K.51$_{3}$ recognize that there are more stars than you can see or count- *changes*

K.52$_{3}$ recognize that the stars, sun, and moon appear to move- *changes*

K.53 observe and compare the properties of rock, sand, and soil- *changes*

K.54 observe the effects of weather on humans, animals, and plants- *changes*

K.55$_{3}$ explore the reason for day and night- *changes*

K.56$_{4,5,7,9}$ observe and describe the effect of evaporation on salt water and tap water in various environments- *changes*

K.57 make a model of the earth to illustrate that the earth has more water than land- *models*

K.58$_{3}$ use materials to make imprints (e.g., wet sand, clay)- *models*

K.59$_{3}$ draw and describe models of the sun, moon, and earth- *models*

K.60$_{3,4}$ use a chart to identify the types of weather daily (e.g., sunny, cloudy)- *models*

Science History

K.61 listen to the lives and discoveries of scientists (e.g., from short stories and news items, films and videos, and visit with men and women scientists)

K.62 recognize that science changes over time (e.g., dinosaurs no longer live, rocks break off from mountains)

K..63 realize that scientists will continue to discover new things (e.g., listen to reports from daily papers and news magazines and visit with scientists)

Science, Technology, and Society

K.64 recognize that there are many science-related careers through the use of speakers, field trips, audio-visual, and/or printed material (e.g., veterinarian, forest ranger)

K.65 recognize that science skills are used in careers not usually related to science (e.g., farmer, construction worker)

K.66 observe how technology has positively or negatively affected the quality of life in West Virginia and the world (e.g., toys, laser price scanner, litter)

K.67 observe that common daily events involve science (e.g., use of car, use of microwave, ice melting)

K.68 develop respect and responsibility for the environment by recognizing the interrelationship of living and non-living things and engaging in conservation practices

Computer/Technology

K.69 use appropriate software to practice and master Kindergarten instructional objectives in science

K.70 on a keyboard, use the letters of his/her name and/or numbers to "Log On"

K.71 on a keyboard, use special function keys such as "Return/Enter, space bar, and Esc"

K.72 select a program from a menu

K.73 use a mouse to "point and click"

K.74 identify the uses of technology at home and play

K.75 identify various components of a computer (e.g., monitor, keyboard, CPU, disk drive, mouse, printer)

Grade One
English Language Arts

The first grade student will be immersed in a literature-rich environment to develop an awareness of print materials as sources of information and enjoyment. The children will grow in language development through reading, writing, speaking, and listening that will become lifelong skills. First grade students will learn from reading authentic literature such as fiction, non-fiction, and poetry that reflects cultures, experiences, and ideas. The English Language Arts curriculum will encourage active children to actively participate as members of the community of readers and writers.

Listening/Speaking

1.1 listen to a variety of literary forms, including stories and poems

1.2 clarify and explain words and ideas

1.3 **follow and state simple two-step directions**

1.4 use singular and plural nouns and compound words in oral communication

$1.5_{3,4,5,6,7,8}$ **given descriptive words and other specific vocabulary, identify synonyms, antonyms, and homonyms**

1.6 express ideas orally in complete sentences (e.g., utilizing communication technologies as a tool)

$1.7_{2,3,4}$ **make inferences based upon story characters and actions**

1.8_{2} **use story content and personal background to make predictions**

1.9 given a narrative, orally summarize story content

1.10 use graphic organizers and visualization to determine meaning

$1.11_{2,3}$ **identify beginning, middle, and end of a narrative selection**

$1.12_{2,3,4}$ **given a narrative, repeat the correct sequence of events**

$1.13_{2,3,4,5,6,7,8}$ **remember specific details, interpret and extend meaning, and evaluate material**

1.14_{2} **hearing a narrative, utilize pictures as well as print options to enhance comprehension (e.g., illustrate part of a story and label with a sentence)**

1.15 demonstrate appropriate listening behaviors (e.g., resist distractions, stay alert, and use appropriate listening posture-hands/feet quiet, eyes on the speaker)

1.16_{2} given an oral selection, respond to, explore, and imagine beyond story

1.17 given a word, create rhyming word families

1.18 identify and manipulate phonemes in syllables and multi-syllable words

1.19 given words with one to three syllables, hear, say, and manipulate phonemes of spoken language (e.g., divide words into phonemes and blend phonemes into words)

1.20 use descriptive words to name objects, places, and things

Reading Comprehension

$1.21_{2,3,4,5,6,7,8,9,10,11}$ **read literary works by national and international authors to include but not to be limited to: fairy tales, science fiction, tall tales, and poetry**

1.22_{2} **determine relationships between phonemes and graphemes**

$1.23_{K,2}$ **identify single consonants/sounds in initial, medial, and final word positions**

1.24_{2} **identify short and long vowels and their sounds**

$1.25_{K,2}$ identify consonant blends in initial positions (e.g., bl, fl, pl, sl, br)

1.26$_{K,2}$ **identify consonant digraphs in initial and final word positions (e.g., ch, sh, th, wh)**
1.27$_{2}$ **identify "other" vowel sounds (e.g., oy, oo, ea, ou, ur)**
1.28$_{2}$ **identify "r-controlled" vowel sounds (e.g., ur, ar, ir)**
1.29 create and use rhyming words
1.30 read sight words fluently from an appropriate word list
1.31$_{2}$ **identify and use compound words**
1.32$_{2}$ **identify and use contractions and be able to match them to the two words being replaced (e.g., I'm for I am)**
1.33 divide words with affixes, double consonants, and compound words into syllables
1.34$_{2}$ **identify words with inflectional endings (e.g., s, es, ed, ing, er, est)**
1.35 identify and use prefixes (e.g., reread, untie)
1.36 use context clues to determine word meaning
1.37 understand and comprehend multiple meaning words
1.38$_{3,6,7,9}$ **determine the object that corresponds to two sentence riddles**
1.39$_{K,2}$ **use picture clues to complete a passage by choosing one of three words to complete a sentence describing a picture**
1.40$_{2,5,6,7,8,9}$ **read for meaning in sentences using both illustration and text**
1.41$_{2,4,5,6,8,9,11}$ **respond to both literal and interpretive comprehension questions after reading a short story selection**
1.42$_{2,4,5,6,8,9,10}$ **interpret recreational (narrative), textual (expository), and functional reading material**
1.43$_{2,3,4,5,6,7,8,9,10}$ **differentiate between fiction and nonfiction**
1.44$_{K,2,3,4,5,8,9,10,11}$ **follow written directions sequentially to achieve a desired result**
1.45 dramatize, illustrate, and retell stories that have been read
1.46 retell major events of a story in sequence
1.47 identify and understand cause and effect in a familiar story
1.48 compare and contrast in text and descriptive language
1.49 recall main ideas and details from a familiar story
1.50 identify story elements (e.g., plot, character, setting)
1.51 use the text and illustrations to predict and confirm
1.52 select and read books for independent, recreational reading
1.53 explain likes and dislikes of a reading selection

Reading Vocabulary

1.54$_{2,3,4,5,6,7,8,9,10,11}$ recognize and use synonyms, antonyms, homonyms, and homophones
1.55$_{2,3,4,5,6,7,,8,910,11}$ use context clues to gain meaning of unfamiliar words
1.56$_{k,2,3,4,5,6,7,8,9,10,11}$ identify and use multiple meaning words

Writing

1.57 use directionality (e.g, left/right, top/bottom, up/down)
1.58 use dominant hand with correct paper position
1.59 hold pencil correctly
1.60 assume and maintain appropriate position
1.61 use appropriate stroke formation
1.62 write upper/lower case letters correctly
1.63 use lined paper correctly with headline, midline, baseline
1.64 demonstrate uniformity when writing letters
1.65 use uniform spacing between letters, words, and sentences
1.66 write numerals 0-9 correctly
1.67 write comma, question mark, exclamation mark correctly
1.68 self-evaluate handwriting
1.69 use the five steps for process writing (e.g., prewrite, draft, revise, edit, and publish)
1.70 write original and complete sentences and paragraphs that describe and explain
1.71 complete riddles and rhymes
1.72 write summaries of stories read or dictated
1.73 write original compositions

1.74 use electronic and traditional editing strategies to spell words correctly (e.g., proper nouns, in and inn [homophone])

Spelling

1.75 recognize and differentiate among initial, medial, and final sounds

1.76 reproduce designs, shapes, numerals, letters, etc. accurately in a predetermined sequence

1.77 produce the graphic symbols for phonemes (e.g., vowel sound spellings and consonant sound spellings)

1.78 spell phonetically regular words

1.79 spell phonetically irregular words (e.g., could, they, one)

1.80 spell contractions

1.81 spell compound words

1.82 spell words with silent consonants (e.g., kn, wr, mb)

1.83 spell irregular verbs (e.g., knew, known)

1.84 spell irregular plural nouns (e.g., teeth, mice, wives, wolves)

1.85 use spelling patterns (e.g. consonant vowel-consonant)

1.86 spell multi-syllable words

1.87 make structural changes as needed in root words by adding inflectional endings (e.g., d, s, es, ing) and dropping final silent "e" before adding "ing"

1.88 make structural changes as needed by changing terminal letters before endings: 1) doubling a final consonant letter 2) changing "y" to "I" before adding endings (e.g., ed, er, est), 3) adding suffixes to change a part of speech

1.89 make structural changes as needed to correctly spell words with prefixes

1.90 listen to a word and a sentence containing that word to identify and select the correct spelling of that word: basic sight words, frequently used nouns and verbs, single and double consonants in initial, medial, and final positions (e.g., consonant blends and consonant digraphs, long and short vowels, vowel digraphs, and vowel dipthongs)

Language

1.91 differentiate between common and proper nouns

$1.92_{2,3,4,5,6,7,8,9,10,11}$ **capitalize first word in a sentence, the pronoun "I", months of the year, and proper nouns (e.g., months of the year, days of the week, names of people)**

$1.93_{2,3,4}$ **identify and use correct punctuation: period, question mark, and exclamation point**

$1.94_{2,3,4,5,6,7,8,9,10,11}$ **use correct subject-verb agreement with corresponding proper verb formation**

1.95 **edit for understanding and meaning**

$1.96_{2,3,4,5,6,7,8,9,10,11}$ **understand and correctly use present and past tense**

$1.97_{2,3,4,7}$ **identify and correct errors in sentence construction and language expression**

$1.98_{2,3,4,5,6,7,8,9}$ **identify sentence fragments**

$1.99_{4,10,11}$ **compose narrative text using correct sentence structure, adding to key ideas and supplying details**

$1.100_{2,3,4,5,6,7,8,9,10,11}$ **identify an author's purpose for writing a selection**

$1.101_{2,3,5,6,7,8,9,10,11}$ **identify supporting sentences that would or would not support key ideas in a text**

$1.102_{8,10,11}$ **communicate ideas in well-organized and clearly written text**

1.103_{2} **identify words in alphabetical order beginning with different letters and beginning with the same letter**

1.104 identify and use nouns, verbs, pronouns, and adjectives

1.105 use contractions and irregular verbs correctly

Study Skills

1.106 acquire organizational skills to manage school materials and time on task

1.107$_{3,4,5,7,9,11}$ locate and become familiar with reference sources (e.g., dictionary, glossary, encyclopedia, card catalog)

1.108 interpret information on graphic sources (e.g., charts/tables, graphs, lists, schedules, diagrams, scale drawings, maps/atlases, statistical illustrations, timelines)

1.109$_{3,4,5,6,7,9,10,11}$ **determine if a word is on a dictionary page when guide words are supplied**

1.110$_{5,6,7,8,9,10}$ given a book, identify the author, illustrator, and title and be able to use the table of contents, glossary, and index

1.111 practice and use test-taking strategies (e.g., listen closely, make careful choices, do your best)

Computer/Technology

1.112 use appropriate software to practice and master first grade English language arts instructional objectives

1.113 turn on/off a student workstation

1.114 on a keyboard, use letters, numbers, and other special function keys (e.g., shift, delete/backspace, and arrow keys) to input information

1.115 save and/or retrieve a file

1.116 print a document

1.117 identify the uses of technology at home and school

1.118 demonstrate respect for the (computer) work of others

1.119 identify fundamental computer terms (e.g., disk, software, hardware, boot/start, cursor, etc)

1.120 select and use appropriate software and/or other technologies to locate and use reference sources (1.07)

1.121 use graphic software to read and interpret information from charts and bar graphs (1.08)

Grade One Mathematics

The first grade objectives continue the emphasis on the use of manipulatives, concrete materials, and appropriate technologies to give students the foundation needed to explore new mathematical concepts. Development of mathematical language allows students to explain such concepts as: addition and subtraction of whole numbers; knowing the value of coins; knowing addition and subtraction facts; identifying two and three dimensional figures; and gathering, organizing, and explaining data.

Number Theory and Number Sense

1.1$_2$ **count forward to 999 and backward from 20 with and without objects; name numbers to 999**

1.2 **given a set containing 100 or fewer concrete items, count and write the corresponding numeral**

1.3$_2$ **compare and order numbers through 100 using words "greater than", "less than", and "equal to"; identify the set with the least number or the most number of elements**

1.4$_2$ **identify and construct place value models for written numbers through 200 using concrete materials; find the place value of a digit in the one's and ten's place without models**

1.5$_2$ **model and count by twos, fives, and tens to 100**

1.6$_2$ **identify the ordinal positions first through twelfth**

1.7 **identify a number through 100: before or after a given number, ten more or ten less than a given number**

1.8$_2$ **group and count concrete items by tens and ones and write the number in standard**

and expanded form

1.9$_{2,3,4}$ **count and trade a collection of pennies, nickels and dimes, whose total value is one hundred cents or less**

Fractions and Decimals

1.10$_{2}$ **identify and model halves, thirds, fourths, and whole using appropriate materials or a drawing; identify models divided into different parts**

1.11 fold and cut paper circles, squares, and triangles into halves and fourths labeling the parts; identify models divided into equal parts

1.12$_{2,3,4,5,6}$ **identify a fraction model that is part of a group**

Whole Number Operations and Computations

1.13$_{2,3,4,5,6}$ **model addition and subtraction of whole numbers with a sum of twenty or less using objects and a number line. Identify the identity element (0), missing elements, and identify the number sentence that represents the commutative property of addition (1+3=3+1), and write the corresponding number sentence. Identify a number sentence that represents the inverse operation of a given number sentence (6-1=5 and 6=1+5 - fact families)**

1.14$_{2}$ **recall basic addition facts with sums to ten and the corresponding subtraction facts**

1.15$_{2}$ **model and solve two and three digit addition and subtraction without regrouping and write the corresponding number sentence**

1.16$_{2}$ **add three numbers with a sum of eighteen or less**

1.17$_{2}$ **solve one digit addition and subtraction problems written horizontally and vertically with sums to 18**

1.18$_{2,3,4}$ **solve story and picture problems involving one-step solutions, using basic addition and/or subtraction facts, and non-routine strategies (logical reasoning)**

Patterns and Relationships

1.19 sort and classify concrete objects according to more than one attribute including size, color, shape, and thickness

1.20$_{K,2,3,4,5,6,7,8}$ **analyze, extend, and describe a wide variety of repeating patterns (e.g., using numbers, rhythm, shapes, and calculators)**

1.21 identify patterns in our world

Probability and Statistics

1.22$_{2,3,4}$ **record data from simple experiments using spinners and color tiles/cubes, and use data to predict which of the two events is more likely or less likely to occur if the experiment is repeated**

1.23 **create, read, and interpret a pictograph with each picture representing a single unit**

1.24 investigate, identify and describe various forms of data collection (e.g., recording daily temperature, lunch count, attendance, or favorite food)

1.25 interpret information displayed on graphs using the vocabulary: less, more, fewer, greater than, and less than

1.26$_{2,3,4}$ **tally by ones, organize the data in a chart/table, and construct a bar graph; read and interpret tally charts and tables**

Geometry and Spatial Sense

1.27$_{2,3,4}$ **draw and describe triangles, squares, circles, and rectangles according to number of sides and vertices (corners)**

1.28 use physical materials to construct, identify, describe, and classify three-dimensional figures: cube, cone, sphere, cylinder, and rectangular solid

1.29 identify three-dimensional figures in the environment
1.30 identify and construct open and closed figures
1.31$_{2,3,4}$ **determine and draw lines of symmetry**
1.32$_{2,3,4}$ **identify and construct plane figures that are congruent (same shape and size) and similar (same shape, different size)**

Measurement

1.33$_{2}$ compare the volumes of two given containers using concrete materials (e.g., sand, jelly beans, rice)
1.34$_{2}$ compare the weight of two objects using a balance
1.35$_{k,2,3,4,5,6,7}$ **use customary, metric, and non-standard units to measure length to the nearest whole unit (e.g., inch, cm, paper clips)**
1.36 explain time concepts in context of personal experiences (e.g., We will go outside in one hour.)
1.37$_{2}$ **name the months of the year and find a date on a monthly calendar(e.g., the fourth Wednesday in March)**
1.38 **read time to the nearest hour and half hour using an analog and digital clock**
1.39 **identify 1 cent, 5 cents, 10 cents, and 25 cents coins**
1.40 **role play making change up to a dime (e.g., using pennies, and/or nickels)**
1.41 **identify the number of pennies equivalent to a nickel, dime, quarter, and dollar**
1.42$_{2,3,4,5,6}$ **select appropriate units to determine length, weight, or volume using standard measurement (e.g., would you use inches, pounds, or cups?)**
1.43$_{k,2,3}$ **compare two objects or events, using direct comparison according to one or more of the following attributes: length, height, weight, temperature, and volume**

Computer and Technology

1.44 use appropriate software to practice and master first grade instructional objectives in mathematics
1.45 turn on/off a student workstation.
1.46 on a keyboard, use letters, numbers, and other special function keys (e.g., shift, delete/backspace, and arrow keys) to input information
1.47 save and/or retrieve a file
1.48 print a document
1.49 identify the uses of technology at home and school
1.50 demonstrate respect for the computer work of others
1.51 identify fundamental computer terms (e.g., Disk, software, hardware, boot/start, cursor, etc.)
1.52 use a calculator to produce repeating number patterns
1.53 use graphing software to create a table and/or bar graph

Grade One Social Studies

The grade one social studies program of study continues the introduction of what constitutes a good citizen by focusing on self and family. Student rights and responsibilities as citizens will be practiced. Rules will be developed and enforced using conflict resolution strategies. The course introduces patriotic traditions and develops an understanding of the connection between past and present. A variety of graphic skills will be incorporated throughout the course including graphs, charts, timelines, and other data collection activities.

Activities will contribute to an understanding of the relationship between people and their environment. Consumer roles in communities and the ways that money relates to those roles will be explored. Good safety practices in communities will be taught. Common geographic features and map symbols will be introduced through simple map construction.

The objectives for elementary West Virginia social studies may be integrated throughout the K-4 curriculum.

Civics

1.1$_{3,4,5,6,7,8,9,10,11}$ name the country/President, state/Governor, town/Mayor

1.2$_{3}$ participate in making classroom rules through experiencing consequences- both positive and negative- and participating in the process of resolving conflicts

1.3$_{3}$ experience various role responsibilities within the classroom and in cooperative learning groups (e.g., group leader, recorder, reporter, collector)

1.4$_{3,4}$ be given the opportunity to recite the Pledge of Allegiance, participate in patriotic singing, and celebrate national holidays

1.5 explain and experience the benefits of volunteerism in the community and at school

1.6$_{3}$ practice safety precautions in role playing situations

1.7 express opinions and accept opinions of others in solving problems and/or resolving conflicts

Economics

1.8$_{3,4}$ identify the name and value of the following coins: penny, nickel, dime, and quarter, and role-play their exchange for goods/services

1.9$_{4}$ compare and contrast occupations in the community

1.10$_{3}$ identify the need to conserve resources through recycling and litter reduction

1.11 make choices from among needs and wants and predict the consequences of those choices

1.12 recognize that although customs and habits differ from one group to another, all people have the same basic needs

Geography

1.13 construct a simple map of a familiar area incorporating cardinal directions and map symbols

1.14$_{3}$ locate on a world map, the United States, the two Americas, the Atlantic and Pacific Oceans, and West Virginia

1.15$_{3}$ describe how climate/weather affects the way people live (e.g., food, clothing, shelter, and recreation)

1.16 sequence the days of the week and months of the year

1.17$_{3}$ given a United States map, identify major geographic features (e.g., rivers, lakes, mountains, and oceans)

1.18 recognize common traffic, safety, and information signs

History

1.19 identify different types of families (e.g., single parent, extended, multi generational) and homes (e.g., apartments, mobile homes, houseboats)

1.20$_{3,4,5}$ investigate family history through two generations (parents, grandparents) and make comparisons to present-day living, using such sources as timelines, interviews, surveys, and graphs

1.21$_{3,4}$ list the major holidays and explain their significance

1.22 explore the values and contributions of heroic men and women past and present

1.23 compare the past to the present by investigating stories of people (e.g., folk tales, pictures, poems, songs, legends, holidays, and customs)

Study Skills

1.24 participate in data collection activities (e.g., polls, surveys) and the graphing of results

1.25 construct and interpret simple maps of the community using cardinal directions, location, a scale, and symbols in a legend

1.26 construct and interpret tables,

charts, and graphs

Computer/Technology

1.27 use graphics software to create tables and graphs
1.28 use appropriate software to practice and master first grade instructional objectives in social studies
1.29 turn on/off a student workstation
1.30 on a keyboard, use letters, numbers, and other special function keys (e.g., shift, delete/backspace, and arrow keys) to input information
1.31 save and/or retrieve a file
1.32 print a document
1.33 identify the uses of technology at school and work
1.34 demonstrate respect for the (computer) work of others
1.35 identify fundamental computer terms (e.g., disk, software, hardware, boot/start, cursor)

Grade One Science

The Coordinated and Thematic Science (CATS) One objectives builds on the process skills and adds data gathering and reporting. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated in all activities. CATS One continues the excitement of learning about the natural world and allows the beginning of experimentation and data collection to emphasize the tools of science and the properties of matter.

Nature of Science

1.1 identify science as a search for answers about themselves and their world (e.g., understand that living things share characteristics, make observations about differences among objects found in nature, distinguish among living and non-living)
1.2 recognize the roles of people involved in science careers
1.3 explore objects and events using the five senses
1.4 describe changes in nature
1.5 probe deeply into natural phenomena by asking and answering questions about the environment (e.g., animals, plants, mountains, rivers)
1.6 use a variety of communication techniques (e.g., sketches, pictographs, models)
1.7 realize that science is never finished by observing changes in the environment (e.g., weather cycles, plant and animal cycles, energy cycles)
1.8 recognize that a solution to one scientific problem often creates new problems (e.g., recycling, pollution)

Scientific Attitudes/Habits of Mind

1.9 ask and answer questions to further an appreciation and joy of discovery of the natural world
1.10 demonstrate innate curiosity, initiative, and creativity by questioning observations of changes in their environment (e.g., life cycles, motion of celestial objects, sun and shadow)
1.11 be in awe and wonder of the patterns, variations, and interactions of natural objects in the environment (e.g., trees,

rivers, rock formations, weather)

1.12 trust observations of changes in the environment (e.g., use of senses)

1.13 listen to and be tolerant of different viewpoints by engaging in collaborative activities

1.14 continue probing phenomena until questions are resolved (e.g., properties of living and non-living, motions of sun and moon)

1.15 recognize that developing solutions to problems takes time and patience

1.16 recognize that science includes both individual and cooperative ventures (e.g., making models, visit scientists at work, read about lives of scientists)

Scientific Processes/Thinking Skills

1.17 develop observation skills (e.g., use of senses)

1.18 collect, record, and compare information (e.g., pictograph, bar graph of heights, months of birthdays)

1.19 use a variety of classification systems (e.g., sorting, sequencing) and associate objects and characteristics (e.g., spirals in shells, growth rings of trees, movement of living things)

1.20 measure the length and width of various objects using standard and non-standard units (e.g., metric ruler, paper clips, counting bears)

1.21 use mathematical skills in scientific investigations (e.g., ordering, sequencing, measuring, graphing)

1.22 describe trends of data and make predictions based on that data (e.g., metamorphosis of frogs, seasonal changes and plants, temperature and weather)

1.23 participate in decision making

Laboratory Investigations/Hands-On Learning

1.24 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

1.25 use scientific equipment and everyday materials to investigate the world (e.g., hand lens, balance, thermometer, seeds, rocks, magnets, calculators, computers)

1.26 use safe and proper techniques for handling, manipulating, and caring for science materials

Science Themes and Subject Matter

1.27 develop an understanding of the scientific themes of systems, changes, and models (e.g., systems is a collection of parts and processes that interact with each other; change occurs gradually, repetitively, or randomly; a model is a picture, description, or a representation of the real thing)

1.28 understand that the study of living and non-living in the natural world integrates living organisms, earth materials, and physical properties of matter

1.29 establish connections across the curriculum (e.g., integrate science with mathematics, social studies, language arts, arts, and/or physical education)

$1.30_{3,4,5}$ compare, sort, and group objects according to size, shape, color, texture, weight, buoyancy, and magnetic properties- *systems*

$1.31_{4,5,6}$ classify objects as living or non-living- *systems*

$1.32_{4,5,6,7,8,9,10,11}$ recognize that water can be a solid (ice), a liquid (rain), and can change from one form to another- *changes*

$1.33_{3,5,6,7,8,9,10}$ identify needs of living things (e.g., food, water, light)- *systems*

$1.34_{3,4,5,6,7}$ recognize, compare, and/or sequence changes in living things (e.g., seed to plant, tadpole to frog, caterpillar to butterfly) -

changes

1.35$_{3,5,7,9}$ construct and/or manipulate models that depict movement of living and non-living things in air, water, space, and on land (e.g., birds and airplanes flying, fish and boats moving through water, animals and vehicles moving on land)- *models*

1.36$_{3,5,6,7}$ recognize that heat can be produced in many ways (e.g., burning, rubbing)- *systems*

1.37$_{3,6,7}$ understand energy types and sources (e.g., sunlight, electricity) and their relationship to heat and temperature- *systems*

1.38 compare the effects of force on an object (e.g., changing direction, stopping, slowing down, speeding up)- *systems*

1.39 notice that objects can change direction when striking a surface (e.g., balls off a wall, light off a mirror)- *changes*

1.40 observe the changes in the object's motion while moving over a surface (e.g., slowing, speeding up, curving)- *changes*

1.41 recognize that sound may change in volume as it travels through different substances (e.g., air, water, wood)- *changes*

1.42$_{3,5,6,8,10}$ examine objects with magnetic properties and observe the changes in fields (e.g., magnet and iron filings between transparencies)- *changes*

1.43 draw pictures of objects that produce heat (e.g., sun, stove, toaster)- *models*

1.44 record/draw a person's shadow at different times of the day- *models*

1.45 construct a model of a simple machine to show how to make work easier (e.g., lever, wedge)- *models*

1.46 construct a musical instrument to demonstrate that sounds are produced by vibrations (e.g., rubber band guitar)- *models*

1.47$_{3}$ compare the day sky with the night sky- *systems*

1.48$_{3}$ identify stars as very distant objects that give off light- *systems*

1.49 explain that the moon reflects light from the sun- *systems*

1.50 identify reasons why the sun is important- *systems*

1.51 identify bodies of water and landforms on Earth- *systems*

1.52$_{3}$ identify important uses of air- *systems*

1.53$_{3}$ identify various weather changes (daily and by seasons) and their effect on living organisms- *changes*

1.54$_{3,4}$ observe and record changes in weather- *changes*

1.55 record temperature at different times of the day (e.g., cool morning, warm at noon)- *changes*

1.56$_{3}$ understand that the sun, moon, and stars appear to move- *changes*

1.57$_{3}$ infer that heat is energy and some materials transfer heat better than others- *changes*

1.58 identify the globe as a model of the Earth- *models*

1.59$_{3}$ compare imprints (e.g., animal tracks, leaf prints, shell prints)- *models*

1.60 construct a wind machine to show wind direction (e.g., wind sock)- *models*

1.61$_{3,4,5,7,9}$ recognize that earth materials consist of solids (e.g., rocks, soils), liquids (e.g., water), and gases (e.g, air) in the atmosphere- *models*

1.62$_{3,9}$ observe and explain the water cycle (e.g., Ziploc bag with water taped to windows)- *models*

Science History

1.63 study the lives and discoveries of scientists (e.g., use short stories, films, and videos) about men and women of science and visit their places of work)

1.64 recognize that science changes over time (e.g., stars appear and disappear, new animals replace dinosaurs)

1.65 realize that scientists will continue to discover new things (e.g., listen to reports and news articles about new stars, plants, and animals and visit with scientists about their work in laboratories)

Science, Technology, and Society

1.66 recognize that there are many science-related careers through the use of speakers, field trips, audio-visual, and/or printed material (e.g., astronomer, geologist)

1.67 recognize that science skills are used in careers not usually related to science (e.g., carpenter, bee keeper)

1.68 develop an awareness of how technology has positively or negatively affected the quality of life in West Virginia and the world (e.g., electromagnets, power lines)

1.69 recognize that common daily events involve science (e.g., CD players, Velcro, weather)

1.70 develop respect and responsibility for the environment by recognizing the interrelationship of living and non-living things and engaging in conservation practices

Computer/Technology

1.71 use appropriate software to practice and master first grade instructional objectives in science

1.72 turn on/off a student workstation

1.73 on a keyboard, use letters, numbers, and other special function keys (e.g., shift, delete/backspace, and arrow keys) to input information

1.74 save and/or retrieve a file

1.75 print a document

1.76 identify the uses of technology at school and work

1.77 demonstrate respect for the computer work of others

1.78 identify fundamental computer terms (e.g., disk, software, hardware, boot/start, cursor)

1.79 using the graphing application of appropriate software, create tables and/or bar graphs

1.80 use a calculator to perform mathematical functions in data analysis

Grade Two
English Language Arts

In grade two, students will continue to be immersed in a literature-rich environment to encourage exploration of various literary forms. Experiencing a total English Language Arts program, enriched by technology, second graders will apply skills mastered through reading, speaking, listening, and writing activities across the curriculum. Using a combination of writing strategies, students will be able to read with comprehension, to speak and listen effectively, and to develop both literal and critical thinking skills. Second graders will develop from dependent to independent readers/learners, and will begin to make their own choices for recreational and informative reading.

Listening/Speaking

2.1$_{1,3,4,5,6,7,8}$ **given descriptive words and other specific vocabulary, identify synonyms, antonyms, homophones, and homonyms**

2.2$_{1,3,5,6,7,8}$ **use story content and personal background to make predictions**

2.3$_{1,3,4}$ **given a narrative, make inferences based upon story characters and actions**

2.4$_{3,4}$ **given a narrative, differentiate between factual information and information based on opinion**

2.5$_{1,5,6,7,8}$ **listen to a story, remember information to interpret or extend meaning, evaluate material, or perform a task**

2.6$_{1,3,4}$ **listen to a story, place events in correct sequence**

2.7$_{1,3}$ **identify the beginning, middle, and end of a narrative**

2.8$_{1}$ **hearing a narrative, utilize pictures as well as print options to enhance comprehension (e.g., illustrate part of a story and label with a sentence)**

2.9$_{3,4}$ **given a narrative, identify the main idea and supporting details to determine the purpose of a passage**

2.10$_{1,5,6,7,8}$ **listen to a variety of literary forms, respond to, explore, and imagine beyond story**

2.11 participate in class discussions, following rules for conversation (e.g., utilizing communication technologies)

2.12 create and share stories orally with an audience

2.13 ask for clarification and/or explanation of words and ideas

2.14 state and follow directions with three or four steps

2.15 orally identify and manipulate phonemes in syllables and words

2.16 discriminate long and short vowel sounds

2.17 given a word, create rhyming word families

2.18 demonstrate appropriate listening and speaking behaviors after differentiating between active listening and hearing

Reading Comprehension

2.19$_{1,3,4,5,,6,7,8,9,10,11}$ **read literary works by national and international authors to include, but not limited to: humor, irony, make-believe, fiction, nonfiction, fairy tales, tall tales, and poetry**

2.20$_{1,3,4,5,,6,7,8,9}$ **interpret recreational, textual, and functional material**

2.21$_{K,1,3,4,5,6,7,,8,9,10,11}$ **use informational text (trade books, textbooks, magazines, and reference sources)**

2.22$_{K,1,3,4,5,6,7,8,9,10,11}$ **determine differences between fiction and nonfiction selections**

2.23$_{5,6,7,8,9,11}$ **analyze the organizational structure, author's style, and text characteristics to determine genre**

2.24$_{K,1}$ **identify single consonants/sounds in initial, medial, and final word**

positions

2.25 **identify short and long vowels and their sounds**

$2.26_{K,1}$ **identify two and three letter consonant blends and digraphs in initial, medial, and final word positions**

2.27_{1} **identify "other vowel" sounds (e.g., diphthongs, digraphs, r-controlled vowels, vowel variants, and schwa sound [away])**

2.28 identify consonant and vowel patterns

2.29 differentiate between rhyming and non-rhyming words and word families

2.30_{1} **recognize word parts to decode and assign meaning to words**

2.31 identify base/root words in an extended word

2.32 identify words with suffixes (e.g., -ful, -less) and prefixes (e.g., un-, re-)

2.33_{1} **identify words with inflectional endings (e.g., -ed. -ing, -s, -es, -er, -est)**

2.34_{1} **identify contractions by matching them with the two words being replaced**

2.35 identify nouns showing possession

2.36_{1} **identify compound words**

2.37 use long word decoding strategies to identify words and count syllables

2.38 use a pronunciation key

$2.39_{K,1,5,9}$ **use illustrations and text to read for meaning in sentences and paragraphs**

$2.40_{3,4,5,6,7,9,10,11}$ **use context clues to determine a reasonable meaning of an unknown word**

$2.41_{K,1,3,4,5,6,7,8,9,10,11}$ **determine sequence of events from stories and written text**

$2.42_{K,1,3,11}$ **comprehend and follow steps in a process and determine reasons and/or cause-effect relationships related to these steps**

$2.43_{5,6,9,10,11}$ **read to perform a task**

$2.44_{3,4,5,6}$ **locate sources of additional information on a specific topic**

2.45 **recall details of a passage and identify the main idea of a selected reading**

2.46 read sight words fluently from an appropriate grade level word list

2.47 **understand first-person narrative**

2.48 use figurative language (e.g., similes, metaphors)

2.49 determine relationships of events, characters, and objects in a story with regard to position, function, time, and quantity

$2.50_{5,8,10}$ **use graphic organizers such as story maps and Venn diagrams to compare, contrast, and construct meaning**

$2.51_{1,3,4,5,6,7,8,9,10,11}$ **respond to both literal and interpretive comprehension questions after reading a short story selection**

$2.52_{K,3,4,5,6,9,11}$ **predict outcomes based upon an understanding of the events and/or characters as described in a story**

$2.53_{3,4}$ **incorporate all key concepts or the larger meaning of the text to select the best title for a selection**

$2.54_{3,4,5,6,7,8,911}$ **empathize, relate to, and determine the motivations of characters within a story**

2.55 **use understanding and prior knowledge to apply rules to a specific situation**

$2.56_{3,5,8,10,11}$ **identify author's purpose for writing and the organization used to accomplish that purpose**

$2.57_{K,1,3}$ **use visualization techniques to determine and compare similar characteristics of objects described in a passage**

2.58 explain personal reaction to a selection

2.59 discriminate between reality and fantasy and between fact and opinion

2.60 recognize descriptive language in literary works, including but not limited to, poetry

2.61 infer unstated information in a selection by asking "why" questions

2.62 given a selection, draw

conclusions and generate a brief summary

2.63 given a selection, identify characters, plot, and setting

2.64 select and read books for independent, recreational reading

Reading Vocabulary

2.65$_{3,4,5,6,7,8,9,10,11}$ **recognize synonyms, antonyms, homonyms, and homophones for identified vocabulary words**

2.66$_{3,4,5,6,7,8,9,10,11}$ **recognize the correct meaning of a multiple-meaning word when presented in text**

2.67$_{3,4,5,6,7,8,9,10,11}$ **apply context clues to determine the meaning of an unknown word**

2.68 given a variety of reading material, increase the number of recognized words in presented text

Writing

2.69 maintain appropriate handwriting posture

2.70 maintain appropriate position of hand/pencil and paper/desk

2.71 write legible manuscript letters and numerals (0-9) using appropriate strokes

2.72 evaluate manuscript writing in terms of letter formation, alignment, proportion, spacing, and line quality

2.73 write legible cursive letters using appropriate strokes and joinings

2.74 self-evaluate cursive writing in terms of letter formation, alignment, proportion, spacing, and line quality

2.75 use the five-step writing process (e.g., prewrite, draft, revise, edit, publish) across the curriculum

2.76 compose a simple sentence using a subject and predicate differentiating between types of sentences (e.g., declarative, interrogative, exclamatory, and imperative)

2.77 compose a short paragraph with a clearly identified beginning, middle, and end containing a main idea and supporting details

2.78 develop various types of writing including, but not limited to: personal narratives, stories, descriptions, friendly letters, book reports, poetry, and journal entries

2.79 use electronic and traditional editing strategies to spell words correctly (e.g., proper nouns, in and inn [homophones])

Spelling

2.80 correctly spell basic sight words

2.81 correctly spell consonant sounds in initial, medial, and final positions including blends and digraphs

2.82 correctly spell vowel sounds including long and short vowels, vowel digraphs(e.g., ea as in bread, oa as in boat), and vowel dipthongs (e.g., oi, oy, oo, ou, aw, ow, ew)

2.83 correctly spell nouns, verbs, and root words with inflectional endings (e.g., -d, -ed, -s, -es, -ing, -er, -est)

2.84 make structural changes as needed when adding -ing, -ed, -er, or -est to base/root words ending in silent e

2.85 double a final consonant letter when necessary before adding an ending

2.86 change final "y" to "i" when necessary before adding an ending

2.87 correctly spell phonetically irregular words (e.g., could, they, one)

2.88 correctly spell irregular verbs and irregular plural nouns (e.g., knew, known, teeth, mice, wives, wolves)

2.89 correctly spell contractions

2.90 correctly spell compound words

2.91 correctly spell words with silent consonants (e.g., kn-, wr-, -mb)

2.92 use spelling patterns (e.g., taught- caught; light- right)

Language

2.93$_{1}$ **alphabetize words beginning with different letters and**

beginning with the same letter

2.94 differentiate between common and proper nouns

2.95$_{1,3,4,5,6,7,8,9,10,11}$ **capitalize first word in a sentence, pronoun "I", titles and initials, titles of written works, greeting and closing of a letter, and proper nouns (e.g., family names, months of the year, days of the week)**

2.96$_{1,3,4,5,6,7,8,9,10,11}$ **identify and use correct punctuation: period (e.g., end of sentence, abbreviations, initials); question mark; exclamation point; comma (e.g., in dates, after greeting and closing of letter, to separate city and state or country, with items in a series); quotation marks; and apostrophe (e.g., contractions, possessives)**

2.97$_{1,3,4,5,6,7,8,9,10,11}$ **use correct subject-verb agreement with proper regular and irregular verb formations**

2.98$_{1,3,4,5,6,7,8,9,10,11}$ **use past and present tense correctly**

2.99$_{1,3,4,5,6,7,8,9,10,11}$ **recognize and write correctly formed sentences (e.g., telling, asking, exclamation, command)**

2.100$_{1,3,4,5,6,7,8,9}$ **recognize and correct sentence fragments**

2.101$_{1,3,4,5,6,7,8,9,10,11}$ identify and correct errors in language expression and sentence construction

2.102$_{1,3,4,5,6,7,8,9,10,11}$ **identify sentences that would or would not support ideas in a text**

2.103 write a paragraph using correct form containing a main idea and supporting details

2.104 recognize and appropriately use parts of speech in their own writing (e.g., nouns, pronouns, verbs, adjectives, and adverbs)

2.105$_{1,3,4,5,6,7,8,9,10,11}$ **determine the purpose, audience, and intent of written composition**

2.106$_{6,7,8,9,10,11}$ **organize information and make decisions about what information is necessary and important to include**

2.107 express experiences adequately to relate ideas

Study Skills

2.108$_{3,4,5,6,7,9,10,11}$ **determine if a given word is on a dictionary page when guide words are supplied**

2.109 use the dictionary for pronunciation, spelling, and meaning

2.110 acquire organizational skills to manage school materials, personal time management, and information to be studied (e.g., sequence, timeline, mapping)

2.111$_{5,6,7,8,910}$ given a book, identify the author, illustrator, and title and be able to use the table of contents, glossary, and index

2.112 follow written directions with multiple steps

2.113 use a study plan to spell new words (e.g., look-say-spell-write-check)

2.114 choose/narrow a topic for story paragraph writing

2.115 adjust reading rate to purpose

2.116 interpret graphic sources (e.g., charts, tables, graphs, lists, schedules, diagrams, maps, and timelines)

2.117 practice and use test-taking strategies (e.g., read directions carefully, read for key words, budget time, read all choices)

Computer/Technology

2.118 use appropriate software to practice and master second grade English language arts instructional objectives

2.119 demonstrate correct keyboarding posture and finger placement for the home row keys

2.120 on a keyboard, locate and use symbol keys (e.g., period, question mark, Caps Lock, arrow keys, shift, and ESC)

2.121 using a word processing program, input information such as spelling words, vocabulary words and definitions, journal writing, etc

2.122 use a mouse to "click and drag"

2.123 execute a program from disk and/or CD-ROM
2.124 identify the uses of technology in the community
2.125 describe the right of an individual to ownership of his/her (computer) work
2.126 identify the function of the various components of a computer system (e.g., monitor, keyboard, CPU, disk drive, CD-ROM, printer, etc)
2.127 use graphic software to read and interpret information from charts and bar graphs (2.116)

Grade Two Mathematics

The second grade objectives help a student to become a more independent problem solver through concrete and technology related experiences which explore: new problem solving strategies, everyday use of mathematical language, and reasonableness and interrelationships of mathematics. Additional concepts include: place value through hundreds, addition and subtraction of three digit numbers, multiplication facts through the fives and related division facts, estimation, introduction of properties of mathematics, and measurement which includes spatial perception.

Number Theory and Number Sense

2.1 **count forward and name numbers to 1000**
2.2_3 **compare and order numbers through 1000; identify the set with the fewest or most elements**
2.3 identify and construct models for numbers through 1000 using concrete materials
2.4 **model and count by twos and fives to 100 and by threes and fours to 96 using mental math, paper/pencil, hundred chart, calculators, and concrete objects**
2.5 **identify the ordinal positions first through twentieth using ordered sets of objects**
2.6 identify the number before or after any number through 1000
2.7 **group and count concrete items by ones, tens, and hundreds and identify the place value; find the place value of a digit in the tens place**
2.8 **read and write three digit numbers, utilizing standard and expanded form**
$2.9_{3,4}$ **model and identify odd and even numbers with and without objects**
2.10 **identify and model 100 more than and 100 less than a given number**
$2.11_{3,4}$ estimate, by front-end digit and rounding, numbers to the nearest hundred

Fractions and Decimals

$2.121_{3,4,5}$ **identify fraction models that are part of the whole and/or group**

Whole Number Operations and Computations

2.13_1 **recall basic addition facts with sums to eighteen and the corresponding subtraction facts**
$2.14_{1,6}$ **identify the identity element (0) for addition**
2.15_1 **identify a number sentence that represents the commutative property of addition**
2.16_3 **model and solve without modeling two digit addition and subtraction with regrouping and write the corresponding number sentence**
$2.17_{3,4}$ **given two whole numbers whose sum is 99 or less; estimate the sum, and find the sum using various methods of**

calculation (mental computation, concrete materials, and paper/pencil)

2.18$_{3,4}$ **given two whole numbers whose sum is 99 or less, estimate the difference, and find the difference using various methods of calculation (mental computation, concrete materials, and paper/pencil**

2.19$_{3,4}$ **model and solve without modeling three digit addition and subtraction with and without regrouping**

2.20 **solve addition and subtraction problems using data from simple charts, picture graphs, tables, patterns, and word problems. Problems will require a two step solution**

2.21$_{3,4}$ **given a simple addition or subtraction fact, recognize and describe the inverse relationship between addition and subtraction (e.g., 3+_=7, 7-3=_ and 7-_=3)**

2.22$_{3}$ **model multiplication facts and the corresponding division facts using objects, a number line, and repeated addition; then write the corresponding number sentence**

Patterns and Relationships

2.23$_{k,1,3,4,5,6,7,8}$ **analyze, extend, describe, and create a wide variety of growing patterns (e.g., using numbers, rhythm, shape, and calculators)**

Probability and Statistics

2.24$_{1,3,4}$ **record data from simple experiments using spinners and colored tiles/cubes, and use the data to predict which of the two events is more likely and less likely to occur if the experiment is repeated**

2.25 **create, read, and interpret a pictograph with each picture representing greater than a single unit**

2.26$_{1,3,4}$ read and interpret tables and tally charts

2.27$_{3,4,5,6,7}$ locate ordered pairs on a grid

Geometry and Spatial Sense

2.28 identify and describe a cube, rectangular solid, cylinder, cone, and pyramid according to the number of faces, edges, bases, and vertices

2.29 compare and contrast plane and solid geometric shapes (circle/sphere, square/cube, triangle/pyramid, and rectangle/rectangular solid)

2.30$_{3,4}$ **given a design with a line of symmetry, construct the mirror image**

2.31 describe the shape created by combining two or more two-dimensional shapes

2.32 identify and construct lines, line segments, and rays and angles using a straight edge

2.33$_{3,4,5,6,7,8,9,10,11}$ **identify rotations and reflections**

2.34$_{3,4}$ **identify plane figures**

2.35$_{3,4}$ **identify congruent figures**

2.36$_{1,3,4}$ **identify geometric figures by the number of sides and vertices (corners)**

Measurement

2.37$_{3,4}$ **estimate and then use a ruler to determine linear measurement to the nearest centimeter and inch; then compare lengths and determine perimeter (the distance around a polygon)**

2.38$_{3,4}$ given grid paper, estimate and count the number of square units needed to cover a given area

2.39 estimate and count the number of cubes in a rectangular box (determine volume)

2.40 estimate and determine weight/mass of familiar objects in pounds and kilograms

2.41 use standard measuring tools for measuring capacity in metric and customary units

2.42$_{3,4}$ read Celsius and Fahrenheit thermometers

2.43 order events in relation to time

2.44 **given a calendar, determine past and future days of the week and identify specific dates**

$2.45_{3,4,5,6,7,8}$ **read time to the nearest quarter hour using an analog and a digital clock and calculate the elapsed time**

2.46 **identify and order all coins (penny, nickel, dime, quarter, half-dollar)**

$2.47_{3,4}$ **role play making change to a dollar using adding/counting on**

$2.48_{1,3,4,5,6}$ **select appropriate units to determine length, weight, or volume using metric measurement (e.g., would you use centimeters, grams, or liters)**

Computer and Technology

2.49 use appropriate software to practice and master second grade instructional objectives in mathematics

2.50 practice correct keyboarding posture and finger placement for the home row keys

2.51 on a keyboard, use symbol keys (e.g., Plus, minus, equal, and dollar sign)

2.52 use a mouse to "click and drag"

2.53 execute a program from disk and/or CD-ROM

2.54 identify the uses of technology in the community

2.55 use a calculator to count by twos and fives to 100, and by threes and fours to 96

2.56 use a calculator to find the sum/difference of two whole numbers whose sum/difference is less than 99

2.57 use a calculator to produce a wide variety of growing number patterns

2.58 describe the right of an individual to ownership of his/her (computer) work

2.59 identify the function of the various components of a computer system (e.g., monitor, keyboard, CPU, disk drive, CD-ROM, printer, etc)

Grade Two Social Studies

The second grade social studies program emphasizes the broader roles of citizenship. Distinguishing basic governmental functions, patriotic symbols and traditions, as well as reporting and discussing current events, will build understanding of the child as a citizen in a democratic nation. Volunteerism and service projects in the school and community will be encouraged. Basic economic concepts, such as needs versus wants and scarcity, will be taught at this level. Classroom strategies will include activities in resource conservation and environmental preservation. The creation and interpretation of a variety of graphic tools, including charts, graphs, timelines, maps, and globes, will be integrated. Conflict resolution skills will be taught and implemented. The objectives for elementary West Virginia social studies may be integrated throughout the K-4 curriculum.

Civics

$2.1_{3,4,5,6,7,8,9,10,11}$ identify functions of the following governmental bodies: Congress, state legislature, and city council

2.2_{3} explain the difference between laws and rules and participate in the writing of "mock" rules for the school

$2.3_{3,4}$ be given the opportunity to recite the Pledge of Allegiance, sing the National Anthem, participate in national celebrations, and identify famous Americans

2.4 choose and participate in a project of volunteer service to the

school

2.5 identify and practice components of conflict mediation within the school community

2.6_3 identify appropriate safety responses to a variety of dangerous situations (e.g., fire, traffic, strangers, drugs)

2.7 recognize the need for responsible authority figures and identify the characteristics of good leaders in various situations

2.8 demonstrate increasing self-control (e.g., respecting the rights, space, and property of others in classroom and school activities)

2.9 identify people who make a difference in our lives, (e.g., ancestors, neighbors, community members, and people from books and other media sources)

Economics

$2.10_{3,4,6}$ demonstrate knowledge of needs and wants in relation to making appropriate personal choices

$2.11_{3,4,5,9}$ explain the role of banks in securing goods/services

2.12 practice bartering as an alternative method of securing goods/services and needs/wants

2.13_4 explore career options

2.14_3 participate in resource conservation and environmental preservation through recycling and litter reduction awareness activities

Geography

2.15 given a map, demonstrate knowledge of cardinal directions and a compass rose by identifying locations in relation to a base marker

$2.16_{3,4,5,6,7,8,9,10,11}$ demonstrate knowledge of map legends by interpreting legend symbols

$2.17_{3,4,5,6,7,8,9,10,11}$ given a world map and globe, locate the seven continents and the four oceans

2.18 name the months of the year and the four seasons

$2.19_{3,4,5,6,7,8,9,10,11}$ given a map, identify major geographic features (rivers, lakes, oceans, islands, continents, and mountains)

History

$2.20_{3,4,5}$ investigate change over time that has occurred in the community

$2.21_{4,9}$ investigate current events through various media (e.g., student newspaper, T.V., news broadcasts)

$2.22_{3,4,7}$ investigate the role of Native Americans in the history of the United States

$2.23_{3,6}$ celebrate historic movements, (e.g., women's history, African American history)

2.24 explore American heritage through children's literature

2.25 investigate the history of the community by identifying locally significant sites and people

2.26 understand that a particular gender or race does not give one rights over others

Study Skills

$2.27_{3,5,6}$ use a map scale to construct class and school maps

$2.28_{3,4,5,6,7,8,9,10,11}$ construct, read, and interpret graphs, charts, tables, and maps of familiar areas

$2.29_{3,4,5,6,7,8,9,10,11}$ utilize and draw conclusions from various data collection methods (e.g., graphs, charts, and timelines)

Computer/Technology

2.30 use graphics software to create graphs and charts

2.31 use appropriate software to practice and master second grade instructional objectives in social studies

2.32 practice correct keyboarding posture and finger placement for the home row keys

2.33 use a mouse to "click and drag"

2.34 execute a program from disk and/or CD-ROM

2.35 identify the ways technology changes the lives of people in the community

2.36 describe the right of an individual

to ownership of his/her (computer) work

2.37 identify the function of the various components of a computer system (e.g., monitor, keyboard, mouse, disk drive, CD-ROM, printer)

Grade Two Science

The Coordinated and Thematic Science (CATS) Two objectives build upon the early stages of experimentation and maintenance of natural curiosity. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics and earth sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes and models. Students will engage in active inquires, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated in all activities. CATS Two will provide opportunities for developmental and academic growth. The activities will introduce the concepts that science and technology are interrelated. The curricular thrust will be to develop early problem-solving skills through observation, experimenting and concluding.

Nature of Science

2.1 determine that science is a search for answers and an understanding of the world (e.g., classify plants and animals based on observations, compare likenesses and differences among plants and animals, observe changes in the environment caused by humans and/or nature)

2.2 identify the role of community people in science careers

2.3 compare and contrast objects and events using the five senses

2.4 identify examples of changes in nature

2.5 probe deeply into natural phenomena by asking and answering questions about the environment (e.g., animals, plants, mountains, rivers, deserts, grasslands, weather)

2.6 use a variety of communication techniques (e.g., pictographs, models, simple bar graphs, logs)

2.7 realize that science is never finished by observing changes in the environment (e.g., weather cycles, energy cycles, life cycles)

2.8 recognize that a solution to one scientific problem often creates new problems (e.g., recycling, pollution, conservation)

Scientific Attitudes/Habits of Mind

2.9 ask and answer questions while participating in investigations that lead to an appreciation and joy of discovery of the natural world

2.10 demonstrate innate curiosity, initiative, and creativity by observing, classifying, and comparing (e.g., states of matter, structure and function of living and non-living things)

2.11 be in awe and wonder of the patterns, variations, and interactions of natural objects in the environment (e.g., sun, earth and moon, plant and animal structures)

2.12 trust observations of living and non-living things in the environment (e.g., wild and domesticated animals, weather phenomena)

2.13 listen to and be tolerant of different viewpoints by engaging in collaborative activities and coming to a group decision

2.14 continue probing phenomena until questions are resolved (e.g.,

properties of living and non-living things, interaction of objects)

2.15 engage in problem-solving activities that have multiple solutions or explanations

2.16 recognize that science includes both individual and cooperative ventures (e.g., group solutions to problems, individual collections of living and non-living things)

Scientific Processes/Thinking Skills

2.17 observe, collect and record information (e.g., graphing, ordering, sequencing, measuring)

2.18 use a variety of classification systems (e.g., properties of living and non-living things)

2.19 use mathematical skills in SI (metric) units in investigations (e.g.,addition and subtraction, measurement of length, weight, and temperature)

2.20 use data to make predictions and construct reasonable explanations (e.g., sink and float, magnetic and non-magnetic objects, growth rate of plants)

2.21 plan and conduct simple investigations

Laboratory Investigations/Hands-On Learning

2.22 engage in active inquiries, investigations and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

2.23 manipulate scientific instruments and everyday materials to investigate the natural world (e.g., hand lens, balance, thermometer, metric ruler, magnets, bulbs and batteries, weather instruments, calculators, computers)

2.24 use safe and proper techniques for handling, manipulating, and caring for science materials.

Science Themes and Subject Matter

2.25 develop an understanding of the scientific themes of systems, changes, and models (e.g., a system consists of many parts that which interact with each other and give rise to new properties; change occurs gradually, repetitively, or randomly; a model is a picture, description, or representation of the real thing)

2.26 understand that the study of living and non-living objects in the natural world integrates living organisms, earth materials, and physical properties of matter

2.27 establish connections across the curriculum (e.g., integrate science with mathematics, social studies, language arts, arts, and/or physical education)

$2.28_{3,4,5,6,8,10}$ compare, sort, and group objects according to size, shape, color, weight, texture, buoyancy, magnetic properties and states of matter -*systems*

$2.29_{3,4,5,6,7,8}$ identify the structures of living things and explain their functions (e.g., wings for flying, fins for swimming, flowers for attracting insects, physical characteristics inherited from parents) - *systems*

$2.30_{3,5,6,7,8,9,10}$ observe, classify, compare, investigate, record and discuss needs of living things in different environments - *systems*

$2.31_{3,4,5,6,7}$ observe, record, predict and discuss changes in living things (e.g., adaptations, growth and development) - *changes*

$2.32_{3,4,5,6,7,8}$ construct and/or manipulate models that depict movement, structures, and functions of living things (e.g., animal movements, plant parts) models

$2.33_{3,4,5,6,7,8}$ identify substances, mixtures and simple solutions -*models*

$2.34_{3,5,6,8,10}$ demonstrate that a magnet can attract or repel objects - *systems*

2.35 illustrate ways to produce sound

(e.g., striking and plucking strings) - *systems*

2.36$_{4,5,6,7,8,9,10,11}$ explain energy types, sources and their relationship to heat and temperatures - *systems*

2.37 recognize that sound can change in pitch and volume - *changes*

2.38 investigate how matter changes from one state to another (e.g., melting, freezing, boiling) - *changes*

2.39 draw a picture of an electric circuit illustrating that electricity travels -*models*

2.40 recognize that some materials conduct heat better that others (e.g., metals) - *models*

2.41 conclude that solids, liquids, and gases take up space - *models*

2.42 recognize that a shadow is cast when an object blocks light - *systems*

2.43$_3$ explain how the Earth rotating on its axis causes day/night - *systems*

2.44 identify structural adaptations that benefit living organisms - *systems*

2.45 describe the water cycle and identify various sources of water - *systems*

2.46$_{5,6,9,11}$ distinguish changes in the atmosphere (e.g., wind movement) - *changes*

2.47 collect and observe the amount of rain in one week - *changes*

2.48 examine changes in non-living things (e.g., events that shape the Earth) - *changes*

2.49$_3$ understand that the moon has phases - *changes*

2.50$_3$ describe how fossils are formed - *changes*

2.51$_3$ construct a collage of resources used for heating homes and buildings - *models*

2.52$_3$ construct and explain models (e.g., sun, moon, earth and landforms) - *models*

2.53$_{3,4}$ construct a chart showing weather conditions over a period of time -*models*

2.54$_3$ sequence pictures of events to illustrate the passage of time - *models*

2.55 use a map key to identify features (e.g., mountains, rivers, lakes) - *models*

2.56$_3$ match a fossil or a picture of a fossil, with a picture of its original organism (e.g., dinosaur shell, fern) - *models*

Science History

2.57 study the lives and discoveries of scientists of different cultures and backgrounds (e.g., read stories about Thomas Edison, Jacques Cousteau, Alexander Graham Bell, and Rachel Carsen and visit scientists in their laboratory

2.58 recognize that science changes over time (e.g., earth features change shape, variations of birds appeared, plants of long ago became coal)

2.59 realize that scientists will always have new things to discover (e.g., galaxies, diseases, plants, and animals)

Science, Technology and Society

2.60 understand that there are many science-related careers through the use of speakers, field trips, audio-visual, and/or printed material (e.g., inventor, meteorologist)

2.61 understand that science skills are used in careers not usually related to science (e.g., piano tuner, photographer)

2.62 understand how technology has positively or negatively affected the quality of life in West Virginia and the world (e.g., solar energy use, sound "pollution")

2.63 understand that common daily events involve science (e.g., food, electricity, toys, transportation)

2.64 develop respect and responsibility for the environment by recognizing the interrelationship of living and non-living things and engaging in conservation practices

Computer/Technology

2.65 use appropriate software to practice and master second grade instructional objectives in science

2.66 practice correct keyboarding posture and finger placement for the home row keys

2.67 use a mouse to "click and drag"

2.68 execute a science program from disk and/or CD-ROM

2.69 using the graphing application of appropriate software, create tables and/or bar graphs

2.70 use appropriate software to practice reading and interpreting graphs and charts

2.71 identify the ways technology changes the lives of people in the community

2.72 describe the right of an individual to ownership of his/her (computer) work

2.73 identify the function of the various components of a computer system (e.g., monitor, keyboard, mouse, disk drive, CD-ROM, printer)

2.74 use a calculator to perform mathematical functions in data analysis

Grade Three
English Language Arts

The third grade student will learn, practice, and apply strategies associated with a total English Language Arts program focused on preparing literate, independent, self-motivated, critical thinkers who take responsibility for their own learning. Students will be engaged in reading and responding to a variety of literature using both literal and critical comprehension skills. Students will communicate orally in large and small group settings. The student will interact with and respond to text and technology in purposeful situations across the curriculum. Proficiency in reading, writing, listening, speaking, and research skills will foster an appreciation for literature and will allow students to make connections between their experiences and the academic disciplines.

Listening/Speaking

- 3.1$_{1,2,4,5,6,7,8}$ **given descriptive words and other specific vocabulary, identify synonyms, antonyms, homonyms, and word meaning**
- 3.2$_{1,2,4}$ **listen to a story, draw conclusions regarding the source of information, characters, events, setting, and purpose**
- 3.3$_{1,2}$ **use story content and prior knowledge to make predictions**
- 3.4$_{4}$ **determine titles for narratives, paragraphs, stories, and student writing**
- 3.5$_{1,2,4}$ **given a dictated paragraph or set of directions, identify stated details**
- 3.6$_{1,2,4}$ **given a dictated paragraph, determine the main idea**
- 3.7 **given a dictated story, paraphrase, summarize, ask questions, make inferences, and identify author's opinion**
- 3.8$_{1,2,4}$ **recognize the sequence of events in a story or a set of directions**
- 3.9 use graphic organizers and visualization techniques to determine meaning
- 3.10 listen to a variety of literary forms
- 3.11 after differentiating between active listening and hearing, demonstrate appropriate listening and speaking behaviors (e.g., utilizing communication technologies)
- 3.12 given a speaking assignment, determine audience and purpose of presentation (e.g., persuade, entertain, inform)
- 3.13 given a topic, present information orally using specific vocabulary
- 3.14 make an oral presentation using appropriate volume, pitch, and rate of speech

Reading Comprehension

- 3.15$_{1,2,4,5,6,7,8,9,10,11}$ **read literary works by national and international authors to include, but not limited to: legends, folktales, and non-fiction**
- 3.16$_{K,1,2,4,5,6,7,8,9,10,11}$ **identify explicitly stated information including, but not limited to: story elements (e.g., setting, characters, plot), a set of directions, and functional reading (e.g., invitations, bulletins)**
- 3.17$_{K,1,2,4,9,10,11}$ **determine sequence (e.g., events in a story, set of directions, and/or a missing item)**
- 3.18$_{2,4,5,7,8,9,10,11}$ **use context clues to determine word meaning**
- 3.19$_{K,1,2,4,5,6,7,8,9,10,11}$ **recognize characteristics of a fictional and non-fictional story**
- 3.20$_{K,2,4,5,6,7,8,9,11}$ **draw conclusions regarding character (e.g., feelings, moods, traits, motives, point of view)**
- 3.21$_{K,1,2,4,5,6,7,8,9,10,11}$ **draw conclusions about a sequence of activities in an announcement or advertisement**

3.22$_{2,11}$ draw conclusions regarding the identity of certain objects when specific details are given

3.23$_{6,7,8,9,10,11}$ compare and contrast in order to draw conclusions regarding a story

3.24$_{K,2,4,9}$ make predictions based on prior knowledge and story information

3.25$_{2,4}$ determine an appropriate title for a reading selection or a story

3.26$_{2,4,5,8,9,10}$ identify theme, main idea, and author's purpose in a selection when it is not explicitly stated

3.27 paraphrase, summarize, compose questions, and make inferences about material read

3.28$_{2,5,6,9}$ recognize other resources where additional information on a specific topic can be located (e.g., dictionary, encyclopedia)

3.29$_{2,5,6,9}$ identify possible sources of functional information (e.g., where would such information probably appear)

3.30 identify cause and effect related to a given event (e.g., what happened and why)

3.31 make generalizations regarding story elements

3.32 recognize figurative language (e.g., similes, metaphors, and idioms)

3.33 chooses and responds to a variety of reading material for pleasure and information

3.34 experience content through imagery (visualizing)

Reading Vocabulary

3.35$_{2,4,5,6,7,8,9,10,11}$ recognize synonyms, antonyms, homonyms, and homophones for identified vocabulary words presented in isolation or within a group of words

3.36$_{2,5,6,7,8,9,10,11}$ recognize the correct meaning of a word with multiple meanings when presented in text

3.37$_{K,2,4,5,6,7,8,9,10,11}$ apply structural analysis and context clues to decode and encode words

3.38 identify and use content area vocabulary

3.39 given a variety of reading material, increase the number of recognized words presented in text

Writing

3.40 demonstrate proper manuscript and cursive writing techniques (e.g., posture, paper placement, pencil grip, letter formation, slant, letter size, spacing, rhythm, and alignment)

3.41 use the writing process (e.g, prewriting, drafting, revising, editing, publishing) across the curriculum

3.42 develop various types of writing including but not limited to narrative, informative, and persuasive (e.g., paragraphs, short stories, reports, and letters)

3.43 produce original writing samples related to creative arts including but not limited to poetry and journal entries

3.44$_{7,10}$ using complete sentences, write a composition with a clearly identified beginning, middle, and end

3.45$_{7,10}$ using complete sentences, write a composition with a main idea and specific relevant details

3.46 use electronic and traditional editing strategies to spell words correctly (e.g., proper nouns, in and inn [homophones])

Spelling

3.47 correctly spell basic sight words and/or frequently used words

3.48 correctly spell words with consonant sounds including, but not limited to: consonant digraphs (e.g., ph, sh, ch, wh), consonant blends (e.g., cr, cl, bl, gr, st), silent consonants (e.g., kn, ght, mb, wr, gn), and double consonants (e.g., tt, ll, dd)

3.49 **correctly spell vowel sounds including but not limited to vowel digraphs (e.g., ee, ea, ai, oa, ie), vowel dipthongs (e.g., oi, oy, oo, ou, aw), variants, and short/long vowels**

3.50 **apply spelling rules to spell words with prefixes and suffixes**

3.51 **correctly spell irregular verbs and irregular plural nouns (e.g., knew, known, teeth, mice, wives, wolves)**

3.52 correctly spell compound words

3.53 given a contraction, correctly identify the two words that form that contraction; given two words, combine them into a correctly spelled contraction

3.54 correctly spell abbreviations

3.55 **make structural changes to spell words correctly (e.g., add inflectional endings, drop silent e, double final consonants, change y to I before adding -ing)**

3.56 identify and correctly spell homophones

Language

$3.57_{1,2,4,5,6,7,8,9,10,11}$ **correctly use capitalization skills (e.g., beginning of sentence, titles, proper nouns, salutations of letters, pronoun "I")**

$3.58_{1,2,4,5,6,7,8,9,10,11}$ **correctly use punctuation skills (e.g., end of a sentence, abbreviations, salutation of a letter, quotations, contractions, possessives, commas in a series)**

$3.59_{4,5,6,7,8,9,10,11}$ **correctly use various forms of common and proper nouns and pronouns (e.g., subjective, objective, possessive, number, gender)**

$3.60_{1,2,4,5,6,7,8,9,10,11}$ **use proper forms of regular and irregular verbs (e.g., tense, helping verbs, forms of be)**

$3.61_{1,2,4,5,6,7,8,9,10,11}$ **use correct subject-verb agreement**

$3.62_{4,5,6,7,8}$ **recognize and correctly use adjectives (including articles) and adverbs**

$3.63_{1,2,4,5,6,7,8,9}$ **distinguish between correct and incorrect usage (e.g., this here)**

$3.64_{1,2,4,5,6,7,8,9,10,11}$ **identify and use correct sentence structure (e.g., refrain from use of fragments, awkward, and run-on sentences)**

3.65 identify types of sentences (e.g., statement, question, command, exclamation)

3.66 identify the subject and predicate in a sentence

$3.67_{4,5,6,7,9,10,11}$ **identify and use correct paragraph structure (e.g., indent, topic sentence, supporting sentences, recognize sentences that do not belong)**

$3.68_{4,5,6,9}$ **recognize and use the correct combining of sentences**

$3.69_{1,2,4,5,6,7,8,9,10,11}$ **recognize the intended audience and purpose of a brief reading selection/paragraph**

3.70 **identify and use appropriate dictionary skills (e.g., word meaning, guide words, syllabication, pronunciation guide)**

3.71 **identify appropriate reference sources for specific information (e.g., dictionary, encyclopedia, atlas)**

3.72 **identify a heading for a category of words**

$3.73_{1,2,4,5,6}$ **correctly write and punctuate a friendly letter**

Study Skills

$3.74_{4,5,6,7}$ **identify and use sources for different types of information (e.g., dictionary, encyclopedia, newspapers, card catalog)**

$3.75_{4,5,6,7,8,9,10,11}$ **recognize and use dictionary skills (e.g., word meaning, guide words, the pronunciation guide, syllabication, alphabetical order)**

3.76_{8} **organize and classify information (e.g., headings, categories, sorting)**

3.77 use graphic sources to interpret

and organize information (e.g., tables, graphs, diagrams, maps, timelines)

3.78 acquire organizational skills to manage school materials, time on task, and information to be studied

3.79 follow written directions with multiple steps

3.80 practice and use test-taking strategies (e.g., read directions carefully, read for key words, budget your time, read all choices)

3.81 identify and use parts of a book (e.g., glossary, index, title page, table of contents)

3.82 use a library and its reference sources (e.g., card catalog, computer listing, electronic retrieval systems)

Computer/Technology

3.83 use appropriate software to practice and master third grade English language arts instructional objectives

3.84 demonstrate proper finger placement for all letters on the keyboard

3.85 using a word processor, input information such as stories, reports, and narratives

3.86 use a mouse to draw simple graphics

3.87 identify the ways technology changes the lives of people in the community

3.88 demonstrate the understanding of the concept that copyright law protects a person's (or company's) work

3.89 relate the input, output, and processing devices of a computer to their functions

3.90 select and use appropriate software and/or other technologies to locate and use reference sources (3.28, 3.29, 3.74 and 3.82)

3.91 use the spell check function in a word processor (3.46)

3.92 use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts (3.77)

Grade Three Mathematics

The third grade objectives extend the students' mathematical skills and concepts through concrete experiences and appropriate technology. These concepts and operations include: whole number operations; comparing and ordering numbers to a hundred and a thousand; fractions and decimals; multiplication facts through the nines; and exploring concepts of perimeter, area, and volume. Additional concepts include: gathering and organizing data, estimating and performing measurements.

Number Theory and Number Sense

3.1_{4} **compare and order numbers through 100,000**

3.2 group and count concrete items by ones, tens, hundreds, and thousands

$3.3_{4,5}$ **Read and write six digit numbers and identify place value for each digit utilizing standard and expanded form**

$3.4_{2,4}$ **identify a number as odd or even**

3.5_{5} identify and model 100 more and 100 less than a given number.

3.6 give examples of multiple uses of numbers in the real world

3.7_{4} **estimate to the nearest 1000 using front-end digit, rounding, compatible numbers, and logical reasoning**

Fractions and Decimals

$3.8_{1,2,4,5}$ **identify fraction models that are part of a whole and/or part of a group**

$3.9_{4,5}$ **compare and order fractions with like and unlike**

denominators

3.10 add and subtract like fractions using concrete materials.

3.11$_{4,5}$ **read, write, compare, and order decimals expressed to hundredths**

3.12 identify and represent equivalent fractions, and relate fractions to decimals as tenths and hundredths using concrete materials

3.13$_{4,5}$ **add and subtract decimals to tenths and hundredths.**

3.14 recognize and model mixed numbers using concrete materials

3.15$_{2,4}$ **add and subtract two and three digit whole numbers and money with and without regrouping**

Whole Number Operations and Computations

3.16$_{4,5}$ **recall basic multiplication facts 0-9 and the corresponding division facts that make up families of facts**

3.17$_{4,5,6,7}$ **identify the commutative property and identity element for multiplication and recognize multiplication as repeated addition**

3.18$_{4}$ model three digit subtraction with regrouping across zeros

3.19$_{2,4}$ **solve problems using various computational methods, including calculator, paper/pencil, mental computation, and estimation**

3.20 use a calculator in situations involving four digit or higher numbers with two or more addends

3.21$_{4}$ **in computation and problem solving situations: identify missing information, verify solutions, and determine the reasonableness of results**

3.22$_{4}$ **multiply two and three digit by one digit numbers with and without regrouping**

3.23$_{4}$ **divide two and three digit by one digit numbers with and without regrouping**

Patterns and Relationships

3.24$_{1,2,4,5,6,7,8}$ **identify patterns within the number system, including numerical operations using the calculator (e.g., odd+odd=even, even+odd=odd)**

3.25$_{k,1,2,4}$ **analyze a given pattern using concrete objects and pictures, and then create a pattern with the same attribute; complete geometric patterns**

Probability and Statistics

3.26$_{1,2,4}$ **experiment and describe the concepts of probability and chance, and list possible outcomes from a sampling**

3.27 using a calculator, determine the mean from collected data

3.28 as part of a problem solving situation, conduct a survey, organize the data, and display the findings on a bar and line graph

3.29$_{4}$ **given grid paper, collect data on a given topic and read, interpret, construct, and label a bar graph showing the results**

3.30 use a time line to display a sequence of events

3.31$_{1,2,4}$ **read and interpret tables and tally charts**

Geometry and Spatial Sense

3.32$_{4,5}$ **locate and graph/plot ordered pairs on a grid in the first quadrant**

3.33$_{2,4,5,6,7,8,9,10,11}$ **given a model, draw an example of a flip, slide, and turn**

3.34$_{1,2,4}$ **identify basic polygons including (pentagon, hexagon, and octagon) and components (sides and vertices)**

3.35$_{4,5}$ identify and construct right, obtuse, and acute angles

3.36$_{4,5,6}$ **compare areas of figures**

3.37$_{1,2,4}$ **identify lines of symmetry**

3.38$_{1,2,4}$ **identify congruent figures**

Measurement

3.39$_{2,4}$ **estimate and compare linear measurements (e.g., length and height) using inch,**

(precise to the nearest half inch) foot, yard, centimeter, and meter; then measure

3.40 estimate and measure results of mass/weight in ounces, pounds, grams, and kilograms

3.41 estimate capacity and measure with appropriate units (teaspoons, tablespoons, cups, pints, quarts, gallons, milliliters, and liters)

$3.42_{1,2,4,6}$ **select and use appropriate units of measurement according to type and size of unit. (read scales of length, temperature, weight, or capacity)**

3.43 indicate the approximate size of units without using a ruler (e.g., width of little finger as centimeter, first joint of thumb as inch)

3.44 **estimate, read, and recognize common temperatures in Fahrenheit and Celsius (e.g., body temperature, hot and cold day, freezing and boiling points)**

$3.45_{2,4,5,6,7,8}$ **read time to the five minute interval and to the nearest minute using an analog and digital clock and calculate elapsed time**

3.46 identify equivalent periods of time, including relationships between days, weeks, months, years, as well as seconds, minutes, and hours

3.47 read and write amounts of money up to $100.00

3.48_4 **role-play making change up to $10.00**

Computer and Technology

3.49 use appropriate software to practice and master third grade instructional objectives in mathematics

3.50 practice proper finger placement for all letters on the keyboard.

3.51 use a mouse to draw simple graphics

3.52 identify the ways technology changes the lives of people in the community

3.53 use a calculator to solve whole number operations

3.54 use a calculator to solve problems with multiple four-digit (or greater) addends

3.55 use a calculator to produce patterns within the number system, including numerical operations

3.56 from a collected data, use a calculator to find the mean.

3.57 demonstrate the understanding of the concept that copyright law protects a person's (or company's) work

3.58 relate the input, output, and processing devices of a computer to their functions

3.59 use graphing software to construct bar and line graphs

Grade Three Social Studies

The objectives for third grade encourage an understanding of community. The study of history will show community change over time due to technology, movement of people, and human interaction with the environment. The geographic factors that influence people's lives will be identified. The creation, exchange, and consumption of goods and services within the context of the community and within a child's experience will build economic understanding. Understanding of citizenship in a participatory democracy will be developed through problem solving and decision making. In all areas, collection, interpretation, and construction of data will be emphasized through the use of graphics such as maps, globes, charts, tables and graphs. The objectives for elementary West Virginia social studies may be integrated throughout the K-4 curriculum.

Civics

$3.1_{4,5,6,7,8,9,10,11}$ **compare and contrast the lawmaking function of government to the legislative**

branch at local, state, and national levels

3.2$_{4,5,8,9,10}$ **compare and contrast leaders and their length of terms and qualifications in the executive branch of government at local, state, and national levels**

3.3 **research and identify laws passed for public safety (e.g., bicycle helmets, speed limits, handicapped access, fire regulations)**

3.4 **resolve classroom dilemmas by using the democratic process of majority rule**

3.5$_{4}$ **explain the significance of patriotic symbols, holidays, celebrations, and famous people (e.g., American flag, national anthem, Pledge of Allegiance, and Capitol)**

3.6 identify people in the community who volunteer for public service

3.7$_{4,9}$ **explain how the government prints and coins currency**

3.8 give examples of rules and laws that protect our health, our safety, our property, and make our lives more pleasant

3.9 develop rules for cooperative group work and attainment of group goals

3.10 set criteria for "fair" rules and identify characteristics of unfair rules

3.11 cite examples to show how groups and individuals can make a difference in the community

3.12$_{5,6,7,8,9,10,11}$ **identify functions of government and which officials are charged with various responsibilities**

3.13 **know what majority rule means and give examples of that concept in democracy**

3.14 **explain the concept of owning property and the rights and responsibilities of property ownership**

3.15 **explain the primary functions of county commission, city council, school board, branches of state legislature, and branches of Congress**

3.16$_{10}$ **list the qualifications at the federal level for being a member of the House of Representatives, the Senate, the President, and the lengths of their terms in office**

3.17$_{5,6,8}$ **identify and explain the similarities and differences of various public officials (e.g., president of United States, mayor, governor)**

Economics

3.18$_{4,5,7,9}$ **explain the purpose of property, personal, and income taxes, who pays taxes, and the consequences for not paying taxes**

3.19$_{7}$ explain the relationship between government taxation and the provision of public services

3.20 **explain the concept of scarcity by citing examples of limited supplies and scarce resources**

3.21$_{4,5,6,7,8,9,10,11}$ **explain supply and demand with appropriate examples**

3.22$_{4,5,6,7,8,9,10,11}$ **illustrate the concepts of goods and services by categorizing community workers who provide each; explain goods and services purchased through personal cost and those provided by government (tax) money**

3.23$_{4,6,7}$ **describe how competition for products increases with advertising, availability, and transportation (e.g., printing press)**

3.24 **explain the concept of monopolies and how the government controls monopolies**

3.25$_{4}$ **trace the path of a product from the raw material to the consumer**

3.26$_{4}$ **explain why budgeting is a critical skill necessary for good management (e.g., personal, business, government)**

3.27 **analyze the purpose of various forms of transportation (e.g., tram, car, bicycle, truck, boat, plane, rocket) and identify how**

each of these impact our economy

3.28 **identify activities that individuals can do to keep the environment clean**

Geography

3.29$_{4,5,6,7,8,9,10,11}$ **given an appropriate map, utilize map skills to locate places using cardinal directions, symbols, grids/coordinates, and a scale**

3.30$_{4,6,9,10}$ **compare and contrast climate, weather, and location to people's clothing, food, shelter, and jobs**

3.31$_{4,6,9,10}$ identify change over time using maps of the community and region

3.32$_{4}$ identify major geographic features in North America (e.g., bodies of water, mountains, gulfs, straits, bays)

3.33 **determine direction using a compass, the sun, and the stars**

3.34$_{6,8,9,11}$ **identify geographic features (e.g., peninsulas, islands, continents, straits, mountains, rivers, deserts, oceans, seas, harbors, gulfs, forests, and oasis)**

3.35 **locate all states and capitals on a blank United States map**

3.36$_{4,5,6,11}$ **given a map, identify north, south, east, west, borders, lines of longitude and latitude, equator, north and south poles, and time zones**

History

3.37 **make historical inferences by analyzing artifacts and pictures**

3.38$_{4,8,11}$ **research and report on major inventions (e.g., printing press, steam engine, cotton gin, reaper) and indicate their impact upon society**

3.39$_{4,5}$ **explain the historical significance of major events, people, and their contributions as it relates to specific events**

3.40$_{6,7,9}$ **investigate ways the present culture is similar to and different from the culture of Native Americans and people of other historical time periods (e.g., source of food, clothing, shelter, products used)**

3.41$_{4}$ using appropriate news sources, draw conclusions and inferences about current events

3.42 explain how diversity in the heritage, culture, ideas, and opinions of others is important

3.43 **explain the impact that railroads and other forms of transportation had on western expansion**

3.44$_{5}$ **recognize portions of famous speeches and writings (e.g., John F. Kennedy- inaugural address, Martin Luther King- "I Have a Dream,")**

Study Skills

3.45$_{4,7,10}$ **create and use graphs, charts, maps and other data sources to illustrate the use of resources, the demand for products, the supply of goods and services**

3.46$_{4,5,6,7,8,9,10,11}$ **read and interpret data from various types of maps, globes, charts, graphs, and timelines (e.g., population, products, climate)**

3.47$_{4,5,6,7,8,9,10,11}$ **analyze and construct timelines, charts, and graphs to interpret historical data**

3.48$_{4,8}$ **sequence a series of pictures that reflect historic change (e.g., transportation, technology, agriculture)**

3.49 organize information from various reference sources to prepare short reports

3.50$_{6,11}$ **use and organize information on time lines to sequence events in history**

Computer/Technology

3.51 use graphics software to create graphs and charts

3.52 use appropriate software to practice and master third grade instructional objectives in social studies

3.53 practice proper finger placement for all letters on the keyboard
3.54 use a mouse to draw simple graphics
3.55 read and interpret graphs and charts
3.56 identify the uses of technology in the community
3.57 demonstrate the understanding of the concept that copyright law protects a person's (or company's) work
3.58 relate the input, output, and processing devices of a computer to their functions

Grade Three Science

The Coordinated and Thematic Science (CATS) Three objectives build upon problem-solving and experimentation and move into a more in-depth study of science. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquires, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated in all activities. CATS Three highlights careers, the beginning of the study of geology and astronomy. Collecting materials, testing the materials, recording data and developing concepts related to physics and chemistry are introduced to expand investigate abilities that lead to logical conclusions.

Nature of Science

3.1 discuss the ways science is a search for answers and an understanding of the world (e.g., ask questions about your role in your world with litter and pollution)
$3.2_{4,5,6,7}$ **given the science-related careers of a nurse, doctor, dentist, x-ray technician, etc., state the roles each plays in a community**
$3.3_{4,5,6,7,8,9,10,11}$ **explore objects and events by attributes (e.g., shape, color, texture)**
3.4 differentiate natural changes from man-made changes
3.5 probe deeply into natural phenomena by asking and answering questions about the environment (e.g., oceans, landforms, volcanoes, weather)
3.6 use a variety of communication techniques (e.g., charts, bar graphs, pie graphs, models, written descriptions)
3.7 realize that science is never finished by observing changes in the environment (e.g., weather cycles, energy cycles, life cycles, rock cycles)
3.8 recognize that a solution to one scientific problem often creates new problems (e.g., recycling, pollution, conservation, waste disposal)

Scientific Attitudes/Habits of Mind

3.9 ask and answer questions while recognizing interactions that further an appreciation and joy of discovery of the natural world
3.10 demonstrate innate curiosity, initiative, and creativity by constructing models to investigate their environment
$3.11_{4,5,6,7,8,9,10,11}$ **be in awe and wonder of the patterns, variations, and interactions of natural objects in the environment (e.g., food chain, rocks and minerals)**
3.12 trust observations as a basis for taking risks involved in new tasks

and skills

3.13 listen to and be tolerant of different viewpoints by engaging in collaborative activities and be willing to modify ideas when new and valid information is presented

3.14 continue probing phenomena until questions are resolved (e.g., properties of matter, motions of sun and moon and planets, adaptations of plants and animals)

3.15 recognize that developing solutions to problems takes time, patience, and persistence

3.16 recognize that science includes both individual and cooperative ventures (e.g., read about scientific discoveries, on-going group investigations)

Scientific Processes/Thinking Skills

3.17$_{4,5,6,7,8,9,10}$ **sort, classify, and compare materials based on useful properties (e.g., magnetism, density, solubility, and conductivity)**

3.18$_{4,5,6,7,8,9,10,11}$ **given a set of objects, group or order the objects according to an established scheme (e.g., celestial objects, patterns of motion, constellations)**

3.19$_{6,8,11}$ **given a set of events, objects, shapes, designs, or numbers, find patterns of constancy or regularity**

3.20$_{4,5}$ **apply mathematical skills and use metric units (e.g., graphing, addition, subtraction, multiplication, division, and measurement of length and volume of liquid samples)**

3.21$_{4,5,6,7,8,9,10,11}$ **establish a data table, graph, map, or diagram and use it to answer questions (e.g., volume, temperature, and rates of freezing, melting, and boiling)**

3.22 support statements with facts (e.g., found in nature books, magazines, and the Internet)

3.23$_{4,5,6,7,8,9,10,11}$ **construct predictions and make inferences based on patterns of evidence**

3.24$_{4,5,6,8,9,10,11}$ **when collecting and observing things around you, look for changes and question what may cause the change (e.g., the effect of push or pull on a moving object, motion related to points of reference, falling bodies, fossils, and weather maps)**

3.25$_{7}$ **relate an organism's pattern of behavior to the nature of its environment (e.g., the kinds and numbers of other organisms present, the availability of food, and the physical characteristics of the environment)**

3.26$_{4,7,10}$ **test variables (e.g., those that effect plant growth, speed, action of water on soil, and shadow formation)**

Laboratory Investigations/Hands-On Learning

3.27 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

3.28$_{4,5,6,7,8,10,11}$ use scientific instruments and everyday materials to investigate the natural world (e.g., graduated cylinder, hand lens, thermometer, bulbs and batteries, tuning fork, and calculators)

3.29 use safe and proper techniques for handling, manipulating, and caring for science materials

Science Themes and Subject Matter

3.30 develop an understanding of the scientific themes of systems, changes, and models (e.g., systems consists of many parts that interact with one another and give rise to new properties or functions; change occurs gradually, repetitively, or randoly;

a model is a picture, description, or simulation of the real thing)

3.31 understand that the study of living and non-living objects in the natural world integrates living organisms, earth materials, and physical properties of matter

3.32 establish connections across the curriculum (e.g., integrate science with mathematics, social studies, language arts, arts, and/or physical education)

3.33$_{4,5,6,8,10,11}$ **compare, sort, and group objects according to solids, liquids, gases, and mixtures - *systems***

3.34$_{4,5,6,7,8,9,10,11}$ **compare and contrast chemical and physical changes - *systems***

3.35$_{4,5,6,7,8}$ **identify the structures of living things, including their systems, and explain their functions (e.g., roots absorb water, circulatory system to move materials) - *systems***

3.36$_{5,7,9}$ **relate the structures and behaviors of living organisms to the environment in which they live (e.g., beaks and feet in birds, seed dispersal, camouflage, different types of flowers -*systems***

3.37$_{5,6,7,8,9,10}$ **describe the relationships among the plants and animals in a closed system of interdependent organisms (e.g., aquariums, terrariums) - *systems***

3.38$_{5,6,7,8,9,10}$ **identify relationships among organisms in an ecosystem (e.g., sequencing food chains, behavior, adaptations, factors that effect populations, predator-prey relationships -*systems***

3.39$_{4,5,6,7}$ **observe, measure, and record changes in living things (e.g., growth and development, variations within species) - *changes***

3.40$_{4,5,6,7,8}$ **manipulate, measure, diagram, construct, arrange, observe and discuss models of plant and animal structures and systems - *models***

3.41$_{5,6,8,10,11}$ **observe chemical reactions (e.g., Alka Seltzer and water, vinegar and baking soda) - *systems***

3.42$_{5,6,8,11}$ **recognize that moving objects must have a force exerted upon them (e.g., gravity, push or pull, unbalanced force) - *systems***

3.43 **identify objects that appear to move or not move based upon the motion of other objects - *systems***

3.44 find out how the number of turns in an electromagnet affects the strength - *systems*

3.45$_{4,5,7,9}$ **show that matter can change phases (e.g., condensation, melting, evaporation) - *changes***

3.46$_{4,5,7,9}$ **relate changes in states of matter to temperature (e.g., water) - *changes***

3.47$_{5,6,8,10}$ **recognize energy transformations (e.g., mechanical to heat, electrical to heat) - *changes***

3.48 recognize that it takes work to move objects over a distance - *models*

3.49 recognize that speed depends on distance and time - *models*

3.50$_{4,5,7,9}$ **construct models related to the structure of solids, liquids, and gases - *models***

3.51$_{4,6,9,10,11}$ identify properties of minerals - *systems*

3.52 explain how igneous, sedimentary and metamorphic rocks are formed - *systems*

3.53 describe three layers of the Earth - *systems*

3.54$_{4}$ identify and describe the various features of the Earth's crust (e.g., plateaus, plain, and valleys) - *systems*

3.55$_{4,6,7,8,9}$ **explain how the rotations of the Earth causes day and night - *systems***

3.56$_{4,6}$ **explain how the revolution of Earth and the tilt of Earth's axis causes the seasons - *systems***

3.57 plan and carry out investigations to show how shadows are formed

- systems

3.58 **describe the similarities and differences among the planets - *systems***

$3.59_{5,6,7,8,9,10,11}$ **describe the size and surface of the Sun, Moon and Earth - *systems***

3.60_{4} **relate changes in the environment to the water cycle -*changes***

3.61_{10} **associate fossils as a record of time (e.g., what organisms once lived on Earth, where they lived) - *changes***

3.62_{10} **move through a simple time line illustrating changes on the Earth over the past 50 million years -*changes***

$3.63_{5,8}$ **describe weather changes by seasons - *changes***

$3.64_{4,5,7,10}$ using water and wind explore the eroding of different materials (e.g., sand, mud pile and rocks) - *changes*

3.65 describe how volcanoes and earthquakes change the Earth - *changes*

$3.66_{4,6}$ **recognize the movement of the Sun and Moon in relationship to the Earth's position - *changes***

3.67_{4} recognize the existence of constellations and their changes through the seasons -*changes*

3.68_{10} **make a model of a fossil and review fossil formation - *models***

$3.69_{6,7}$ **design a collage that represents how Earth's resources are used in every day life (e.g., water, wind, rock, soil, and minerals) - *models***

$3.70_{7,8,10,11}$ **identify land features using a topographical model or map (e.g., mountains, rivers, valleys, lakes, glaciers, and volcanoes) - *models***

$3.71_{7,8,9}$ **explain using models the phases of the Moon and eclipses - *models***

$3.72_{5,6,9,11}$ **build a weather station and use to collect and record measurable data (e.g., temperature, wind, direction, wind speed, and precipitation) - *models***

$3.73_{4,6,7,8,9,10,11}$ **read a weather chart or map - *models***

Science History

3.74 study the lives and discoveries of scientists of different cultures and backgrounds (e.g., find articles, videos, and books about specific scientists, their discoveries, and their equipment: George Washington Carver, Luther Burbank, John Audubon, Isaac Newton, and Madame Curie and take field trips to places where scientists work)

3.75 recognize that science changes over time (e.g., weathering, new plants and animals appear)

3.76 realize that scientists will always have questions about the world (e.g., how big is the world, when did it start, how old is it)

Science, Technology and Society

3.77 examine that there are many science-related careers through the use of speakers, field trips, audio-visual, and/or printed material (e.g.,allergist, environmentalist)

3.78 examine that science skills are used in careers not usually related to science (e.g.,animator, transportation engineers)

3.79 research how technology has positively or negatively affected the quality of life in West Virginia and the world (e.g., Biosphere II, "skyglow" light pollution)

3.80 examine how common daily events involve science (e.g., mail delivery, television)

3.81 develop respect and responsibility for the environment by recognizing the interrelationship of living and non-living things and engaging in conservation practices

Computer/Technology

3.82 use appropriate software to practice and master third grade

instructional objectives in science

3.83 practice proper finger placement for all letters on the keyboard

3.84 use a mouse to draw simple graphics

3.85 use appropriate software to practice reading, interpreting, and analyzing the data on a chart, graph, and table

3.86 use appropriate software to practice drawing conclusions, making predictions, and making inferences based on data from a chart, graph, and table

3.87 use appropriate software to practice determining the length of an object

3.88 identify the uses of technology in the community (e.g. health care, communications, agriculture)

3.89 demonstrate understanding of the concept that copyright law protects a person's (or company's) work

3.90 relate the input, output, and processing devices of a computer to their functions

3.91 using the graphing application of appropriate software, create tables and/or bar graphs

3.92 use a calculator to perform mathematical functions in data analysis

3.93 use a variety of instruments (e.g., probes, thermometers, measuring devices) to perform measurements and record data

Grade Four
English Language Arts

The goal of the fourth grade English Language Arts curriculum is to develop readers and writers who are independent, self-motivated, critical thinkers who take responsibility for their own learning. Students will learn to critically evaluate what they read, to express themselves clearly in speaking and in writing, to gather and use information, and to utilize strategies to be applied in all content areas. At this level, children are provided with a variety of opportunities to interact with a wide range of literary forms, setting the foundation for lifelong reading.

The curriculum has been developed in such a way as to encourage integrated English Language Arts instruction across the curriculum, thus enabling students to make connections to all subject areas. A wide variety of instructional activities that address individual student needs and learning styles are to be provided .

Listening/Speaking

4.$1_{1,2,3,5,6,7,8}$ **demonstrate skill in using conventions of English (e.g., synonyms, antonyms, homonyms, word meanings, subject/verb agreement, adjectives, adverbs, and pronouns)**

4.$2_{1,2,3}$ **given a dictated paragraph, recognize intended audience**

4.$3_{1,2,3}$ **given a dictated narrative, draw conclusions/infer details related to setting, characters, problem, plot, theme, point of view, and author's purpose**

4.4_{3} **given a dictated paragraph, determine meaningful titles**

4.$5_{2,3,5,6,7,8}$ **given a narrative, distinguish between factual information and information based on opinion**

4.$6_{2,3,5,6,7,8}$ **given a dictated paragraph, identify the stated or implied main idea**

4.$7_{1,2,3,5,6,7,8}$ **given a narrative or set of directions, identify stated details**

4.8_{3} **given a narrative, paraphrase, summarize, and ask appropriate questions regarding content**

4.$9_{1,2,3,5,6,7,8}$ **recognize the sequence of events in a story or set of directions**

4.10 **given a set of directions, draw conclusions/infer specific information**

4.11 **listen to a variety of literary forms**

4.12 given oral text, listen to, record, and state factual information

4.13 contribute to group discussions

4.14 seek ideas and opinions of others

4.15 using oral communication, form and support opinions

4.16 given a topic, organize and use subject-related information and vocabulary in an oral presentation

4.17 make an oral presentation using appropriate volume, pitch, and rate of speech

4.18 after differentiating between active listening and just hearing, demonstrate appropriate listening/speaking behaviors (e.g., using communication technologies)

Reading Comprehension

4.$19_{K,1,2,3,5,6,7,8,9,10,11}$ **read literary works by national and international authors to include, but not limited to: legends, folktales, biographies, historical fiction, and WV authors**

4.$20_{2,3,5,6,7,8,9,10,11}$ **identify explicitly stated information/details including, but not limited to: story elements (e.g., setting, character, plot), a set of directions, functional reading (e.g., invitations, bulletins), and expository text**

4.$21_{K,1,3,9,10}$ **locate and order events in a**

story (e.g., first, second, third) or identify missing items in a sequence of events

4.22$_{K,1,2,3,5,6,7,8,9,10,11}$ **recognize characteristics of a fictional and nonfictional story (e.g., fairy tales, mysteries, vs. true stories)**

4.23$_{3,11}$ **scan a short passage for key words to answer a question**

4.24$_{3,11}$ **skim a short passage for an overview of the material**

4.25$_{K,2,5,6,8,9,10}$ **identify theme and main idea of a story**

4.26$_{K,2,3,5,6,7,8,11}$ **draw conclusions and make inferences regarding information related to story elements, functional selections, informational selections, or expository text**

4.27$_{2,3,5,9,10,11}$ **identify and/or draw conclusions regarding details and the purpose of a set of directions**

4.28$_{2,3}$ **determine an appropriate title for a reading selection (e.g., expository text, story, biography)**

4.29$_{K,2,3,5,6,9,10,11}$ **make predictions based on information provided**

4.30$_{6,7,8,10}$ **identify characteristics of fact versus opinion**

4.31$_{9,10}$ **read and make use of information in a functional selection or expository text**

4.32$_{K,1,2,3,5,6,7,8,9,10,11}$ **use context clues to determine word meaning**

4.33 **use prior knowledge to recognize the topic of a story**

4.34 **recognize different organizations of paragraphs (e.g., main ideas with details, how things are alike or different, how something has changed)**

4.35 identify cause and effect related to a given event

4.36 compare/contrast likenesses and differences of words, objects, and ideas

4.37 develop generalizations regarding story elements and relate facts to content

4.38 experience content through imagery (visualizing)

4.39 recognize non-literal meanings (e.g., similes, metaphors, analogies, idioms, puns)

4.40 paraphrase, summarize,, compose questions, and make inferences about material read

4.41 identify nonverbal symbols (e.g., #, &, etc.)

4.42 choose and respond to a variety of reading material for pleasure and information

Reading Vocabulary

4.43$_{2,3,5,6,7,8,9,10,11}$ **recognize synonyms, antonyms, homonyms, and homophones for identified vocabulary words that are either presented alone or within a group of words**

4.44$_{2,3,5,6,7,8,9,10,11}$ **recognize the correct meaning of a word with multiple meanings when presented in text**

4.45$_{K,2,3,5,6,7,8,9,10,11}$ **apply structural analysis and context clues to decode and encode words**

4.46 identify and use content area vocabulary given a variety of reading material

4.47 increase the number of recognized words presented in text

Writing

4.48 demonstrate proper manuscript and cursive techniques (e.g., posture, paper placement, pencil grip, letter formation, slant, letter size, spacing, rhythm, and alignment)

4.49 use the writing process (e.g., prewriting, drafting, revising, editing, and publishing) across the curriculum

4.50 develop various types of writing including, but not limited to, narrative, informative, and persuasive (e.g., paragraphs, stories, letters, and newspaper articles)

4.51 produce original writing samples related to creative arts including but not limited to poetry, journal entries, and plays

4.52$_{7,10}$ using complete sentences, write a composition with a clearly identified beginning, middle, and end

4,53$_{7,10}$ **produce a composition with a main idea and specific, relevant details**

4.54$_{7,10}$ **using complete sentences, write a composition that is focused, coherent, and has a logical progression of ideas**

4.55 use electronic and traditional editing strategies to spell words correctly (e.g., proper nouns, in and inn [homophones])

Spelling

4.56 correctly spell basic sight words and frequently used words

4.57 **identify and correctly spell homophones**

4.58 **use syllabication rules to spell words correctly**

4.59 **correctly spell words with consonant sounds including silent consonants, consonant digraphs and doubling the final consonant to add -ing**

4.60 **correctly spell words using various vowel patterns (e.g., silent vowels, vowel dipthongs, silent e when -y or -ing are added, and vowel digraphs)**

4.61 **make structural changes as needed in root (base) words (e.g., -y to -I before adding -ed)**

4.62 **apply spelling rules to the addition of prefixes and suffixes**

4.63 correctly spell irregular verbs and irregular plural nouns (e.g., knew, known, teeth, wolves)

4.64 correctly spell compound words

4.65 given a contraction, correctly identify the two words that form that contraction; given two words, combine them into a correctly spelled contraction

4.66 correctly spell abbreviations

4.67 given a word, determine the origin of its meaning to correctly spell it

4.68 correctly spell multi-syllabic words

Language

4.69$_{1,2,3,5,6,7,8,9,10,11}$ **use capitalization skills correctly (e.g., titles, closing of a letter, greeting of a letter, first word in a quotation, first word of sentence, proper nouns, pronoun "I")**

4.70$_{1,2,3,5,6,7,8,9,10,11}$ **use punctuation skills correctly (e.g., quotation marks, end marks, commas in a series, apostrophes, correspondences, contractions, abbreviations, separation of clauses, underlining) in narratives and friendly business letters**

4.71$_{1,2,3,5,6,7,8,9,10,11}$ **use various forms of common and proper nouns and pronouns correctly (e.g., subjective, objective, number, gender)**

4.72$_{1,2,3,5,6,7,8,9,10,11}$ **use various forms of verbs correctly (e.g., verb tense, subject/verb agreement, helping verbs, forms of be, linking verbs)**

4.73$_{3,5,6,7,8}$ **distinguish between and correctly use adjectives and adverbs (e.g., making comparisons)**

4.74 distinguish between proper and improper usage (e.g., that there)

4.75$_{1,2,3,5,6,7,8,9,10,11}$ identify and use correct sentence structure (e.g., refrain from use of sentence fragments, awkward and run-on sentences)

4.76 identify and use simple and compound subjects and predicates

4.77$_{3,5,6,9}$ combine sentences into a logical, clear sentence using such words as "and" and "however"

4.78$_{3,6,7,9,10,11}$ identify and use correct paragraph structure (e.g., indent, topic sentence, closing sentence, supporting sentences, recognizing sentences that do not belong)

4.79$_{1,2,3,5,6,7,8,10,11}$ **identify purpose of various types of paragraphs (e.g., narrative, informative, persuasive)**

4.80 identify and use appropriate dictionary skills (e.g.,

wordmeaning, guide words, syllabication, pronunciation guide)

4.81 identify appropriate reference sources for specific information (e.g., dictionary, encyclopedia, atlas)

4.82 identify and use various sentence types (e.g., declarative, interrogative, exclamatory, imperative)

Study Skills

4.83$_{5,6,7}$ **identify and use sources of different types of information (e.g., dictionary, encyclopedia, newspapers, card catalog)**

4.84$_{3,5,6,7,8,9,10,11}$ **recognize and use dictionary skills (e.g., use of guide words, word meaning, pronunciation guide, syllabication, alphabetical order)**

4.85$_{3,8}$ **use graphic sources to interpret and organize information (e.g., tables, graphs, maps, diagrams, timelines, web)**

4.86$_{5,6,7}$ **acquire organizational skills to manage school materials, personal time management, and information to be studied**

4.87 follow written directions with multiple steps

4.88 practice and use test-taking strategies (e.g., read all directions, read for key words, budget your time, read all possible choices)

4.89$_{5,6,7,8,9,10}$ **identify parts of a book and the information therein (e.g., glossary, index)**

4.90$_{8,9,10}$ **know the purpose of and use a book's table of contents (e.g., locate specific chapters, determine the general idea of the book, locate specific information, infer the content of a chapter)**

4.91$_{3,8}$ **organize items that belong under one heading**

4.92 **use a library and its reference sources (e.g., card catalog, computer listing, electronic retrieval systems)**

Computer/Technology

4.93 use appropriate software to practice and master fourth grade English language arts instructional objectives

4.94 demonstrate proper finger placement for all keys on a keyboard

4.95 using a word processor, create a one (or more) paragraph document

4.96 identify ways technology is used to access information

4.97 demonstrate the understanding that the violation of copyright law is a crime

4.98 select and use appropriate software and/or other technologies to locate and use reference sources (4.82)

4.99 use the spell check function in a word processor (4.56)

4.100 use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts (4.86)

4.101 using a word processor, input types of writing such as paragraphs, stories, letters, and newspaper articles (4.51 and 4.52)

Grade Four Mathematics

The fourth grade objectives emphasize critical thinking skills to create independent problem solvers who possess a personalized set of skills and strategies to solve problems in everyday life. Concepts which are stressed include: multiplication and division of two and three digit numbers, construction and description of objects from different perspectives, estimation, reading temperatures, description of possible outcomes in a given situation, use of calculators and computers, and describing mathematical relationships and patterns in other content areas and the real world. Additional concepts include adding and subtracting like fractions, multiplication of fractions, and adding and subtracting decimals.

Number Theory and Number Sense

- 4.1$_5$ **compare and order two or more whole numbers through 1,000,000**
- 4.2$_{5,6}$ **read, name, and write nine digit numbers and identify place value for each digit utilizing standard and expanded form**
- 4.3$_6$ identify 1,000 more and 1,000 less than a given number
- 4.4$_{3,5,6,7,8}$ **estimate to the nearest 1000 using front-end digit and rounding, compatible numbers, and reasonableness**
- 4.5$_{2,3}$ **identify odd and even numbers**

Fractions and Decimals

- 4.6$_{1,2,3,5}$ **identify fraction models that are part of a whole or part of a group**
- 4.7$_{3,5}$ **compare and order fractions with like and unlike denominators**
- 4.8$_5$ add and subtract like and unlike fractions using concrete materials and paper and pencil
- 4.9$_5$ add and subtract fractions and reduce to lowest terms
- 4.10$_5$ **given a fraction model: read and write the fraction or mixed number, change an improper fraction to a mixed number, and change a mixed number to an improper fraction**
- 4.11$_5$ **read, write, compare, order, and identify place value and pictorial representations of decimals expressed as thousandths**
- 4.12 identify and represent equivalent fractions and relate fractions to decimals using concrete objects
- 4.13 change a fraction into a decimal using a calculator
- 4.14 **add and subtract decimals to tenths, hundredths, and thousandths**
- 4.15 round decimals to the nearest whole, tenth, and hundredth
- 4.16 solve problems using fractions and decimals

Whole Number Operations and Computations

- 4.17$_{5,6,7,8}$ **add and subtract two, three, and four digit whole numbers and money with and without regrouping**
- 4.18$_{2,3}$ **choose the appropriate method to solve a problem: paper/pencil, mental math, estimation, and calculators**
- 4.19$_{3,5}$ **use concrete materials to demonstrate and identify the associative property of addition and multiplication, the identity element and commutative property of multiplication (fact families)**
- 4.20$_6$ **multiply two and three digit numbers by two and three digit numbers with and without regrouping**
- 4.21$_6$ **divide two and three digit numbers by one and two digit numbers with and without regrouping**
- 4.22 **introduce and use the order of operations (e.g., parenthesis, multiplication/division, and addition/subtraction**
- 4.23 **round to the nearest dollar, hundreds, and thousands**

Patterns and Relationships

4.24$_{k,1,2,3,5,6,7,8}$ **solve problems involving pattern identification and completion of patterns**

4.25 describe and represent relationships with tables, graphs, and rules

Probability and Statistics

4.26 understand and reason about the use and misuse of statistics in our society. Given certain situations and reported results, identify faulty arguments or misleading representations of data

4.27 as a part of a problem solving situation, conduct a survey, organize data, and display the findings on a bar, line, and circle graph

4.28$_{3,5}$ **collect, organize, display, read, and interpret data from a problem solving situation in line graphs, bar graphs, tally charts, and tables with scale increments of one or greater than one**

4.29$_{5}$ **list all possible outcomes for an experiment using a tree diagram (e.g., tournaments and roll the dice)**

4.30$_{5,6,7}$ determine mean, median, mode, and range from collected data

4.31$_{3,5,6,7}$ **identify coordinate locations**

4.32$_{1,2,3}$ **identify plane figures and their components (sides and vertices)**

Geometry and Spatial Sense

4.33$_{5}$ **construct, label, compare, and classify acute, right, and obtuse angles**

4.34 **compare and contrast quadrilaterals (rectangle, square, parallelogram, trapezoid, and rhombus)**

4.35 identify and construct lines which intersect, are parallel, and are perpendicular

4.36$_{6,7}$ using a compass, construct a circle, and draw and label the parts of a circle (center, radius, chord, and diameter)

4.37 describe three dimensional objects from different perspectives (e.g., view of face, view of vertex)

4.38 model and use a protractor for measuring angles

4.39$_{2,3,5,6,7,8,9,10,11}$ **identify rotations and reflections**

4.40$_{1,2,3}$ **identify symmetry**

Measurement

4.41$_{2,3,5,6,7}$ **compare, estimate, and measure length using customary and metric units**

4.42$_{5}$ solve problems involving perimeter, area, volume, and surface area

4.43$_{3,5,6}$ **compare areas of figures**

4.44 compare inches and centimeters, quart and liter, yard and meter, pound and kilogram

4.45 identify the major United States time zones, and their relationships to each other

4.46$_{2,3,5,6,7,8}$ **calculate elapsed time**

4.47 **create and solve problems involving addition, subtraction, multiplication, and division of money amounts using various computational methods such as calculations, paper/pencil, mental computation and estimation**

4.48$_{3}$ **count coins and bills and identify correct change**

4.49$_{1,2,3,5,6}$ **read scales of length, temperature, weight, or capacity and select appropriate units**

Computer and Technology

4.50 use appropriate software to practice and master fourth grade instructional objectives in mathematics

4.51 practice proper finger placement for all keys on a keyboard

4.52 identify ways technology is used to access information

4.53 use a calculator to change a fraction into a decimal

4.54 use a calculator to solve operations with money

4.55 demonstrate the understanding that the violation of copyright law

is a crime·

4.56 use graphing software to construct tables, bar, line, and circle graphs

4.57 use a calculator to find the mean, mode, and range of collected data

Grade Four Social Studies

The program at the fourth grade level will focus upon the growth of America through its colonization, assimilation of immigrant groups, development of improved technology, and major historical figures. Course content will include the influence of geographic factors upon the diverse cultures that settled in America through time. The democratic process will be incorporated into classroom activities. The study of economics will emphasize the relationship among geographic factors, natural resources, transportation, advertising, and the work force. In all areas, collection, interpretation and construction of data through the use of graphics such as maps, globes, charts, tables and graphs will be emphasized.

Civics

$4.1_{3,5,6,7,8,9,10,11}$ identify the functions of the three branches of national government and compare to local and state levels.

$4.2_{5,7,8,9}$ explain the role of voting in the democratic process and practice the voting process by participating in a class or school election, identifying the rights and responsibilities of citizens, and knowing the legal voting age

$4.3_{6,7,11}$ explain the rights of minorities in the democratic process and the right to dissent responsibly

4.4_{3} research public documents to determine the significance of patriotic symbols, holidays, celebrations, and famous people

$4.5_{3,8}$ identify public agencies in the community that provide services and investigate opportunities for volunteerism

4.6 identify historical conflicts concerning individual rights and how those conflicts were resolved

$4.7_{7,11}$ explain the make-up of United States Congress and the relationship between the Senate and House of Representatives

4.8 compare and contrast the differences between city, county, state, and national governments

4.9_{3} list the primary responsibilities of public officials (e.g., FBI, sheriff, school superintendent, mayor)

4.10 compare and contrast the similarities of various branches of government on local, state, and national levels

$4.11_{3,5,8}$ contrast examples of elected and appointed officials (e.g., president is elected, state superintendent is appointed)

4.12 understand the difference between public sector and private sector employment (e.g., postman-public, teacher-public, deputy sheriff-public, artist-private, welder-private, store owner-private)

Economics

4.13 compare and contrast the relationship between geographic factors, available resources, and transportation in determining how people make a living

$4.14_{3,5,6,7,8,9,10,11}$ give examples of people as consumers and producers of goods and services in the public and private sectors

$4.15_{3,6,7}$ using print and media sources, analyze advertisements and

their impact upon consumer choices

4.16 explain the concept of "trade-off" (e.g., developing hypothetical budgets in simulated situations)

$4.17_{3,5,7,9}$ investigate the various kinds of taxes and their relationship to services

$4.18_{5,6,7,10}$ predict how competition in the market place affects prices

$4.19_{5,7,9}$ explain the concept of taxation (e.g., tax assessment, services provided)

$4.20_{3,10}$ research the origin of American currency and how it is regulated

4.21 analyze product labels (e.g., ingredients, quality, and information omitted) and compare prices

4.22 explain how each new form of transportation affected society and the economy

4.23 interpret how the availability of transportation on roads and waterways impact the production and marketing of certain products

Geography

4.24 compare and contrast geographic factors to development of transportation routes and settlement patterns in the Americas

4.25 identify physical barriers to transportation in the Americas and how people adapted to the barriers (e.g., Appalachian and Rocky Mountains, Isthmus of Panama)

$4.26_{6,9,10}$ analyze and compare the effects of geographic factors upon people's jobs, food, clothing, shelter, services, and interaction with the outside world

$4.27_{5,8}$ contrast the physical, economic, and political changes caused by geographic conditions and human intervention

4.28 use geographic terms to describe America's physical features (e.g., mountains, rivers, grassland, oasis)

4.29 identify and locate North, South, and Central American countries and bodies of water on a blank map

4.30 identify geographic factors which affect population density

History

$4.31_{3,6,7}$ describe the cultures of the colonists and Native Americans and list the changes that occurred when they came into contact with one another

$4.32_{5,6,7,8,9,11}$ create a timeline showing the arrival of major immigration groups and describe the influence of each culture upon American society

$4.33_{8,10,11}$ explain how major inventions eliminated some jobs (e.g., Pony Express/invention of the telegraph) and created the need for other jobs (e.g., telegraph operators)

$4.34_{6,10}$ research events that led to the colonists' break with England and the fight for an independent nation (e.g., Sugar Act, Stamp Act, Boston Tea Party)

4.35_{5} identify major leaders and events from America's colonization to the Civil War

$4.36_{8,10,11}$ depict territorial expansion and population distribution in the United States through maps, charts, pictures, and research projects

4.37_{8} identify the Presidents of the United States and their involvement with major historical events

4.38 list and identify the sequence of major United States conflicts

4.39 explain why maintaining historical records and landmarks is important to civilization

4.40 identify major United States historical figures, their contributions, and their involvement related to specific

events

4.41 **explain how African Americans came to America and list their accomplishments**

Study Skills

$4.42_{7,10}$ **analyze a product chart for price comparison**

$4.43_{3,5,6,7,8,9,10,11}$ **utilize map skills to locate places and to construct maps (e.g., symbols in a legend/key; lines of demarcation [Equator, Prime Meridian, latitude and longitude, time zones, borders, coast lines] scales; directions [cardinal and intermediate]; and geographic barriers)**

$4.44_{3,5,6,7,8,9,10,11}$ **read, interpret, and construct special purpose American and other maps/globes, graphs, charts, and timelines**

4.45 construct and use charts, graphs, tables, and grids to display data

$4.46_{3,5,6,8,10,11}$ **analyze and interpret information from pictures and news sources related to historical events and people**

4.47 suggest appropriate reference sources to answer specific questions, collect information, and prepare short reports

4.48 **sequence major historical events in United States history on a timeline (e.g., discovery of America, Revolutionary War, Civil War, Boston Tea Party)**

$4.49_{3,5,6,7,8,9,10,11}$ **read and interpret graphs, charts, and timelines**

Computer/Technology

4.50 use graphics software to create graphs and charts

4.51 use appropriate software to practice and master fourth grade instructional objectives in social studies

4.52 practice proper finger placement for all keys on a keyboard

4.53 identify ways technology is used to access information

4.54 demonstrate why violation of copyright law is a crime

Elementary West Virginia Studies

The objectives for West Virginia Studies explore historic, geographic, economic, and civic concepts. These objectives shall be taught as a separate fourth grade unit. The relationship among geographic factors, settlement patterns, and economic development of West Virginia will be explored in this course. The cultural heritage of the various groups who settled West Virginia will be researched through classroom activities. The course content will reflect West Virginia's unique characteristics as well as its relationship to the nation.

Civics

WV.1 identify student's state, town, and address

WV.2 identify state symbols, the state capitol, the Governor, celebrations and holidays, and famous West Virginians

WV.3 recite the State Motto and State Song

WV.4 identify the roles and functions of the government (e.g., legislative, executive, and judicial branches) at the local, county, and state levels

WV.5 explain why voting as a West Virginia citizen is a right, a privilege, and a responsibility

WV.6 given a local problem, propose solutions and investigate opportunities for public volunteerism

Economics

WV.7 identify the major occupations of people in the private and public sectors of our state

WV.8 identify the effect of natural resources and geographic features upon the economic development of counties and the state

Geography

WV.9 locate West Virginia on a United States map and identify bordering states

WV.10 locate student's county and county seat on a West Virginia map

WV.11 locate and describe the four geographic regions of West Virginia

WV.12 describe West Virginia's climate and weather

WV.13 analyze the impact of West Virginia's geography on transportation, settlement, jobs, clothing, food, shelter, services, and interaction with the outside world

WV.14 explain the effect of geography on the expansion and development of West Virginia

History

WV.15 explain and trace the economic, social, and political history of West Virginia

WV.16 describe the cultural life of West Virginia as reflected in folklore and heritage

WV.17 compare and contrast lifestyles of West Virginians of yesterday and today

Study Skills

WV.18 use maps to explore West Virginia's population, products, resources, transportation, state parks, forests, and scenic/recreational resources

WV.19 find an absolute West Virginia location (e.g., using a grid system) and a relative location (e.g., direction and reference to neighboring states, rivers, and mountain ranges)

WV.20 use reference sources to answer specific questions, collect information, and prepare short reports about West Virginia

Grade Four Science

The Coordinated and Thematic Science (CATS) Four objectives builds on the study of geology, astronomy, chemistry and physics. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics and earth sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquires, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities. CATS Four promotes cooperative learning, group decisions, cultural diversity, careers, and expands the development of hands-on exploration. Basic science concepts are developed and problem-solving abilities are augmented.

Nature of Science

4.1 explain that science is a search for truth and an understanding of the world

4.2 $_{3, 5, 6, 7}$ **explore the role of science and science-related careers**

4.3 $_{3, 5, 6, 7, 8, 9, 10, 11}$ **design a model given a set of attributes (e.g., design a fish)**

4.4 explain the changes in nature given a series of pictures illustrating changes

4.5 probe deeply into natural phenomena by asking and answering questions about the environment (e.g., biomes,

weather patterns)

4.6 use a variety of communication techniques (e.g., charts, bar graphs, pie graphs, models, reports)

4.7 realize that science is never finished by observing changes in the environment (e.g., seasons, energy cycles, life cycles, rock cycles, weathering, erosion)

4.8 recognize that a solution to one scientific problem often creates new problems (e.g., recycling, pollution, conservation, waste disposal, need for technology)

Scientific Attitudes/Habits of Mind

4.9 **experience the joy of discovery of the natural world by developing questions and an understanding of the natural world which lead to investigations**

4.10 demonstrate innate curiosity, initiative, and creativity by designing simple experiments (e.g., electrical circuits, evaporation and condensation)

4.11 be in awe and wonder of the patterns, variations, and interactions of objects in the universe (e.g., constellations, rock cycle, weather patterns)

4.12 trust observations of discoveries when trying new tasks and skills

4.13 listen to and be tolerant of different viewpoints by engaging in collaborative activities and modifying ideas when new and valid information is presented

4.14 continue probing phenomena until questions are resolved (e.g., motion of celestial objects, relationship of living things and habitat, transfer of energy)

4.15 recognize that developing solutions to problems requires persistence, flexibility, open-mindedness, and alertness for the unexpected

4.16 recognize that science includes both individual and cooperative ventures (e.g., interview scientists and meteorologists, group investigation, and model building)

Scientific Processes/Thinking Skills

4.17$_{5,6,7,8,9,10,11}$ **sort, classify, and compare objects, and events based on properties (e.g., mass, volume, density, conductivity)**

4.18$_{3,5,6,7,8}$ **given a set of objects, group or order the objects according to an established scheme**

4.19$_{5,6,8,10,11}$ **apply mathematical skills and use metric units (e.g., graphing, multiplication, division, and measurement of length and volume)**

4.20$_{5,6,8,9}$ **establish the variables and controls in an experiment**

4.21$_{3,5,6,7,8,9,10,11}$ **construct a hypothesis when provided a problem (e.g., cause and effects of an event, based on formation of shadows)**

4.22$_{3,5,6,7,8,9,10,11}$ **construct predictions and inferences based on patterns of evidence**

4.23$_{3,5,6,7,8,9,10,11}$ **test variables (e.g., that effect plant growth, action of water in shaping the earth, and causes and effects of events)**

4.24$_{3,5,6,7,8,9,10,11}$ **interpret data presented in a table, graph, or diagram and use it to answer questions and make decisions**

4.25$_{5,6,7,8,9,10,11}$ **draw and support a conclusion based on patterns of evidence (e.g., weather maps, change of speed in a given amount of time, change in wave motions with changes in energy, and variation of plants)**

4.26 support statements with facts (e.g., found in books, multimedia, Internet)

Laboratory Investigations/Hands-On Learning

4.27 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of

the instructional time to develop conceptual understanding and laboratory skills

4.28 use scientific instruments and everyday materials to investigate the natural world (e.g., observe the natural world using instruments such as a hand lens, microscope, telescope, thermometer, magnets, bulbs and batteries, graduated cylinders, calculators, computers)

4.29 demonstrate safe and proper techniques for handling, manipulating, and caring for science materials

Science Themes and Subject Matter

4.30 develop an understanding of the scientific themes of systems, changes, and models (e.g., systems consists of many parts that interact with one another and give rise to new properties or functions; change occurs gradually, repetitively, or randomly; a model is a picture, description, simulation, or equation which represents the real thing)

4.31 understand that the study of living and non-living objects in the natural world integrates living organisms, earth materials, and physical properties of matter

4.32 establish connections across the curriculum (e.g., integrate science with mathematics, social studies, language arts, arts, and/or physical education)

4.33$_{3,5,6,7,8,9,10,11}$ **compare, sort, and group objects according to buoyancy, magnetic properties, states of matter, density, solubility, conductivity and ability to react - *systems***

4.34$_{3,5,6,7,8}$ **identify the structures of living things including their systems, and explain their function (e.g., skeletons, teeth structures, and leaves) - *systems***

4.35$_{3,5,7,9}$ **describe the different characteristics of plants and animals which help them to survive in different niches and environments - *systems***

4.36$_{3,5,6,7,8,9,10}$ **describe the environments and conditions which are needed for the survival of living things (e.g., water, sunlight, soil, food, climate, correct habitat, environmental barriers) - *systems***

4.37$_{3,5,6,7}$ **classify living things according to their structures and functions (e.g., taxonomy) - *systems***

4.38$_{3,5,6,7,8,9,10}$ **review relationships among organisms in an ecosystem (e.g., fresh water, salt water, and terrestrial organisms and habitats, climate as related to biomes, food webs) - *systems***

4.39$_{3,5,6}$ **identify human uses of plants and animals (e.g., food sources, medicines) - *systems***

4.40 associate the behaviors of living things to external and internal influences (e.g., hunger, climate, seasons) - *systems*

4.41 identify cells in plants and animals (e.g., use hand lenses or microscopes to examine plant and animal cells) - *systems*

4.42 **identify variations in structures and function within and among species of living things (e.g., different seeds, leaves, skeletons, different forms of reproduction, animal and plant structures) - *changes***

4.43$_{3,5,6,7}$ **recognize, compare, and/or sequence changes in living things (e.g., plant and animal life cycles) - *changes***

4.44 describe environmental barriers to the migration of animals - *changes*

4.45 construct and explain models of habitats, food chains, and food webs - *models*

4.46$_{5,6,7,8,9,10,11}$ **observe and investigate how properties can be used to identify substances (e.g., acids and bases, solubility, conductivity, magnetism) -**

systems

4.47$_{3,5,6,7,8,9,10,11}$ **examine simple chemical changes (e.g., tarnish, rust, burning) - *changes***

4.48$_{10}$ **construct Bohr models of atoms - *models***

4.49 identify different forms of energy and describe energy transformation (e.g., electrical to heat, light to mechanical) - *systems*

4.50 examine properties of waves (e.g., transverse, longitudinal, frequency, wavelengths) - *systems*

4.51 relate motion to its properties (e.g., frame of reference, position) - *systems*

4.52$_{3,5,7,9}$ **relate changes in states of matter to energy transformation - *systems***

4.53$_{5,6,11}$ **predict and investigate the changes in motion produced when applied force is changed (e.g., increase/decrease in applied force, length of vibrating strings, length of time force is applied) - *changes***

4.54$_{3,5,7,9}$ **identify various changes in states (e.g., solids to liquids, liquids to solids, solids to gas) - *changes***

4.55$_{5,6,10,11}$ **use models to demonstrate heat, light, and sound (how produced., how changed, applications to every day living, how moved through system) - *models***

4.56$_{5,10}$ **construct simple electrical circuits (e.g., conductors, non-conductors, complete/incomplete) - *models***

4.57$_{6,9,10,11}$ **explain the relationship between the rate of cooling and crystal size of igneous rocks - *systems***

4.58 describe the Earth's atmosphere - system

4.59$_{6}$ **state that air has mass, takes up space, and is made of molecules - *systems***

4.60$_{5,6}$ **identify parts of the solar system - *systems***

4.61 explain the reason why other planets are not always seen in the same position

4.62$_{5}$ **research evidence to discover the age of the earth - *systems***

4.63$_{10}$ **associate fossils with the periods in which they were formed - *systems***

4.64$_{3,5,6,7,8,9,10}$ **locate and identify patterns of stars and their seasonal changes - *changes***

4.65 **describe the orbits of the sun and moon -*changes***

4.66$_{5}$ **compare and explain the relative time differences to erode materials (e.g., a sand pile, mud pile, rock pile) - *changes***

4.67 **investigate the cause and effects of volcanoes, earthquakes, and landslides - *changes***

4.68$_{6,7,8,9,10,11}$ **enter weather data on weather charts and use the data to hypothesize how air temperature and humidity affect air pressure - *models***

Science History

4.69 study the lives and discoveries of men and women scientists of different cultures and backgrounds (e.g., Albert Einstein, Earl Core, Wright Brothers, Gerty Cori, Gertrude Elion, Albert Achweitzer, Lewis and Clark, John Muir)

4.70 recognize that science changes over time (e.g., discoveries of new ideas creates a need for new equipment, new equipment makes it possible to discover new ideas, new ideas may have positive or negative consequences)

4.71 realize that scientists will continue to have questions about the world (e.g., what is the smallest particle, what causes diseases, can humans live in space for a long time)

Science, Technology, and Society

4.72 explain that there are many science-related careers through

the use of speakers, field trips, audio-visual, and/or printed material (e.g.,computer technician, food chemist)

4.73 explain that science skills are used in careers not usually associated with science (e.g., jewelry maker, pilot)

4.74 explain how technology has positively or negatively affected the quality of life in West Virginia and the world (e.g., rechargeable batteries, Great Lakes Zebra Mussels, oil spills and clean up)

4.75 research how common daily events involve science (e.g., flashlights, laser scanners, printed materials)

4.76 develop respect and responsibility for the environment by recognizing the interrelationship of living and non-living things and engaging in conservation practices

Computer/Technology

4.77 use appropriate software to practice and master fourth grade instructional objectives in science

4.78 practice proper finger placement for all keys on a keyboard

4.79 use appropriate software to practice reading, interpreting, and analyzing the data on a map, chart, graph, table, and diagram

4.80 use appropriate software to practice drawing conclusions, making predictions, and making hypotheses based on data from a map, diagram, chart, graph, and table

4.81 identify and demonstrate ways technology is used to access information

4.82 demonstrate understanding that the violation of copyright law is a crime

4.83 using the graphing application of appropriate software, create tables, charts, and/or graphs

4.84 use a calculator to perform mathematical functions in data analysis

4.85 use a variety of instruments (e.g., probes, thermometers, measuring devices) to perform measurements and record data

Grade Five
English Language Arts

English Language Arts at the fifth grade level is designed to expand and strengthen knowledge and abilities learned in the fourth grade and to prepare students for the sixth grade. Listening and speaking instruction prepares students for interaction and expression at school, at home, and , later, in the work place. Reading comprehension and vocabulary skills enable students to read on literal, interpretive, and critical levels for functional and recreational purposes. Writing, spelling, and language objectives provide instruction and opportunity to develop proficient written expression. Study skills help students interact with the world of information that will be much more complex when they become adults.

Listening/Speaking

5.1 distinguish difference between listening and hearing

5.2 recognize and exhibit oral communication skills (e.g., pitch, tone, rate)

5.3 identify and correct usage errors in oral communication (e.g., word choice, grammar)

5.4 exhibit appropriate speaking etiquette (e.g., speaking in turn, proper use of communication technologies)

5.5 use public speaking strategies to prepare formal and informal speaking presentations across the curriculum (e.g., oral report, recitation, dramatization)

5.6 exhibit appropriate audience etiquette in a variety of listening experiences

5.7 listen to a story and retell events in sequence

5.8 $_{1,2,3,6,7,8}$ **listen to multi-step oral instructions and successfully complete a task(s)**

5.9 supply missing step(s) in a set of oral directions

5.10$_{6,7,8}$ **listen to sentences to identify the meaning of a synonym, antonym, homonym, etc., by using context clues**

5.11$_{1,2,6,7,8}$ **listen to oral communications and critique, evaluate, question, imagine and summarize about a selection**

5.12$_{2,3,4,,7,8}$ **use critical thinking to distinguish fact from opinion, purpose, predict, draw conclusions, and compare or contrast information**

5.13$_{2,3,4,6,7,8}$ **listen to specific information and interpret it to construct meaning in and beyond text**

5.14 $_{6,7,8}$ **relate personal experience to construct new meaning from information heard**

Reading Comprehension

5.15$_{1,2,3,4,6,7,8,9,10,11,12}$ **read literary works by national and international authors to include but not limited to: article autobiography, biography, fable, fairy tale, folk tale, legend, mystery, myth, novel, play, poetry, tall tale, historical fiction, science fiction, realistic fiction, humorous fiction, and fantasy**

5.16$_{6,7,8,9}$ **locate factual information (e.g., details, events, sequences)**

5.17$_{k,2,4,6,8,9,10}$ **determine the main idea in text to establish meaning and determine main idea inferred in text to establish meaning**

5.18$_{3,4,6,7,8,9,10,11}$ **determine time/sequence using order words**

5.19$_{3,7,8,9,10,11}$ **determine plot, style, mood, characterization to construct initial meaning**

5.20$_{k,1,2,3,4,8,9,10}$ **analyze text to identify a sequence of events**

5.21$_{3,4,7,9,11}$ determine a character's feelings, motives, and traits based on text

5.22$_{3,4,7,9,11}$ interpret text to infer information about an event

5.23$_{8,9,10,11}$ interpret text to draw conclusions about a person or event

5.24$_{k,2,3,4,6,7,8,9,10,11}$ predict what will happen next in a story

5.25$_{2,3,8,9,10,11}$ determine author's purpose by using tone, style, and technique

5.26$_{2,3,4,7,8,9,10,11}$ determine the appropriate reading strategy (e.g., rereading) to acquire specific information

5.27$_{3,6,9,10}$ identify how and where to locate additional information on a text topic (e.g., map, resource person, book, cartoon, drawing)

5.28 determine the meaning of a word using context clues

5.29$_{10}$ interpret the use of a rhetorical question in text

5.30$_{10,11}$ interpret figurative language in text

5.31$_{k,3,6,7,8,9,10,11}$ make hypothesis based on text

5.32$_{1,2,3,9,10}$ read and apply directions for a specific task

5.33$_{8,9,10}$ draw graphic organizers to reflect main ideas and supporting details

5.34 utilize paraphrasing and summarization to establish understanding of text

5.35 create an alternative ending to a story

Reading Vocabulary

5.36$_{2,3,4,6}$ use context clues to determine meaning of an unknown word

5.37$_{7,8,9,10,11}$ define synonyms

5.38 use context clues to find a synonym for an unknown word

5.39$_{2,3,4,6,7,8,9,10,11}$ identify synonyms to improve quality of text

5.40 define antonyms

5.41 use context clues to find an antonym for an unknown word

5.42$_{2,3,4,6,7,8,9,10,11}$ use context clues to determine meaning of a multiple-meaning word

5.43 choose the correct definition of a multiple-meaning word

5.44 recognize homophones (e.g., dear-deer, knight-night), and choose correct homophone for the context

5.45 recognize homographs (e.g., lead (to guide)-lead (a metal) and chose correct homographs for the context

5.46 sort words into categories or classes

5.47 analyze and complete analogies (e.g., synonyms, antonyms, part/whole, object/group)

5.48 use prefixes as structure clues for word recognition and meaning

5.49 use root words as structure clues for word recognition and meaning

5.50 use suffixes as structure clues for word recognition and meaning

5.51 evaluate a list of synonyms and sort according to their connotations

Writing

5.52$_{4,7,10}$ write complete sentences

5.53$_{4,7,10}$ use a variety of sentence types (e.g., simple, compound, complete, declarative, and interrogative)

5.54 develop a paragraph with a main idea/topic sentence supported by details

5.55 use prewriting and drafting strategies to generate topics and plan approaches to writing tasks

5.56 use strategies to write for a specific purpose (e.g., narrative, informative, and persuasive)

5.57$_{4,7,10}$ use editing strategies to correct errors in organization, content, usage, capitalization, punctuation and spelling

5.58$_{4,7,10}$ compose narrative text that contains a beginning, middle and end

5.59$_{4,7,10}$ use a writing prompt to develop a composition with a smooth transition

5.60 develop a composition that is focused, coherent, and has a clear and logical progression of ideas

5.61$_{4,7,10}$ develop a composition that contains specific, relevant details

5.62 use writing strategies to address specific types of writing (e.g., journal, friendly letters, and business letters)

5.63 demonstrate progress toward mastery of penmanship and keyboarding

5.64 use electronic and traditional editing strategies (e.g., symbols, dictionaries) to correct spelling errors (e.g., proper names, homographs, [in, inn].)

Spelling

5.65 **identify and spell common homophones/homonyms (words that have different meanings and spellings but are pronounced the same (e.g., here - hear, sun - son)**

5.66 spell words correctly containing "long a" and its variants (e.g., ai, ay, a_e, eigh)

5.67 **spell words correctly containing "long e" and its variants (e.g., ea, e_e, _e, ee)**

5.68 spell words correctly containing "long I", and its variants (e.g., i_e, ie, igh, _y, _ye)

5.69 spell words correctly containing "long o" and its variants (e.g., oa, oe, ow, ough, o_e, _o)

5.70 spell words correctly containing "long u" and its variants (e.g., u_e, ue, oo, ew)

5.71 **spell words correctly containing the "r" controlled vowels (e.g., ir, ur, er, ar, or)**

5.72 spell words correctly containing the letter "g" pronounced "j" (e.g., gi, ge, dge)

5.73 **spell words correctly containing the letter "c" pronounced "s" (e.g., ci, ce, cy)**

5.74 spell words correctly containing the phonetic elements "ch" and "sh" (e.g., churn, shirt)

5.75 **spell correctly words ending in "s", "ss", "x", "ch", "sh", with an "s" added (e.g., gases, boxes, churches, pushes)**

5.76 spell correctly words beginning with the "n" sound, but have silent consonants (e.g., gnat, knot)

5.77 spell correctly words having "f" sound spelled with diphthong ph (e.g., phone)

5.78 **spell correctly words ending in a vowel with an inflectional ending or suffix added (e.g., mating, messiness)**

5.79 **spell correctly words ending in a consonant with an inflectional ending or suffix added (e.g., hopping, hoping)**

5.80 spell correctly words with the prefix "mis" (e.g., misspell)

5.81 spell correctly words with the suffix "ion", "sion", "tion"

5.82 demonstrate accurate spelling across the curriculum

5.83 develop spelling competency by recognizing one's own spelling weakness

5.84 differentiate words that are commonly misspelled (e.g., except, accept)

5.85 distinguish between spelling of contractions and similar possessives (e.g., its, it's)

5.86 use correct and exaggerated pronunciation as a spelling strategy (e.g., identify I-den-ti-fy)

5.87 use syllabication as a spelling strategy

5.88 use memorization and /or mnemonic devices as a spelling strategy

5.89 use meaning as a spelling strategy (e.g., "bi" means "two", "tri" means "three", "sub" means "under", "super" means "over")

5.90 use visualization as a spelling strategy (e.g., word configuration)

5.91 use visual and auditory cues as a spelling strategy (e.g., dessert, desert)

5.92 use visual and auditory cues as a spelling strategy (e.g., -ise, -ice, -ize)

5.93 use visual and auditory cues as a spelling strategy (e.g., compound words)

5.94 use electronic as well as traditional editing resources to correct spelling errors (e.g., electronic spell checker,

dictionary, thesaurus)

Language

5.95 capitalize first word in sentence
5.96 capitalize pronoun "I"
5.97$_{1,2,4,7,8,9,10,11}$ **capitalize proper nouns, abbreviations, and proper adjectives**
5.98 **capitalize titles of persons and initials**
5.99 capitalize titles of written works
5.100$_{2,3,4,6}$ **capitalize parts of a letter**
5.101$_{3,4,6,9,10,11}$ **capitalize first word of direct quotation**
5.102 capitalize parts of an outline
5.103 use period at end of declarative and imperative sentence, after abbreviation, and in outline form
5.104 use question mark at end of interrogative sentence
5.105 use exclamation mark at end of exclamatory sentence and after interjections
5.106$_{2,3,4,6}$ **use commas between city and state**
5.107 use comma to separate day of week from day of month from year
5.108$_{2,3,4,6}$ **use comma after greeting and after closing in a friendly letter**
5.109$_{3,4,6,9}$ **use comma to separate items in a series**
5.110$_{3,4,6,7,8,9,10,11}$ **use comma in a compound sentence (e.g., ..., and ; ...., but....)**
5.111$_{7,8,10,11}$ **use comma to separate a noun from its appositive**
5.112 use commas after introductory words phrases and clauses
5.113 underline titles of books
5.114$_{2,3,4,6,9}$ **use apostrophe with contractions**
5.115$_{4,6,7,8,9,10,11}$ **use apostrophe with possessive nouns**
5.116$_{3,4,6,9,10,11}$ **use quotation marks in direct quotations**
5.117$_{4,6}$ **use quotation marks in titles of written work or work of art**
5.118$_{6,8,10,11}$ **use colon to indicate a list follows**
5.119 use a hyphen to divide words between syllables at the end of a writing line
5.120 use a hyphen in appropriate compound words
5.121$_{4,6,8,9,10,11}$ **evaluate and correct the use of apostrophes, colons, quotation marks, and commas when editing a writing sample**
5.122$_{1,2,4,7,9,10,11}$ **identify proper and common nouns**
5.123 use correct forms for regular and irregular plurals of nouns
5.124 use correct possessive forms of nouns
5.125 identify concrete nouns (e.g., people, places)
5.126 identify abstract nouns (e.g., feelings)
5.127 identify verbs
5.128$_{1,2,3,4,6,7,8,9,10,11}$ **use correct verb tense in oral and written work**
5.129 recognize action, helping, and linking verbs
5.130$_{1,2,3,4,6,7,8,9,10,11}$ **use subject-verb agreement in oral and written work**
5.131 use correct forms of irregular verbs
5.132 identify adjectives
5.133$_{3,4,6,7}$ **use "-er" at end of comparative adjectives**
5.134$_{3,4,6,7}$ **use "-est" at end of superlative adjectives**
5.135 identify adverbs
5.136 use "-er" at end of comparative adverbs
5.137 use "-est" at end of superlative adverbs
5.138 identify adjectives that use "more" and "most" instead of "-er" and "est" for comparative and superlative forms
5.139 identify adverbs that use "more" and "most" instead of "-er" and "-est" for comparative and superlative forms
5.140$_{1,2,3,4,6,7,8,9,10,11}$ **identify and correct double negatives in oral and written work**
5.141$_{4,6,7,8,9,10,11}$ **use the correct pronoun case (e.g., nominative, objective, possessive)**
5.142 use pronoun/antecedent agreement
5.143 use correct demonstrative pronoun (e.g., this, that, these, those)

5.144 use correct compound personal pronouns (himself instead of hisself, themselves instead of theirself)
5.145 identify subject of a sentence
5.146 identify predicate of a sentence
5.147$_{3,4,6,8}$ **combine two sentences by combining subjects, predicates, modifiers, phrases, and/or clauses**
5.148$_{1,2,3,4,6,7,8,9,10,1}$ **identify and correct run-on sentences**
5.149$_{1,2,3,4,6,7,8,9,10,11}$ **identify and correct sentence fragments**
5.150$_{1,2,3,4,6,7,8,9,10,11}$ **identify and correct redundant words/sentences**
5.151$_{6,7,8,9,10,11}$ **recognize an appropriate ending to a story (e.g., purpose, content, organization, and tone)**
5.152$_{3,4,6,7,9,10,11}$ **recognize a topic sentence in a paragraph**
5.153$_{2,3,6}$ **recognize a summary or supporting sentence in a paragraph**
5.154$_{2,3,4,6,7,8,9,10,11}$ **identify audience for which a selection was written**
5.155$_{6,7,8,9,10,11}$ **edit to produce concise, effective writing (e.g., exact/precise words, vivid words, trite/overused words, cliches)**
5.156$_{1,2,4,6,7,8,10,11}$ **edit to remove unnecessary sentences**

Study Skills

5.157$_{8,9,10}$ **identify and evaluate the general usefulness of a book's content after reading the table of contents, title page. copyright page, and index**
5.158$_{8,9}$ **know the purpose of the table of contents of a book**
5.159$_{8,9,10}$ **locate information in identified chapters using the table of contents**
5.160$_{8,9,10}$ **locate specific information using the table of contents and index**
5.161 **infer the content of a chapter after reading the table of contents**
5.162$_{6,7}$ **identify sources for certain types of information (e.g., newspaper, dictionary, encyclopedia**
5.163$_{6,7,8,9,10}$ **identify parts of a text and the information contained therein (e.g., glossary, telephone, directory, and index**
5.164$_{3,4,6,7,9,11}$ **demonstrate the appropriate use of the general reference sources of a dictionary, thesaurus, atlas, almanac, and encyclopedia**
5.165$_{6,7}$ **identify a word that will come first in alphabetical order according to its second and, then, third letter**
5..166$_{3,6,7,9,10,11}$ **use guide words from a dictionary page to select the word that would be on the page**
5.167$_{3,6,7,8,9,10,11}$ **read the various meanings of a dictionary entry to determine the meaning of a word in a sentence**
5.168$_{3,6,7,8}$ **use the dictionary pronunciation guide to determine sounds, syllables, and accent(s) of a word**
5.169$_{6,7,8,9,10,11}$ **determine which number in a dictionary definition best fits the meaning of a word in a sentence**
5.170 know the purpose of the card catalog, both electronic and traditional
5.171$_{6,7,8}$ **locate a call number from electronic or traditional catalog**
5.172 use active reading skills to gain information (e.g., survey, note-taking, adjust reading rate, underlining, outlining or webbing, and summarizing)
5.173$_{9,10,11}$ **organize title, topics, and details into a semantic web**
5.174$_{6,7,8}$ **recognize topic, main headings, and sub-headings in a graphic organizer**
5.175$_{6,7,8}$ **know author's sources of information are in a bibliography or reference section**
5.176 identify and interpret graphic aids (e.g., maps, charts, graphs, tables, and timelines)
5.177 identify and use note-taking and test-taking skills
5.178 adjust reading rate according to

purpose and nature of material

Computer/Technology

5.179 use appropriate software to practice and master fifth grade English language arts instructional objectives

5.180 using a word processor, demonstrate correct keying, editing, and formatting techniques

5.181 use a word processing program to copy and move text (5.57)

5.182 use a word processing program to produce a report that contains centering, tabs, and more than one paragraph (5.57)

5.183 use the editing functions of a word processor (spell check, grammar checker, thesaurus, outliner) (5.57, 5.64 and 5.94)

5.184 identify examples of written, spoken, and viewed work that is protected by copyright laws

5.185 describe the influence of technology on communication (reading, writing, spelling, handwriting/keyboarding, speaking, listening, and viewing)

5.186 select and use appropriate software and/or other technologies to locate and use reference sources (5.27 and 5.162)

5.187 develop keyboarding skills: proper posture, finger placement, keying letters, numbers, symbols, and special keys (5.63)

5.188 use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts (5.176)

Grade Five Mathematics

Building on mastery of the basic facts of addition, subtraction, multiplication, and division, the fifth grade objectives place emphasis on developing proficiency in using whole numbers, fractions, and decimals to solve problems. Students will collect, display, and analyze data in a variety of ways and solve probability problems. Students will solve problems involving area and perimeter, will classify polygons, plot points on a coordinate plane, and write a number sentence using a variable to solve problems. Students should be actively engaged, continuing to use concrete materials and appropriate technologies such as calculators and computers. Problem solving should be integrated throughout all the strands. The development of a variety of problem-solving strategies should be a major goal of mathematics at this grade level.

Number Theory and Number Sense

$5.1_{4,6,7,8}$ **read, write, and identify place value of whole numbers and decimals from millions through thousandths using standard and expanded form**

$5.2_{4,6}$ **compare and order the value of whole numbers and decimals from millions through thousandths using symbols <,>, or =**

$5.3_{6,7,8}$ **identify alternative representations (pictures, models, number lines, etc.) of fractions, mixed numbers, and decimals**

$5.4_{6,7,8}$ **compare and order fractions, including lowest term fractions, improper fractions, and mixed numbers with like and unlike denominators**

$5.5_{6,7,8}$ **write or model equivalences of fractions, decimals, percent, and ratios**

5.6_{6} **find the Greatest Common Factors of two numbers by listing factors**

5.7_{6} **find the Least Common Multiple of two numbers by listing multiples**

5.8_{6} represent or model decimals on a grid or use concrete materials

5.9 **identify a number that is one**

hundred more or one hundred less than a given number

Computation and Estimation

5.10$_{3,4,6,7,8}$ **use estimation to solve problems with whole numbers and decimals including money (compatible numbers, rounding, and front-end estimation); use to determine reasonableness**

5.11$_{6,7,8}$ **solve problems in context involving addition and subtraction of whole numbers through six digits; multiplication of whole numbers through four digits by three digits; division of whole numbers with dividends of up to five digits and divisors of up to two digits using estimations, mental math, calculators, and paper and pencil**

5.12$_{6,7,8}$ **solve problems in context involving addition, subtraction, and multiplication of decimals through the thousandths and division of decimal dividends through the thousandths by a single digit whole number divisor using estimation, mental math, calculators, and paper and pencil**

5.13$_{6,7,8}$ **solve problems in context involving addition and subtraction of fractions and mixed numbers with like and unlike denominators involving regrouping, expressing answers in simplest form**

5.14 use computation, estimation, calculators, and computers to solve application problems

5.15$_{6,7,8}$ **round to the nearest dollar, hour, and to the million and millionth places**

5.16$_{6,7,8}$ **solve problems with multiple operations in context and with operations involving basic percents in context**

Patterns, Functions, and Algebra

5.17$_{k,1,2,3,4,6}$ **explore a variety of patterns with missing elements, including numeric and geometric patterns, such as triangular numbers, perfect squares, patterns formed by powers of ten, and arithmetic sequences using paper and pencil, concrete materials, calculators, and/or computers**

5.18$_{6,7,8}$ **use input/output models for functions (number machines)**

5.19 **write a number sentence using a variable to solve problems**

5.20 solve problems by using a choice of strategies including guess and check, make a table, make a model, make a list, draw a picture, find a pattern, work backwards, use a formula, and/or make a diagram

5.21$_{3,4,6,7}$ **rewrite addition and multiplication number sentences and expressions using the operations of addition and multiplication and their inverse and commutative properties [e.g., 4×3=□⇒ □÷3=4 (fact families) and 5×8×3=3×8×5]**

5.22 introduce the order of operations: parenthesis, multiplication and division, then addition and subtraction

Probability and Statistics

5.23$_{6,7,8}$ **collect, organize, display, read, and interpret numerical data in a variety of forms: tables, tally charts, bar graphs, line graphs, circle graphs, and stem-and-leaf plots**

5.24$_{6,7}$ **find the mean, median, range, and mode of a given set of data**

5.25$_{4,6,7,8}$ **identify probabilities and solve problems involving the probability of an event by using tree diagrams or by construction of a sample space representing all possible results**

5.26 construct, read, or interpret tables, charts, and graphs to draw reasonable inferences or verify predictions using available technology

5.27 model situations by carrying out experiments to determine probability

5.28$_{6,7,8}$ **determine combinations and permutations (tree diagrams and probability experiments with and without replacements)**

Geometry

5.29$_{4,6,7}$ **compare, classify, measure, and draw right, acute, and obtuse angles and triangles using a straightedge and protractor**

5.30 recognize and construct isosceles, right, and equilateral triangles

5.31 **classify and compare the following polygons: square, rectangle, parallelogram, pentagon, hexagon, and octagon**

5.32$_{3,4,6,7}$ **identify the ordered pair for a point and locate the point in the first quadrant of a coordinate plane**

5.33 **identify figures as similar and/or congruent, including scale drawings**

5.34 **recognize lines of symmetry in the environment**

5.35 **recognize the images of figures after flips, slides, and turns (reflections, translations, and rotations)**

Measurement

5.36$_{6,7,8}$ **estimate and/or measure the length of real objects in parts of an inch up to 1/8 inch, whole inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers**

5.37 estimate and/or measure the weight/mass of real objects in ounces, pounds, tons, grams, and kilograms

5.38 estimate and/or measure liquid volume in cups, pints, quarts, gallons, milliliters, and liters

5.39 estimate and measure temperature in Celsius and Fahrenheit units of the boiling point of water, freezing point of water, room temperature, and body temperature

5.40$_{4,6,7,8}$ **describe, determine, and compare the perimeters of polygons and the area in square units of squares, rectangles, and triangles, given the appropriate measures**

5.41 apply the concepts of perimeter, area, volume, weight/mass, time, and temperature in practical problem-solving situations

5.42$_{2,3,4,6,7,8}$ **determine an amount of elapsed time in hours and minutes within a twenty-four hour period**

5.43 apply the concepts of perimeter, area, volume, weight/mass, time, and temperature in practical problem-solving situations

5.44$_{6,7,8}$ **compute and convert customary and metric units of measure within the same system in problem-solving situations**

5.45$_{6}$ **select appropriate customary and metric units and tools for measuring to desired degree of precision**

5.46$_{6,7,8}$ **determine actual measurements from scale drawings**

Computer and Technology

5.47 use appropriate software to practice and master fifth grade instructional objectives in mathematics

5.48 use a calculator to solve problems with large whole numbers and small decimal numbers

5.49 use a calculator to solve problems with large whole numbers and small decimal numbers

5.50 use a calculator to solve application problems.

5.51 use a calculator to produce a variety of number patterns

5.52 use a calculator to find mean, median, range, and mode of a given set of data

5.53 use a calculator to convert

customary and metric units of measure in problem-solving situations

5.54 use graphing software to organize and display data by creating tables, charts, bar, line, and circle graphs

5.55 practice inputting data using correct keying, editing, and formatting techniques

5.56 identify examples of mathematical work that is protected by copyright laws

5.57 describe the influence of technology on mathematics

Grade Five: United States History

The fifth grade program of study consists of a basic overview of the history of the United States from the age of exploration to the present.

Civics

5.1 **explain how the implementation of the Articles of Confederation led to the development of the United States Constitution**

5.2_{11} **identify and analyze the reasons for compromises used in the development of the United States Constitution.**

5.3 identify the three parts of the Constitution and explain the importance of each section

$5.4_{3,6,7,8,9,10,11}$ **list and explain the functions of the executive, legislative, and judicial branches of government**

5.5 **define the national census and explain the effects that it has on the legislative branch**

5.6 explain the reasons for the adoption of the Bill of Rights to the Constitution and the rights that it protects

$5.7_{6,7,8,9}$ **identify differences between individual rights and responsibilities of American citizenship**

5.8_{3} **using a mock legislature, demonstrate the roles of elected representatives**

$5.9_{3,6,8,9,10}$ **construct a chart which lists the roles of government at the local, state, and national levels**

5.10 **compare similar responsibilities in public and private sector jobs**

5.11_{7} participate in role playing exercises which demonstrates knowledge of "trial by jury"

Economics

$5.12_{4,6,8}$ **list geographic factors that can enhance or limit economic activities in various United States regions**

$5.13_{4,6,7,10}$ **utilizing economic vocabulary, apply the concept of supply and demand to a specific United States situation**

5.14 explain the economic impact of slavery upon the development of the United States

5.15_{6} **examine graphs, charts, and timelines to draw conclusions about agricultural development**

5.16_{10} **explain the economic importance of the New Deal in relation to the Great Depression**

$5.17_{6,8}$ **describe the characteristics of an industrial center and its impact on the United States economy**

$5.18_{3,4,7,9}$ **construct a chart showing the distribution of tax dollars in the United States economy**

$5.19_{7,9,10}$ **identify the roles of consumers in the United States economy**

$5.20_{4,6}$ **apply the concepts of sales,**

expenses, and profits to a real life event (e.g., school-related situation such as sports events, concession stand, snack machines)

Geography

5.21 use maps and globes to trace the location and movements of various cultures drawn to the New World

$5.22_{4,6,11}$ **measure distances using a scale and apply the concept of cardinal and intermediate directions to maps**

$5.23_{6,11}$ **use a map to indicate the location of a country by hemisphere and its proximity to the equator**

$5.24_{7,8}$ **explain the geographic perceptions explorers had of the New World with regard to landforms, wealth, and people**

5.25_{7} trace the development of America's urban areas

5.26_{6} **use geography to describe historical events (e.g., the emergence of different Native American groups, the rise of slavery in the South, the need for Asian labor in the West, exploration)**

5.27_{9} **explain the relationship of United State's cultures to its environments**

5.28 **identify and locate each of the fifty United States within their regions**

5.29 locate, identify, and contrast the major rivers, landforms, natural resources, climate regions, major soil regions, and deserts of the United States

5.30 **relate America's westward expansion to natural resources and physical geography**

5.31 describe how people have changed the environment of the United States

$5.32_{3,4,6,7,8,9,10,11}$ **read, interpret, and draw conclusions from United States maps (e.g., special purpose maps, graphs, charts, tables, and timelines)**

History

5.33 compare and contrast Native American cultures and the cultures of European settlers

$5.34_{6,7,8,9,11}$ **explain problems faced by immigrants relocating to the New World**

5.35_{9} **identify areas and patterns of early American settlement**

5.36 examine the lifestyles and customs of the colonial settlers

$5.37_{6,10}$ **analyze the causes and effects of the American Revolutionary War, and identify leaders in the movement**

$5.38_{3,6}$ **interpret quotes of famous Americans from various periods of history**

$5.39_{6,10}$ **identify and classify the issues contained in the Declaration of Independence**

5.40_{8} describe problems faced by Washington when he became the first United States President

5.41 **list and explain the causes and effects of the Louisiana Purchase**

$5.42_{6,8,10,11}$ **compare and contrast reasons for exploration and land acquisition by the French, Spanish, and English in America and the effect it had on Native Americans**

$5.43_{7,8,9}$ **analyze how immigration policy changes have affected United States immigration patterns**

$5.44_{4,6,8}$ **identify causes, major events, and important people of the Civil War**

$5.45_{6,8}$ **analyze the impact of slavery and the Abolitionist Movement upon the development of the United States**

$5.46_{6,8}$ **explain how expansion affected the inhabitants of the American West (e.g., Native Americans, settlers) ,and explain the roles of Homesteaders**

$5.47_{6,9}$ **explain the importance of various historical documents in the development of the United States**

5.48 identify and explain social and

technological changes that took place during the Industrial Revolution in the United States

5.49 trace the development of transportation in the United States and describe its impact on settlement, industry, and residential patterns

5.50 identify events which led to the United States becoming a world power

5.51 identify the two opposing sides in World War I, and explain why the United States entered the war

5.52 describe the effects of the Great Depression on the people of the United States

5.53 identify the causes and effects of World War I and World War II

5.54 identify contributors to the Civil Rights Movement (e.g., John Fitzgerald Kennedy, Martin Luther King Jr., Rosa Parks, Lyndon Johnson)

5.55 identify United States conflicts resulting from police action as opposed to a declaration of war (e.g., World War I, World War II, Korea, Vietnam)

5.56 identify contributing factors leading to United States peace keeping missions initiated by the United Nations

Computer/Technology

5.57 use appropriate software to practice and master fifth grade social studies instructional objectives

5.58 use a variety of audio-visual and multi-media materials to practice and master fifth grade social studies instructional objectives

5.59 practice inputting data using correct keying, editing, and formatting techniques

5.60 using graphics software, select the appropriate type of graph to display a set of data

5.61 use graphics software to create charts, graphs, and tables

5.62 identify database management terms (e.g., database, file, record, field/category, sort/arrange, select/search, report)

5.63 use a database template to enter and edit data

5.64 identify intellectual property protected by technological copyright

5.65 describe the influence of technology on life in the United States

Grade Five Science

The Coordinated and Thematic Science (CATS) Five objectives identify, compare, classify and explain our living and designed worlds. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth/space sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated in all activities. CATS Five reviews earth and the sky, life cycles and habitats of organisms, properties, positions, and motions of objects, and energy. New major concepts introduced at the fifth grade level include changes in properties of matter, structures, functions and adaptations of organisms, and the structure of the earth's system.

Nature of Science

5.1 develop a conceptual framework of scientific principles

5.2 recognize the interdependency of science themes and scientific concepts

5.3 evaluate the interrelationships of scientific concepts to everyday life by making informed decisions and choices using scientific reasoning and knowledge ◊

5.4$_{6,7}$ **investigate career choices in science and technology** ◊

5.5$_{6,7,8}$ **apply skepticism, careful methods, logical reasoning, and/or creativity in investigating the observable universe (e.g., changing of mechanical energy to electrical energy, electrical energy to mechanical energy, electrical energy to light)**

5.6 recognize and appreciate that scientific knowledge is subject to modification as new information challenges current theories

5.7 acquire a holistic view of scientific knowledge by integrating reading, writing, mathematics and other disciplines with the science curriculum

5.8 use a variety of activities and investigations to produce a sense of wonder about the natural world and the joy of discovery

5.9 recognize that the exploration of science is challenging and fulfilling and establishes patterns of lifelong curiosity and learning

Scientific Attitudes/Habits of Mind

5.10 cooperate and collaborate to ask questions, find answers, solve problems and conduct investigations to further an appreciation and joy of scientific discovery ◊

5.11 process and integrate experiences with prior knowledge to formulate new ideas

5.12 understand that the study of science is a dynamic process and the results are not always definite or complete

5.13$_{6,7,8,9,10,11}$ **formulate conclusions through close observations, logic, objectivity, perseverance and integrity in data collection (e.g., adaptations in structures, photosynthesis, respiration)** ◊

Scientific Processes/Thinking Skills

5.14 recognize and apply facts, concepts, laws, and theories to explain phenomena

5.15$_{3,4,6,7,8,9,10}$ **compare and contrast objects, actions or phenomena according to similarities and differences in order to classify them (e.g., atoms and molecules, AC and DC currents, earthquakes and volcanoes)**

5.16$_{3,4,6,7,8,9,10,11}$ **construct and use charts, graphs, and tables to organize, display, interpret, analyze, and explain data (e.g., extrapolation, interpolation)** ◊

5.17$_{3,4,6,7,8,9,10}$ **use inferential reasoning to make logical conclusions from collected data (e.g., causes and effects)** ◊

5.18$_{3,4,6,7,8,9,10,11}$ **utilize experimentation to demonstrate scientific processes (e.g., formulating questions, predicting, forming hypotheses, quantifying, identifying dependent and independent variables)**

5.19$_{3,4,6,7,8,9,10,11}$ **develop rational thinking processes that underlie scientific approaches to problem solving by employing critical-thinking skills in applying scientific knowledge, using imagination and creativity while working individually or cooperatively (e.g., patterns of motion, cycles of matter and energy)** ◊

5.20$_{3,4,6,7,8,9,10,11}$ **develop skills in the use of laboratory materials and equipment; and proper communication of scientific**

data collected (e.g., meter sticks, balances, thermometers, scales, graduated cylinders) ◊

Laboratory Investigations/Hands-On Learning

5.21 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

5.22 use a variety of materials and scientific instruments to conduct explorations and investigations of the natural world to explain science concepts (e.g., measure environmental conditions using appropriate instruments) ◊

5.23 demonstrate safe techniques for handling, manipulating and caring for science materials, equipment and living organisms ◊

Science Themes and Subject Matter

5.24 develop through the study of interdependent themes including systems, changes, and models an understanding of biological, earth/space, and physical science concepts

5.25 associate hands-on activities to daily life experiences

5.26 express ideas that illustrate the relevance of science, technology, and societal issues

$5.27_{3,4,6,8,9,10,11}$ **classify living and non-living things according to properties (e.g., structures and functions, mass, volume, density, solubility, conductivity, magnetism, weight, shape, color, freezing point, boiling point, evaporation, rocks and minerals) - *systems***

5.28 identify and explain common energy transformations and cycles of matter (e.g., photosynthesis, water, carbon dioxide, nitrogen, energy conversions including fuels) - *systems*

5.29 demonstrate the processes involved in the changes of physical states of matter (e.g., solid to liquid to gas to liquid to solid) - *systems*

$5.30_{3,4,6,7,8,9,10,11}$ **recognize and explore methods for investigating physical changes (e.g., evaporating, condensing, boiling, freezing, melting, salinity, density, shape and size) - *changes***

5.31_{6} **explain the affects of force on motion (e.g., wind currents, hot air on balloons) - *changes***

$5.32_{2,3,4,7,8,9,10}$ **explain how the different characteristics of plants and animals help them to survive in different niches and environments (e.g., adaptations, natural selection, extinction) - *systems***

$5.33_{4,7,8}$ **identify the structures of living things and explain their functions (e.g., cells, tissues, organs, organ systems, whole organisms, communities, ecosystems) - *systems***

$5.34_{4,6,8,10}$ **compare variations of plant growth and reproduction (e.g., seed dispersal, asexual and sexual reproduction, needs of growing plants) - *systems***

5.35 describe methods that various cells use to obtain and process food - *changes*

$5.36_{3,4,6,7,8,9,10}$ **trace the pathways of the sun's energy through producers, consumers, and decomposers (e.g., food webs, pyramids) - *models***

5.37 **explain that the mass of a material is conserved whether it is together, in parts, or in a different state - *systems***

5.38 recognize that elements are composed of atoms of the same type - *models*

5.39 using the periodic table, identify common elements according to their symbols - *models*

5.40 describe variables affecting the motion of objects (e.g., gravity, friction, density of medium, amount of energy) - *systems*

5.41 **use SI (metric) units of measurement as they apply to electricity (e.g., amps, volts, watts) - *systems***

5.42$_{6,7,8,9,10}$ **construct and interpret graphs depicting motion (e.g., speed vs time) - *models***

5.43$_{4,10}$ **analyze diagrams of circuits (e.g., complete and incomplete circuits, parts and functions) - *models***

5.44$_{8}$ **demonstrate magnetic forces using magnets (e.g., law of magnets, lines of force) - *models***

5.45 **describe sound as a wave (e.g., compressional wave) - *models***

5.46 **review fundamental earth science concepts including, relative age of the earth, movement of celestial objects, air has mass and exerts pressure - *systems***

5.47$_{4,6}$ **understand there are stars in the universe just like our sun as well as many that are bigger or smaller - *systems***

5.48$_{10}$ explore how fossils can be used to determine the age of rock layers - *systems*

5.49$_{6}$ interpret the influence of land forms on weather and climate - *systems*

5.50 **identify and describe natural land forms, changes in these land forms and recognize that they may be used as a record of time - *changes***

5.51 **compare and explain the different rates of weathering in certain materials (e.g., sand pile, mud pile, rock pile) - *changes***

5.52$_{3,8}$ **explain how the earth's tilt and revolution determine the seasons - *changes***

5.53 **compare how seasonal weather patterns are affected by the sun (e.g., amount of sunlight, tilt of the earth, revolution) - *changes***

5.54$_{3,6,9}$ **collect and display weather data to describe weather patterns (e.g., temperatures, wind direction, wind speed, precipitation) - *models***

5.55$_{3,4,6,7,8,9,10,11}$ **fabricate and illustrate models (e.g., solar system, structure of earth, erosion and weathering, forces which drive the rock cycle) - *models***

Science History

5.56$_{6,7}$ **articulate the historical significance of scientific discoveries (e.g., as influenced by technological demands, competition, controversy, world events, personalities, societal issues)**

5.57$_{6,7}$ **compare the evolution of science concepts and theories (e.g., cells, plate tectonics, atoms, genetics)**

5.58$_{6,7}$ **examine the contributions of men and women of diverse cultures to the development of science**

Science, Technology, and Society

5.59$_{6,7,8,10,11}$ **give examples of how science and technology are used in daily living** ◊

5.60$_{6,7,8,10,11}$ **use the knowledge of science and technology to make personal decisions at local and global levels** ◊

5.61 evaluate and critically analyze mass media reports of scientific developments and events ◊

5.62$_{6,7,8,10,11}$ **critically analyze the effects and impacts of science and technology on global and local problems (e.g., mining, manufacturing, recycling, farming, water quality)**

5.63$_{6,7,8,10}$ **explore the connections between science, technology, society, and career opportunities**

5.64$_{6,7,8,10,11}$ **analyze the positive and negative effects of technology on society and the influence of societal pressures on the**

irection of technological advances

Computer/Technology

5.65 use appropriate software and a variety of audio-visual and/or multimedia materials to practice and master fifth grade instructional objectives in science

5.66 input data using correct keying, editing, and formatting techniques

5.67 using the graphing application of appropriate software, select the suitable graph, chart, or table to display a set of data

5.68 using the graphing application of appropriate software, create tables, charts, and/or graphs

5.69 use a calculator to perform mathematical functions in data analysis

5.70 use a variety of instruments (i.e. probes, thermometers, measuring devices) to perform measurements and record data

5.71 identify database management terms (e.g., database, file, record, field, record, field/category, sort/arrange, select/search, report)

5.72 use a database template to enter and edit data

5.73 use appropriate software to practice reading, interpreting, analyzing, and evaluating the data on a map, chart, graph, table, and diagram

5.74 use appropriate software to practice drawing conclusions from maps, diagrams, charts, graphs, and tables

5.75 use appropriate software to practice making predictions, inferences, and hypothesis from maps, diagrams, charts, graphs, and tables

5.76 associate computer/technology activities with related careers

5.77 identify work created by using technology as intellectual property and thus protected by copyright

5.78 describe the influence of technology on life in your community

5.79 retrieve current data from a variety of electronic sources which might include the Internet, and/or software reference programs

Grade Six
English Language Arts

English Language Arts at the sixth grade level promotes continued proficiency in communication skills of students. At this level, listening and speaking strategies require students to gather and process oral information and to effectively express themselves orally in a variety of situations. Reading objectives strive to promote the development of various vocabulary and comprehension skills that advance the acquisition of literal and inferential knowledge of students and foster recreational reading from a variety of genres, authors, media and resources. Emphasis is given to develop effective writing skills, including prewriting, drafting, revising, editing, and publishing compositions that are error-free and demonstrate proficiency in mechanics and usage to communicate ideas through conventional and electronic methods. This includes applying strategies to spell correctly across the curriculum. Objectives for study skills help students collect and organize information to make it useful in all situations.

Listening/Speaking

6.1 identify and correct usage in oral communications

6.2 exhibit appropriate speaking etiquette (e.g., speaking in turn, using proper communication technologies, demonstrating interpersonal communication)

6.3 use public speaking strategies to prepare formal and informal speaking presentations across the curriculum using appropriate pitch, tone, and rate

6.4 listen to oral communications using proper etiquette

6.5 listen to oral communications and retell in either oral or written form

6.6$_{2,3,5,7,8}$ **listen to oral directions and successfully complete the task**

6.7 listen to oral communications and critique, evaluate, and summarize their contents across the curriculum

6.8$_{2,4,5,7,8}$ **listen to specific oral information and interpret it to construct meaning in and beyond the text**

6.9$_{5,7,8}$ listen to oral communications and identify the synonym of an unknown word from context

6.10 listen to oral communication to determine the main idea

6.11 listen to oral communication to list details

6.12 $_{2,3,4,5,7,8}$ **listen to oral communication and distinguish between fact and opinion**

6.13 listen to oral communication to predict outcomes

6.14 $_{1,2,5,7,8}$ **think critically about oral selection to foster exploration, questioning and imagining**

6.15 $_{5,7,8}$ relate personal experiences to the information heard to construct new meaning

Reading Comprehension

6.16$_{1,2,3,4,5,7,8,9,10,11}$ **read literary works by national and international authors to include but not to be limited to: short stories, biographies, contemporary fiction, nonfiction (science and social sciences), narratives, novels, folk-lore, poetry, and drama**

6.17$_{1,2,3,4,5,7,8,9,10,11}$ **analyze the organization, author's style, and text components to determine genre**

6.18 determine and use the appropriate reading style for a particular reading situation (e.g., skim, scan, reading for information, recreational reading)

6.19 read directions to perform a task and apply the directions to a specific situation

6.20$_{7,8,9}$ **locate key words and other explicit information to construct initial meaning of a**

text

6.21$_{k,2,4,8,9,10,11}$ **extend the meaning from a passage to determine the main idea (e.g., theme)**

6.22$_{3,4,5,7,8,9,10,11}$ **locate specific details in a textbook passage to promote understanding (e.g., cause-effect, classifying, compare and contrast, sequence, etc.)**

6.23$_{k,3,4,5,7,8,9,10,11}$ **locate specific details in functional materials (e.g., advertisements) and recreational materials to promote initial understanding**

6.24$_{4,7,8,10}$ **determine factual information from opinion or fiction**

6.25 determine the meaning of a word by using context clues

6.26$_{k,3,4,7,8,9,11}$ **draw conclusions to describe character traits, thoughts, feelings, and motives**

6.27$_{k,3,4,5,7,8,9,10,11}$ **draw conclusions to make generalizations, judgements, inferences, and to summarize and analyze information based on reading selection**

6.28$_{k,3,4,5,7,8,9,10,11}$ **draw conclusions from functional material (e.g., advertisements) to make analysis of information**

6.29$_{8,9,10,11}$ **justify conclusions based on textbook information**

6.30$_{k,2,3,4,5,7,9,10,11}$ **make logical predictions based on events in a passage**

6.31$_{9,10}$ **use setting, plot, characterization, author's style, and theme to determine understanding and extend the story**

6.32$_{5,9,10,11}$ **use figurative language (e.g., simile, metaphor, hyperbole, pun, idioms alliteration, personification, and onomatopoeia,) and jargon to determine meaning of information in functional text (e.g., advertisement)**

6.33$_{3,5,10}$ **identify other sources of information for a textbook topic (e.g., encyclopedia, dictionary, thesaurus, and library resources)**

6.34$_{k,5,10}$ **identify and apply appropriate strategies to aid in comprehension (e.g., graphic organizers, outlining, etc.)**

Reading Vocabulary

6.35 recognize and use key words introduced in the text

6.36 recognize and supply rhyming words

6.37 identify and generate compound words

6.38 recognize and select synonym for a word

6.39$_{2,3,4,5,7,8,9,10,11}$ **determine the synonym for words in text to clarify meaning**

6.40 recognize and select antonyms

6.41 recognize words as homophones and be able to chose appropriate homophone according to the usage

6.42 recognize words as homographs and correctly pronounce according to its usage

6.43$_{2,3,4,5,7,8,9,10,11}$ **determine the meaning of multiple meaning words according to context**

6.44$_{k,2,3,4,5,7,8,9,10,11}$ **determine the meaning of words from their use in context**

6.45 use prefixes as structural clues for word recognition and meaning

6.46 use base words as structural clues for word recognition and meaning

6.47 use suffixes as structural clues for word recognition and meaning

6.48 recognize and use Greek or Latin roots as structural clues for help in determining word meanings

6.49 recognize and understand clipped or shortened words (e.g., exam-examination)

6.50 recognize and select appropriate word to complete analogies

6.51 use connotation/denotation to understand meaning

Writing

6.52 write sentences that are complete, varied, and economical

6.53 use prewriting and drafting

strategies (e.g., drawing, clustering, brainstorming, discussion, etc.) to generate topics and plan approaches to writing tasks

6.54 use writing strategies to address specific writing purposes, such as research, creative, journalistic, essay, narrative, informative and persuasive

$6.55_{4.7,10}$ use a writing prompt to develop a composition that has smooth transition

$6.56_{4.7,10}$ use a writing prompt to develop a composition that addresses the assigned topic

$6.57_{4.7,10}$ use a writing prompt to develop a composition containing specific, relevant details

$6.58_{4.7,10}$ write sentences where diction is expressed in complete, varied, and economical ways

6.59 use revision strategies (e.g., adding dialogue, varying sentence length and structure, adding details, etc.)

6.60 edit own writing as well as the writing of others (e.g., peer editing) to delete or correct errors in organization, content, usage, mechanics, and spelling

$6.61_{4.7,10}$ write with ever increasing command of the conventions of composition

$6.62_{4.7,10}$ use a writing prompt to develop a composition that has a beginning, middle, and end

$6.63_{4.7,10}$ use a writing prompt to develop a composition that is focused, coherent, and has a clear and logical progression of ideas

6.64 use writing strategies to write for audiences, including peers, teachers, and employers

6.65 demonstrate continuous progress toward mastery of penmanship and keyboarding in the writing process

6.66 use electronic and traditional editing strategies to correct spelling errors (e.g., symbols, dictionaries) (e.g., proper names, homophones, [in, inn].)

Spelling

6.67 demonstrate accurate spelling and pronunciation in their written and oral communication across the curriculum

6.68 develop spelling competency by recognizing one's own spelling weakness

6.69 focus on problem parts of words that are commonly misspelled (e.g., busy, minute, etc)

6.70 use memorization or mnemonic devices as a strategy for spelling words (e.g., colonel)

6.71 spell correctly words containing short vowel sounds (e.g., snack, spend)

6.72 **spell correctly words containing long vowel sounds (e.g., "a" cane, paint, pay)**

6.73 **spell correctly words containing the schwa sound (e.g., elephant, telephone)**

6.74 **spell correctly words containing a vowel variant (e.g., ou, ie, ey)**

6.75 **spell correctly words with multi-spellings for the same sound (e.g., "c" sounded as "k", "c" sounded as "s")**

6.76 **form and spell correctly the plurals of words ending in "o" and "y" (e.g., domino, potato, baby)**

6.77 spell correctly words that form plurals requiring the addition of "s" and "es" (e.g., girls - dresses)

6.78 spell correctly words containing "y" sounded as "I" (e.g., my, fly)

6.79 spell correctly words containing silent letters or have doubling of final consonant (e.g., doll, class, comb, gnaw, etc)

6.80 spell correctly words containing "oi" and "oy" and "ei" and "ie" (e.g., boil, toy, receive, believe)

6.81 identify, use, and spell common homophones/homonyms (words that have different meanings and spellings but are pronounced the same (e.g., hear - here, sun - son)

6.82 identify and form words with inflectional endings including when the word ending changes to

add "ed" or "ing"

6.83 identify and form comparative and superlative adjectives (e.g., hard, harder, hardest)

6.84 **identify and form words with prefixes (e.g., in, im, pre, tri, re, un, dis, etc)**

6.85 **identify and form words with the common suffix, "tion", "ly", "ious", "ture", "ible", and "able" (e.g., subtraction, lovely, mixture, precious, enjoyable, and flexible)**

6.86 acquire a spelling vocabulary from a wide variety of instructional sources

6.87 use electronic editing as well as traditional editing resources to correct spelling errors (e.g., electronic spell checker, dictionary, thesaurus)

Language

6.88 use capital letters at beginning of sentences

6.89 capitalize the pronoun "I"

$6.90_{1,2,3,4,5,7,8,9,10,11}$ **use capital letters for proper nouns (e.g., names, family relationships, days of the week, cities, states, countries, holidays, months, geographic features, nationalities, languages, and historic events)**

$6.91_{k,1,2,3,4,5}$ **use capital letters for titles of works (e.g., books, stories, T.V. shows, and works of art)**

$6.92_{1,2,3,4,5,7,8,9,10,11}$ **use capital letters for titles of people (e.g., President Lincoln)**

$6.93_{2,3,4,5}$ **capitalize appropriate part of a letter (e.g., heading, greeting, closing, etc)**

6.94 use capital letters when writing initials and abbreviated titles

$6.95_{3,4,5,10,11}$ **use a capital letter for the first word of a direct quotation**

6.96 use capital letters for parts of an outline

$6.97_{7,8,10,11}$ **use a capital letter for proper adjectives**

6.98 use periods at the end of a declarative or imperative sentence, after abbreviations, and in outlines

6.99 use a question mark at the end of an interrogative sentence

6.100 use an exclamation mark at the end of an exclamatory sentence and following an interjection

$6.101_{3,4,5,7,8,9,10,11}$ **supply commas for words in a series, and for compound sentences**

6.102 supply commas between cities and states, in dates, addresses, letter parts, direct quotations, direct addresses, appositives, adjective, adverbial clauses, and to introduce phrases and clauses

$6.103_{2,3,4,5,7,8,9,10,11}$ **supply apostrophes for contractions and possessive nouns**

$6.104_{3,4,5,9,10,11}$ **supply quotation marks for direct quotations, dialogue, and titles of written works (e.g., stories, poems, etc)**

$6.105_{5,8,10,11}$ use colon with a list

6.106 use hyphen to divide syllables at end of writing line and in certain compound words (e.g., sister-in-law)

6.107 recognize and compose declarative, interrogative, exclamatory, and imperative sentences

6.108 identify and compose simple, compound, and complex sentences

$6.109_{1,2,3,4,5,7,8,9,10,11}$ **recognize and correct sentence fragments and run-on sentences**

$6.110_{1,2,3,4,5,7,8,9,10,11}$ **identify and correct awkward sentence structure (e.g., misplaced modifiers)**

6.111 identify and compose complete, simple, and compounds subjects and predicates

$6.112_{4,5,8}$ **organize information by combining sentences**

6.113 recognize direct objects, indirect objects, predicate nominatives, and predicate adjectives

6.114 recognize singular, plural, and possessive nouns

$6.115_{1,2,4,5,7,9,10,11}$ **recognize proper and common nouns**

$6.116_{4,5,7,8,9}$ **recognize and use the cases (e.g., nommative, objective, possessive) of pronouns(personal, compound**

personal, demonstrative, interrogative, relative, and indefinite) correctly by labeling the pronoun and its antecedent

6.117 recognize and understand antecedent of a pronoun

6.118 recognize and supply action, linking, and helping verbs

6.119$_{1,2,3,4,5,7,8,9,10,11}$ **write and edit text using past, present, and future tense correctly**

6.120$_{1,2,3,5,7,8,9,10,11}$ **write and edit text using correct subject-verb agreement**

6.121 recognize and use adjectives and adverbs

6.122$_{8}$ **differentiate the use of adjectives and adverbs (e.g., real and really)**

6.123 recognize and use comparative and superlative adjectives correctly

6.124 identify prepositions and their prepositional phrases

6.125 identify and use coordinating and correlative conjunctions

6.126$_{1,2,3,4,5,7,8,9,10,11}$ **identify the purpose and audience in written expression**

6.127$_{4,5,7,9,10,11}$ **identify topic sentences in written expression**

6.128$_{1,2,3,7,8,10,11}$ **identify supporting sentences in written expression**

6.129$_{1,2,4,5,7,8}$ **make decisions about relevant and appropriate content to eliminate extraneous sentences in writing**

6.130$_{5,7,8,9,10,11}$ **identify and correct redundancy**

6.131$_{1,2,3,4,5,7,8,9,10,11}$ **recognize and use editing skills in writing compositions**

Study Skills

6.132$_{5,7,8,9,10}$ **identify and use the parts of a book including title page, copyright page, table of contents, glossary, index**

6.133$_{8,9,10}$ **use the table of contents to determine the purpose of a book, the main idea of a book, locate general and specific information in a book, and determine the intent of a chapter**

6.134 identify the index of a book and parts of an index entry (e.g., topic, subtopics, and cross-references)

6.135$_{5,7,8,9,10}$ **use an index to locate specific information**

6.136$_{3,4,5,7,9,11}$ **demonstrate the appropriate use of the general reference sources of a dictionary, thesaurus, atlas, almanac, and encyclopedia**

6.137$_{5,7}$ **identify a word that will come first in alphabetical order according to the second, third, fourth, and fifth letter**

6.138$_{3,5,7,9,10,11}$ **use a set of guide words from a dictionary page to select a word to be found on that page**

6.139$_{3,5,7,8}$ **use the dictionary pronunciation guide to determine how a word is divided into syllables, determine the sounds of dictionary entry words, and sounds of letters as they appear in words**

6.140$_{3,5,7,8,9,19,11}$ **read the various meanings of a dictionary entry to determine the meaning of a word in a sentence**

6.141 develop an awareness of word origin as contained in a dictionary

6.142 identify and use a thesaurus as a source for locating synonyms and antonyms

6.143$_{5,7}$ **identify and use sources for specific types of information (e.g., encyclopedia, atlas/maps, almanac, periodicals/magazines, newspapers, Readers Guide to Periodical Literature, and computer on-line services)**

6.144 recognize and use the library as a source of reference

6.145 identify and use various resources in the library including fiction and non-fiction categories of books

6.146$_{5,7,8}$ **access and identify title, author, subject, call number, publisher, and copyright of**

resources using the card catalog system or electronic systems

6.147$_{9,10,11}$ **know the purpose and use of graphic organizers (e.g., diagrams, webbing, T-chart, and flow chart)**

6.148 know the purpose and interpret graphic aids (e.g., graphs, tables, charts, diagrams, maps, and illustrations)

6.149$_{3,8}$ **organize information into an outline by being able to categorize information into topics, subtopics, and details**

6.150 identify and use the correct procedure for note taking, test taking, completing functional forms

6.151 access and use information from various audiovisuals resources (e.g., compact disks, tape, and films)

6.152 adjust reading rate according to purpose and nature of material

Computer/Technology

6.153 use appropriate software to practice and master sixth grade English language arts instructional objectives

6.154 use the editing functions of a word processor (spell check, grammar checker, thesaurus, outliner) (6.60, 6.66, 6.87 and 6.131)

6.155 using a word processor, demonstrate correct keying, editing, and formatting techniques (6.65)

6.156 use a word processing program to copy and move text

6.157 use a word processing program to produce a report that contains centering, tabs, and more than one paragraph (6.60)

6.158 identify examples of copyright law violations and possible penalties

6.159 identify the role of technology in various communication careers

6.160 select and use appropriate software and/or other technologies to locate and use reference sources (6.33 and 6.151)

6.161 develop keyboarding skills: proper posture, finger placement, keying letters, numbers, symbols, and special keys (6.65)

6.162 use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts (6.148)

Grade Six Mathematics

The sixth grade objectives place continued emphasis on the study of whole numbers, decimals, and fractions. However, students need opportunities to apply their computation skills to real life applications. Calculators and computers may be used to solve problems. Decreased attention should be given to tedious paper and pencil computations. Sixth graders will continue to use manipulatives whenever new material is introduced or whenever it is needed to review previously taught material. The areas of probability, statistics, geometry, and pre-algebra will be stressed. Students will use ratios to compare data sets, make geometric constructions of three-dimensional figures, explore thoroughly the algebra strand, and solve problems involving circles, volume, and surface area.

Number Theory and Number Sense

6.1$_{7,8}$ **read, write, and identify the place value from billions through millionths using standard and expanded form**

6.2$_{7,8}$ **compare and order the value of whole numbers, fractions, and decimals from billions through ten-thousandths and write and model equivalences**

6.3$_{7}$ **identify prime and composite numbers up to 100 using hundred chart, manipulatives, and calculators**

6.4 identify and represent integers on a number line

6.5 identify and use the divisibility rules of 2,3,5, and 10

6.6$_{7,8}$ **identify pictorial representations of fractions and decimals**

6.7$_{5}$ **identify least common multiple or greatest common factor of two numbers**

Computation and Estimation

6.8$_{3,4,5,7,8}$ **use estimation to solve problems with whole numbers (rounding, compatible numbers, clustering, front-end estimation with adjustment) and decimals, including money**

6.9$_{5,7,8}$ **continue to reinforce whole number computation skills, applying them to problem-solving situations using estimation, mental math, calculators, and paper and pencil**

6.10$_{5,7,8}$ **solve problems in context that involve addition, subtraction, multiplication, and division of fractions and mixed numbers with and without regrouping, including like and unlike denominators, expressing answers in simplest form using estimation, mental math, calculators, and paper and pencil**

6.11$_{5,7,8}$ **solve problems in context that involve addition, subtraction, and multiplication of decimals through the ten-thousandths and division of decimals by decimal divisors using estimation, mental math, calculators, and paper and pencil**

6.12$_{7,8}$ **use concrete materials, estimation, mental math, calculators, and paper and pencil to find the percent of a number**

6.13 use order of operations to solve multi-step problems

6.14 **identify a number that is 1,000 more or 1,000 less than a given number**

Patterns, Functions, and Algebra

6.15 **identify missing elements in numeric and geometric patterns and explore a variety of patterns, including perfect squares, square roots, exponents, and scientific notation**

6.16$_{5,7,8}$ **use input/output models for functions (number machines).**

6.17 **solve equations using the identity property of addition (8+n=8) and the identity property of multiplication (8*n=8)**

6.18 write the cross product of a proportion and solve the resulting equation.

6.19 represent and solve real world-problems by choosing the appropriate strategy, such as guess and check, make a table, write a proportion, find a pattern, work backwards, use a formula, write an equation, or make a scale drawing

6.20 **write algebraic expressions for word expressions and evaluate them by replacing the variable with a given value**

6.21$_{5,7}$ **solve equations with addition, subtraction, multiplication, and division of whole numbers, fractions, decimals, and integers using inverse operations, guess and check, and/or physical models**

6.22 solve inequalities by using a number line

6.23 graph one-step linear equations in one variable in the first quadrant

Probability and Statistics

6.24$_{5,7,8}$ **collect, organize, display, and interpret data using line graphs, circle graphs, bar graphs, histograms, stem-and-leaf plots, tables, and charts**

6.25$_{5,7,8}$ **create and solve problems involving the mean, median, mode, and range of a set of data**

6.26 model practical problem-solving situations by constructing a sample space to determine probability

6.27 **determine the probability of a given event and express that probability as a ratio, decimal, or percent**

6.28 test the expected probability of an event against the actual outcome by carrying out an experiment using technology whenever appropriate

$6.29_{5,7,8}$ **determine combinations and permutations (tree diagrams, probability experiments with and without replacement)**

Geometry

$6.30_{7,8}$ classify lines as parallel, intersecting, perpendicular, or skew

6.31 draw, compare, and contrast the following quadrilaterals: parallelogram, rectangle, square, rhombus, and trapezoid along with the following polygons: pentagon, hexagon, octagon, decagon, and dodecagon

$6.32_{4,5,7}$ **classify and compare line segments, angles, and polygons**

6.33 describe, identify, and build models of three dimensional figures, including prisms, pyramids, cylinders, and cones; locate, count, and record the faces, edges, and vertices of the prisms and pyramids

6.34 bisect a line segment and construct congruent angles using a compass and straightedge

$6.35_{7,8}$ **identify the ordered pair for a point and locate the point in all four quadrants of the coordinate plane**

6.36 **recognize line symmetry and rotational symmetry**

6.37 **demonstrate flips, slides, and turns using congruent geometric figures**

$6.38_{7,8}$ **identify the radius and diameter of a circle**

Measurement

6.39 use concrete materials to derive approximation for pi from actual measurements of circumference and diameter of a circle

6.40_{7} create and solve problems by finding the circumference and area of a circle when given the radius or diameter

$6.41_{7,8}$ **measure real objects in order to develop the formulas for perimeter and area; determine the perimeter and area of a triangle, square, rectangle, parallelogram, and irregular figures given the appropriate measures**

6.42 investigate and solve problems involving the volume and surface area of rectangular prisms using real objects and practical situations

$6.43_{7,8}$ **use prior knowledge of customary and metric measures of length, mass/weight, and capacity/volume to solve problems**

$6.44_{2,3,4,5,7,8}$ **solve application problems using measurement including elapsed time**

$6.45_{5,7,8}$ **convert between units within the same system**

$6.46_{2,3,4,5}$ **select appropriate units to determine length, weight, temperature, or volume using customary and metric units**

$6.47_{7,8}$ **determine measurements indirectly from scale drawings**

Computer and Technology

6.48 use appropriate software to practice and master sixth grade instructional objectives in mathematics

6.49 use a calculator to do computations in problem-solving situations

6.50 use a calculator to solve problems with fractions and mixed numbers

6.51 use a calculator to add, subtract, and multiply problems with decimal through ten-thousandths

and division of decimals by decimals

6.52 use a calculator to find the percent of a number

6.53 use a calculator to solve multi-step problems involving order of operations

6.54 use a calculator to find mean, median, mode, and range from a set of data

6.55 use graphing software to create line, circle, and bar graphs, histograms, tables and charts

6.56 identify spreadsheet terms (e.g., column, row, cell, formula, etc)

6.57 compare the difference between a paper spreadsheet and a computer spreadsheet (e.g., grade book, budget, sports statistics)

6.58 use a spreadsheet software template to enter and edit data.

6.59 practice inputting data using correct keying, editing, and formatting techniques

6.60 identify examples of copyright law violations and possible penalties.

6.61 identify the role of technology in various mathematical careers

Grade Six Social Studies: Selected Regions of the World

The sixth grade program of study will provide an interdisciplinary examination of selected regions of the world: North America, South America, Western Europe, and the Middle East. The study of early civilizations and their impact on modern cultures will emphasize how cultures have adapted to environmental changes and have emerged into a global society.

Civics

6.1 identify and give examples of different forms of government

6.2 **identify the aspects of strong leadership as they impact world events (e.g., Abe Lincoln)**

$6.3_{9,11}$ **explain the purpose of political parties in governments and identify how special interest groups attempt to influence political parties and the political process**

$6.4_{4,8,9,10}$ **explain the concept of separation of powers among executive, legislative, and judicial branches of democracies**

$6.5_{3,8,9,10}$ **explain the functions of community support systems and their roles in local government (e.g., police, fire departments, city/town councils)**

6.6 **differentiate between the rights and privileges of citizens of different countries**

6.7 **explain how individuals, companies, and countries may enter into a legally binding contract or treaty**

6.8_{10} **identify the major court cases and civil rights acts that ended segregation in the United States**

6.9_{8} **explain how a nation's constitution protects the rights of individuals, states, or political sub-divisions**

$6.10_{5,9}$ **identify and analyze the effect of written documents which contributed to the formation of the American system of government**

Economics

$6.11_{4,7,9,10}$ **explain how the law of supply and demand affects different countries and be able to interpret a supply and demand**

graph

6.12$_{3,10}$ **draw conclusions about the economic contributions of early settlers to the Americas by examining their principal occupations and places of origin**

6.13$_{8,11}$ **assess the impact of technology on settlement, homes, industry, and agriculture**

6.14 **outline the steps in producing and marketing goods**

6.15 **identify strategies used by individuals, companies, and corporations to obtain profits**

6.16$_{4,5,7,9}$ **identify where responsibility rests for upkeep of private property as opposed to public property**

6.17 explain how trade cartels affect the world economy (e.g., Organization of Petroleum Exporting Countries) ◊

6.18 trace the development of treaties and organizations related to trade

6.19$_{9,10}$ **compare the basic characteristics of communism, socialism, and capitalism**

6.20 **compare production and consumption of goods and services in different countries**

Geography

6.21$_{3,8}$ **locate and identify the continents, major climates, major water bodies, and natural resources (e.g., a knowledge of landforms such as peninsulas, mountain ranges, plateaus, river valleys, and lakes) and compare the relationship of people and the environment**

6.22$_{3}$ **locate the major lakes of North America, South America, and Western Europe; and explain their impact on exploration, settlement, and trade**

6.23$_{4}$ **given a world time zone map, determine the time at one location when informed of the time at another location**

6.24$_{3,4}$ **compare and contrast general characteristics of the population of selected regions with regard to religion, language, and movement**

6.25$_{3,4}$ **interpret information from a population growth graph and a population pyramid (e.g., discuss the age of the population, growth potential, and life expectancy)**

6.26$_{3,5,8,11}$ **solve problems dealing with map locations (e.g., use legends, keys, and scales) and interpret map information (e.g., climate, landforms, and resources)**

6.27$_{4,9}$ **using maps, draw conclusions about the effects of geography on transportation, culture, economic activities, and population density and distribution** ◊

6.28 explain the changing nature of earth's structure (e.g., earthquakes, volcanoes)

6.29 identify changes in population due to shifts from agricultural to industrial/urban development

6.30$_{9}$ trace changes in the commercial form and function (e.g., agriculture center to trade center to industrial center) of urban areas in different regions of the world

History

6.31$_{3,7,9}$ **explain the role of climate and vegetation in determining how people feed, cloth, and shelter themselves (e.g., Woodland Indians, Plains Indians, Irish Farmers, Arab Nomads, and others)**

6.32 **identify how Europeans benefited by expansion in the New World**

6.33$_{9,11}$ **outline or build a timeline showing the influx of ethnic groups into North America**

6.34$_{4,10}$ **explain the causes of the American Revolutionary War**

6.35 **explain the competition of the**

English and French on the American frontier

6.36$_{10}$ **explain how the Industrial Revolution affected the lives of people in Western Europe and the Americas**

6.37$_{8,11}$ **develop a timeline of the major events of western migration in the United States and identify key land acquisitions on a map ◊**

6.38$_{5,8,9}$ **outline events in the Abolitionist movement and its outside influences from the beginning to the conclusion (e.g.,the Emancipation Proclamation, Amendments 13, 14, 15)**

6.39$_{4,7,11}$ **identify key figures, philosophies, and events in the Minority Rights movements (e.g., Women's Rights, Civil Rights)**

6.40 **identify the major historical events in the development of transportation systems (aviation, rail, motor vehicles, and water transportation)**

6.41 identify and evaluate the contributions of the classical civilizations and cite the reasons for their rise and fall

6.42$_{10}$ explain the basic tenets of major monotheistic religions (Judaism, Christianity, Islam) and their impact on western civilizations

6.43 identify the contributions and characteristics of Arab/Islamic society

6.44 identify the contributions and characteristics of the Christian society (e.g., cultural, political, economic)

6.45 compare and contrast the worth of the individual in different societies

6.46 identify the causes and consequences of the Reformation

6.47 describe how the slave trade impacted political, economic, and social systems in North America, Latin America, Iberia, and Africa

6.48 identify examples of agricultural products exchanged between the New and Old World during the Age of Exploration.

6.49 contrast the slavery system's development in the United States with West Africa, North Africa, the Middle East, and Iberia

6.50 analyze the growth of democracy during the nineteenth century in western nations

6.51 explain the causes of World War I and the factors which led to United States' involvement

6.52 explain the causes and effects of the economic depression of the 1930's

6.53 explain the political responses to the Depression (e.g., election of Mussolini, election of Hitler, rise of militarism in Japan, and the New Deal in the United States)

6.54 identify the global tensions which contributed to the outbreak of World War II

6.55 explain the impact of the use of atomic weapons

6.56 analyze the threat to world security posed by terrorists and their impact on world peace

6.57 identify concerns for future generations (e.g., diminishing resources, medical issues, environmental issues, technological change, population, aging, space, destructive capability of man, crime, redistribution of people, changing nature of jobs, adaptability of the United States Constitution, intolerance, and changing roles of men and women)

6.58$_{3,4,5,7,8,9,10,11}$ **draw historical conclusions from informational maps, globes, charts, graphs, and timelines**

Computer/Technology

6.59 use appropriate software to practice and master sixth grade social studies instructional objectives

6.60 use a variety of audio-visual and multi-media materials to practice and master sixth grade social

studies instructional objectives

6.61 use graphics software to select the appropriate type of graph to display a set of data

6.62 use graphics software to create charts, graphs, and tables

6.63 practice inputting data using correct keying, editing, and formatting techniques

6.64 use a database to enter and edit data

6.65 use a database to sort and search data for two criteria

6.66 identify examples of copyright law violations and possible penalties

6.67 identify ethical and unethical uses of technology

6.68 project concerns for the future relating to technological changes

6.69 identify the role of technology in various careers

Grade Six Science

The Coordinated and Thematic Science (CATS) Six objectives demonstrate, differentiate, and apply concepts of the living and designed worlds. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth/space sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of major science themes of systems, changes and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction integrated in all activities. CATS Six reviews changes in the properties of matter, structures, functions, and adaptations of organisms, and the structure of the earth's systems. New major concepts introduced a the sixth grade level include motions and forces, ecosystems, diversity of life, energy transformations, plate tectonics, earth's resources and weather.

Nature of Science

6.1 develop a conceptual framework of scientific principles

6.2 recognize the interdependency of science themes and scientific concepts

6.3 evaluate the interrelationships of scientific concepts to everyday life by making informed decisions and choices using scientific reasoning and knowledge ◊

$6.4_{5,7}$ **investigate career choices in science and technology** ◊

$6.5_{5,7,8}$ **apply skepticism, careful methods, logical reasoning, and/or creativity in investigating the observable universe (e.g., sun, earth, and moon relationships, changes in ecosystems, weather forecasting)**

6.6 recognize and appreciate that scientific knowledge is subject to modification as new information challenges current theories

6.7 acquire a holistic view of scientific knowledge by integrating reading, writing, mathematics and other disciplines with the science curriculum

6.8 use a variety of activities and investigations to produce a sense of wonder about the natural world and the joy of discovery

6.9 recognize that the exploration of science is challenging and fulfilling and establishes patterns of lifelong curiosity and learning

Scientific Attitudes/Habits of Mind

6.10 cooperate and collaborate to ask questions, find answers, solve problems and conduct investigations to further an appreciation and joy of scientific discovery ◊

6.11 process and integrate

experiences with prior knowledge to formulate new ideas

6.12 understand that the study of science is a dynamic process and the rsults are not always definite or complete

6.13$_{4,5,7,8,9,10,11}$ **formulate conclusions through close observations, logic, objectivity, perseverance and integrity in data collection (e.g., water quality, forces and motion, populations and ecosystems)** ◊

Scientific Processes/Thinking Skills

6.14 recognize and apply facts, concepts, laws, and theories to explain phenomena

6.15$_{3,4,5,7,8,9,10}$ **compare and contrast objects, actions or phenomena according to similarities and differences in order to classify them (e.g., systems in living organisms, changes in rock record, elements)**

6.16$_{3,4,5,7,8,9,10,11}$ **construct and use charts, graphs, and tables to organize, display, interpret, analyze and explain data (e.g., extrapolation, interpolation)** ◊

6.17$_{3,4,5,7,8,9,10}$ **use inferential reasoning to make logical conclusions from collected data (e.g., causes and effects)** ◊

6.18$_{3,4,5,7,8,9,10,11}$ **utilize experimentation to demonstrate scientific processes (e.g., formulating questions, predicting, forming hypotheses, quantifying, identifying dependent and independent variables)**

6.19$_{3,4,5,7,8,9,10,11}$ **develop rational thinking processes that underlie scientific approaches to problem solving by employing critical-thinking skills in applying scientific knowledge, using imagination and creativity while working individually or cooperatively (e.g., how systems work together, factors which impact the environment, ecological consequences of human interactions)** ◊

6.20$_{3,4,5,7,8,9,10,11}$ **develop skills in the use of laboratory materials and equipment; and proper communication of scientific data collected (e.g., meter sticks, balances, thermometers, scales, graduated cylinders)** ◊

Laboratory Investigations/Hands-On Learning

6.21 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

6.22 use a variety of materials and scientific instruments to conduct explorations and investigations of the natural world to explain science concepts (e.g., measure environmental conditions using appropriate instruments) ◊

6.23 demonstrate safe techniques for handling, manipulating and caring for science materials, equipment and living organisms ◊

Science Themes and Subject Matter

6.24 develop through the study of interdependent themes including systems, changes, and models an understanding of biological, earth/space, and physical science concepts

6.25 associate hands-on activities to daily life experiences

6.26 express ideas that illustrate the relevance of science, technology, and societal issues within the lessons

6.27$_{4,8,9,10,11}$ **describe the interactions of various cycles that provide energy and/or materials for growth, repair and shelter (e.g., carbon cycle, water cycle, nitrogen cycle, decomposition photosynthesis, respiration,**

transpiration)

6.28$_{4,5,7,8}$ **identify the structures of living things and explain their functions (e.g., similarities and differences in organisms, complexity in organisms, similarities and differences among closely related groups) - *systems***

6.29$_{4,5,7}$ **classify living things according to their structures and functions (e.g., dichotomous keys, field guides) -*systems***

6.30$_{4,5,7,8,9,10}$ **explain changes in common patterns of interdependence among organisms (e.g., biotic and abiotic factors) - *changes***

6.31 demonstrate changes in populations of organisms due to limiting environmental factors (e.g., food supply, predators, disease, habitat) - *changes*

6.32$_{4,5}$ **analyze the ecological consequences of human interactions with the environment (e.g., renewable and non-renewable resources) - *models***

6.33$_{5,8,10}$ **interpret growth patterns in different plants (e.g., mosses, ferns, perennials, biennials, woody plants, herbaceous plants) - *models***

6.34$_{3,4,5,7}$ **demonstrate how the various systems provide for the needs of a living organism (e.g., plants, animals, fungi) - *models***

6.35 construct models of plant and animal cells which show the basic parts (e.g., cytoplasm, cell wall, cell membrane, nucleus, chloroplasts) - *models*

6.36$_{3,4,5,7,8,9,10,11}$ **classify materials according to physical and chemical properties - *systems***

6.37$_{3,4,5,7,8,9,10,11}$ **identify processes as physical or chemical changes - *systems***

6.38$_{4,8}$ **identify food as sources of energy in animals - *systems***

6.39$_{11}$ research historical reasons for classifying elements and compounds (e.g., Greek philosophers, European alchemists) - *systems*

6.40$_{8,10,11}$ apply knowledge of physical and chemical properties to examine samples of water - *systems*

6.41$_{10}$ identify the atom as the smallest particle of an element - *systems*

6.42$_{3,4,5,7,8,9,10,11}$ **investigate the formation of simple mixtures - *changes***

6.43$_{9}$ investigate methods for separating mixtures (e.g., evaporation, filtration, chromatography, screening) - *changes*

6.44$_{3,8,10,11}$ **using indicators, identify substances as acidic, basic, or neutral - *changes***

6.45$_{11}$ identify the symbols of elements -*models*

6.46$_{11}$ using the periodic table, identify elements as metals or non-metals - *models*

6.47$_{10}$ draw Bohr's models to indicate the placement of protons and neutrons in the nucleus and electrons outside the nucleus - *models*

6.48$_{5,7,8,9,10,11}$ **describe properties of matter (e.g., inertia, gravitational interaction, specific heat, malleability, melting point, density) - *systems***

6.49 differentiate concepts related to the electromagnetic spectrum (e.g., wavelengths, frequencies, visible light) - *systems*

6.50$_{8,11}$ **interpret the relationship of mass to gravitational force (e.g., larger the mass the larger the gravitational pull, the closer the objects the stronger the pull) - *systems***

6.51$_{4,5,8,11}$ **examine simple machines and the forces involved (e.g., levers, pulleys) - *systems***

6.52$_{11}$ **describe the flow of heat between objects (e.g., hot air rises, absorption and release of heat by metals) - *systems***

6.53$_{7}$ **identify factors affecting reflection and refraction (e.g., nature of surfaces, color, density of medium) - *systems***

6.54$_{5,11}$ **apply the effects of balanced**

and unbalanced forces on motion of objects (e.g., inertia, addition and subtraction of forces in a straight line) - *changes*

6.55 describe the relationship between different frequencies and receivers (e.g., eyes, ears, radios) -*changes*

6.56_{4} explain absorption and reflection of light by different objects of various colors and textures (e.g., transparent, translucent, opaque, different colors) -*changes*

$6.57_{3,4,11}$ **explain motion in terms of frames of reference (e.g., motions on earth, ball thrown in or from moving vehicle) - *changes***

6.58_{4} **relate the length of a shadow to the position or source of illumination (e.g., sundials) - *changes***

6.59 utilize a model to represent direction and amount of force (e.g., arrow point to show direction) - *models*

6.60 diagram simple parallel and series circuits (e.g., bulbs, battery, wires, switch) - *models*

$6.61_{5,7,8,9,10}$ **analyze graphs depicting motion, predict future motion (e.g., graphs, tables, charts) - *models***

6.62 relate wave lengths and/or frequency to position on electromagnetic spectrum (e.g., colors, x-ray) - *models*

6.63 **review fundamental earth science concepts including celestial relationships, air has mass and exerts pressure - *systems***

$6.64_{4,5}$ **recognize that stars are different temperatures and ages - *systems***

$6.65_{3,5,7,8,10,11}$ **identify and investigate Earth's resources (e.g., use and abuse, energy sources, how man's utilization affects the environment) - *changes***

$6.66_{9,10,11}$ **probe atmospheric conditions (e.g., composition, interactions)- *changes***

6.67 summarize the forces and results of plate tectonics - *changes*

6.68 describe the factors involved in causing catastrophic meteorological and geological events - *changes*

6.69 develop an understanding in the change's of the rock record - *changes*

$6.70_{3,4,5,8,10,11}$ **identify and measure changes in weather (e.g., air temperature, speed and direction of wind, humidity, precipitation) -*changes***

$6.71_{4,7,8,9,10,11}$ **investigate weather (e.g., forecasting, data, methods, making and using maps, thunderstorms, tornadoes, hurricanes, acid rain) - *models***

$6.72_{4,9,10,11}$ **construct and explain various models (e.g., solar eclipses, lunar eclipses, rock formation , including sedimentary, igneous and metamorphic) -*models***

Science History

$6.73_{5,7}$ **articulate the historical significance of scientific discoveries (e.g., as influenced by technological demands, competition, controversy, world events, personalities, societal issues)**

$6.74_{5,7}$ **compare the evolution of science concepts and theories (e.g., cells, plate tectonics, atoms, genetics)**

$6.75_{5,7}$ **examine the contributions of men and women of diverse cultures to the development of science**

Science, Technology, and Society

$6.76_{5,7,8,10}$ **give examples of how science and technology are used in daily living** ◊

$6.77_{5,7,8,10,}$ **use the knowledge of science and technology to make personal decisions at the local and global levels** ◊

6.78 evaluate and critically analyze mass media reports of scientific developments and events ◊

6.79$_{5,7,8,10}$ **critically analyze the effects and impacts of science and technology on global and local problems (e.g., mining, manufacturing, recycling, farming, water quality)**

6.80$_{5,7,8,10}$ **explore the connections between science, technology, society, and career opportunities**

6.81$_{5,7,8,10}$ **analyze the positive and negative effects of technology on society and the influence of societal pressures on the direction of technological advances**

Computer/Technology

6.82 use appropriate software, audio-visual and/or multimedia materials to practice and master sixth grade instructional objectives in science

6.83 using the graphing application of appropriate software, select the suitable chart, table, or graph to display a set of data

6.84 using the graphing application of appropriate software, create tables, charts, and/or graphs

6.85 use a calculator to perform mathematical functions in data analysis

6.86 use a variety of instruments (i.e. probes, thermometers, measuring devices) to perform measurements and record data

6.87 use appropriate software to practice reading, interpreting, analyzing, and evaluating the data on a map, chart, graph, table, and diagram

6.88 use appropriate software, practice extrapolating and interpolating information from a graph

6.89 use appropriate software to practice drawing conclusions from maps, diagrams, charts, graphs, and tables

6.90 use appropriate software to practice making predictions, inferences, and hypothesis from maps, diagrams, charts, graphs, and tables

6.91 use appropriate software to practice reading an instrument

6.92 input data using correct keying, editing, and formatting techniques

6.93 use a database to sort and search data given one and/or two criteria

6.94 identify examples of copyright law violations and possible penalties

6.95 identify ethical and unethical uses of technology

6.96 recognize concerns for the future as they relate to technological changes

6.97 identify the role of technology in various careers

6.98 retrieve current data from a variety of electronic sources which might include the Internet, and/or software reference programs

Grade Seven
English Language Arts

English Language Arts in the seventh grade continues to build, expand, and refine prior learning. Listening and speaking instruction rigor is regarded as a skill that will help prepare students to interact and express themselves among peers, at home, and in the community. Reading comprehension and vocabulary will be developed through the use of a wide variety of literary genre. Strategies that are essential to each genre will be targeted. Writing utilizes prewriting, composing, revising, and editing skills to produce error-free and content-rich communication. Correct spelling will be emphasized in all writing across the curriculum. Strategies that enable students to develop spelling skill and awareness of their individual weaknesses will be utilized. Language instruction is addressed through mechanics and expression. Ability to gather, organize, interpret, and report on information gained through reading or research will be fulfilled through study skill development.

Listening/Speaking

7.1 identify and correct usage errors in oral communication ◊

7.2 exhibit appropriate speaking etiquette (e.g., speaking in turn, using proper communication in technology, demonstrating interpersonal communication)◊

7.3 $_{1,2,3,5,6,8}$ **understand multi-step oral directions to perform a task** ◊

7.4 order events chronologically in a given passage ◊

7.5 use public speaking strategies to prepare formal and informal speaking presentations ◊

7.6 identify and correct grammar errors in oral communication ◊

7.7 listen to oral communication using proper etiquette (e.g., proper theater behavior) ◊

7.8 listen to oral communication to retell information ◊

7.9 $_{2,4,5,6,8}$ **listen to specific information and construct meaning beyond the text (e.g., character's feeling)** ◊

7.10$_{5,6,8}$ **listen to oral communications and identify a synonym for a dictated word** ◊

7.11 $_{2,3,4,5,6,8}$ **listen to oral communications and distinguish between fact and opinion** ◊

7.12 listen to oral communications to determine author's purpose ◊

7.13 listen to oral communications to compare and contrast information ◊

7.14 listen to oral communications to predict outcomes ◊

7.15 draw conclusions and infer information from listening to oral communication ◊

7.16$_{1,2,5,6,8}$ **think critically about the selection to foster exploration, questioning, and imagining** ◊

7.17$_{1,2,5,6,8}$ **listen to oral communications and critique, evaluate, and summarize content from different perspectives** ◊

7.18 $_{5,6,8}$ relate personal experiences to information heard to construct new meaning ◊

Reading Comprehension

7.19$_{1,2,3,4,5,6,8,9,10,11}$ **read literary works by national and international authors to include but not be limited to biographies, short stories, science fiction, tall tales, legends, folktales, contemporary fiction, poetry, plays, and essays** ◊

7.20 respond to a wide variety of literary genre ◊

7.21$_{1,2,3,4,5,6,8,9,10,11}$ **use setting, plot, characterization, and style to determine a text's genre (e.g., science fiction, folktales)**

7.22 **locate details in a passage to promote initial understanding of text**

7.23$_{k,2,4,8,9,10,11}$ **determine main idea of a passage** ◊

7.24$_{k,2,3,4,5,6,9,10,11}$ **make a logical prediction based on events in a passage** ◊

7.25$_{k,2,3,4,5,6,8,9,10,11}$ **draw a conclusion to describe a character based on character's thoughts and actions**

7.26$_{k,3,4,5,6,9,11}$ interpret a character's feeling based on content of a story

7.27$_{8,10,11}$ determine the meaning of persuasive language and propaganda to determine meaning of information in functional text (e.g., advertisements) ◊

7.28$_{6,8,9,10,11}$ make inferences from functional text to make analysis of information (e.g., advertisements) ◊

7.29$_{8,9,10,11}$ justify conclusions reached from textbook information ◊

7.30 identify other sources of information to support conclusion made from textbook information ◊

7.31$_{6,9,11}$ identify and apply appropriate strategies to aid comprehension ◊

7.32$_{5,9,10,11}$ use figurative language and jargon to determine meaning of information in functional text

7.33$_{3,5,10}$ identify other sources of information for a textbook topic ◊

7.34$_{5,8,9,10}$ use graphic organizers to construct meaning of textbook passage showing important ideas and relationships among those ideas ◊

7.35$_{9,10}$ use setting, plot, characterization and author's style to determine an appropriate extension to the story

7.36$_{4,6,8,9,10}$ **distinguish between information based on fact and information based on opinion** ◊

7.37$_{2,3,4,5,6,8,9,10,11}$ infer meaning of a word used in context ◊

Reading Vocabulary

7.38$_{k,2,3,4,5,8,9,10,11}$ use context clues to determine the precise word to complete a given statement ◊

7.39 supply a synonym or anonym for a given word ◊

7.40$_{2,3,4,5,6,8,9,10,11}$ **determine the synonym for words in text to improve quality** ◊

7.41 determine whether the word has a literal or figurative meaning

7.42 choose from multiple word meanings to complete a statement ◊

7.43$_{2,3,4,5,6,8,9,10,11}$ **determine the definition of multiple meanings words used in context** ◊

7.44 using given words, find the meaning and word origin

7.45 identify positional words and time words in a given passage ◊

7.46 determine root/base word from a list of affixed words

7.47 use a dictionary to locate meaning of words used in a statement ◊

7.48 generate new words given a list of prefixes and suffixes

7.49 determine meaning of word based on its affix

7.50 supply appropriate word to complete a given analogy ◊

Writing

7.51$_{4,10}$ **use prewriting and drafting strategies to address specific writing purposes** ◊

7.52$_{4,10}$ **compose a composition that is focused, coherent, and has a clear and logical progression of ideas** ◊

7.53$_{4,10}$ **compose a composition that shows a smooth transition to produce a cohesive piece of writing** ◊

7.54$_{4,10}$ **use a writing prompt to develop a composition on a given topic** ◊

7.55$_{4,10}$ **use writing strategies to write for different audiences** ◊

7.56$_{4,10}$ **compose a composition with a beginning, middle, and end** ◊

7.57$_{4.10}$ **compose the piece of writing that includes specific, relevant details** ◊

7.58$_{4.10}$ **compose sentences that are complete, varied, and economical** ◊

7.59$_{4.10}$ **use writing strategies to compose various types of paragraphs (e.g., informative, narrative, expository, persuasive, chronologically ordered, explanatory, compare/contrast, and cause/effect)** ◊

7.60$_{4.10}$ **use writing strategies to address specific types of writing (e.g., newspaper article, essay, journal, friendly letter, business letter, research, and poetry)**

7.61$_{4.10}$ **use revision strategies as necessary (e.g., varying sentence length, changing order, making words more exact, and edit for organizational errors)** ◊

7.62$_{4.10}$ **use editing strategies to correct usage, punctuation, and spelling errors** ◊

7.63$_{4.10}$ **demonstrate continuous progress toward mastery of penmanship**

7.64$_{4.10}$ **demonstrate continuous progress toward control of keyboarding in the writing process** ◊

7.65 use electronic and traditional editing strategies (e.g., symbols, dictionaries) to correct spelling errors in computer generated work (e.g., proper names, homophones, [in, inn].) ◊

Spelling

7.66 acquire a written vocabulary from a wide variety of instructional sources and activities that demonstrate accurate spelling and pronunciation in their written communication across the curriculum ◊

7.67 develop spelling competency by recognizing one's own spelling weakness

7.68 use metacognition as a strategy for self-assessment ◊

7.69 use the spelling strategy of focusing on problem parts of words that are commonly misspelled (e.g., all right [alright], does [dose]) ◊

7.70 **use meaning as a strategy for spelling words correctly (e.g., bi means two, tri means three, sub means under)**

7.71 use visual and pronunciation cues as strategies for spelling (e.g., dessert, desert) ◊

7.72 use memorization as a strategy for spelling (e.g., colonel) ◊

7.73 create mnemonic devices to assist in spelling problem parts of words (e.g., mosquito --A mosquito is hard to avoid. You'd like for the mosquito to "quit" biting you) ◊

7.74 use visual and auditory cues as a strategy to spell (e.g., ise, ice, ize sh, ti, ci) ◊

7.75 use correct and exaggerated pronunciation as a strategy to spell words (e.g., identity-iden- ti-ty) ◊

7.76 identify a mismatch between homophones or homophone confusion (e.g., dear-deer, hear-here) ◊

7.77 distinguish between misuse and proper spelling of a contraction and possessive ◊

7.78 identify and spell common homophones/homonyms and homographs ◊

7.79 **spell words containing the vowel variant (ou, ie, ey)** ◊

7.80 **use generalization to spell words containing "c" sounded as "k" (e.g., candle)** ◊

7.81 **spell words with the common suffix "tion" and "ly" (e.g., subtraction, lovely)** ◊

7.82 **spell words containing "oi" and "oy" (e.g., boil, toy)** ◊

7.83 **spell words with "our" sounded as "or" (e.g., pour,**

four) ◊

7.84 **form inflectional endings when spelling words ending in "e" (e.g., stately)** ◊

7.85 **form comparative forms of words ending in "y" (e.g., easy, easier, easiest)**◊

7.86 **form past tense of words ending in "y" (e.g., played)** ◊

7.87 use electronic as well as traditional editing resources to correct spelling errors (e.g., electronic spell checker, dictionary, thesaurus) ◊

Language

$7.88_{1,2,3,4,5,6,8,9,10,11}$ **capitalize every important word in the names of particular people, places, or things (e.g., Melvin J. Harris, District of Columbia, Lincoln Memorial, Bill of Rights)** ◊

$7.89_{1,2,3,4,5,6,8,9,10,11}$ **capitalize title or their abbreviations when used with a person's name (e.g., Governor John Dodridge, Senator Stone, Dr. John, President Washington)** ◊

$7.90_{6,8,10,11}$ **capitalize proper adjectives (e.g., We ate at a German restaurant.)** ◊

7.91 capitalize the names of organizations, businesses, institutions, and agencies (e.g., National Football Association, The Status Company) ◊

7.92 capitalize the first and last words and all important words in the titles of books, newspapers, magazines, stories, songs, poems, reports, and outlines (e.g., articles, short conjunctions, and short prepositions are not capitalized unless they are the first and last word) ◊

7.93 capitalize the first word of each main topic and subtopic in an outline ◊

7.94 capitalize nationalities, languages, religions, and religious terms ◊

7.95 capitalize words showing family relationships only when they are used before a name, or when they take the place of a name (e.g., My mom is nice. When I came home from school Mom wasn't home.)

$7.96_{8,9,10,11}$ **capitalize regions of the United States (e.g., the Southwest)** ◊

7.97 capitalize names of documents (e.g., Declaration of Independence) ◊

$7.98_{8,9}$ **use comma with an introductory phrase** ◊

$7.99_{4,6,8,9,10,11}$ **use commas with conjunction between clauses (e.g., We had lunch in the park, and we arrived at the parade in time for the bands.)** ◊

$7.100_{5,8,9,10,11}$ **use commas to set off an appositive from the rest of the sentence when the appositive is not necessary to the meaning of the sentence (e.g., West Virginia, the Mountain State, is very scenic.)** ◊

7.101 use a comma following an introductory prepositional phrase (e.g., Inside the right-hand dresser drawer, you will find the scarf.) ◊

$7.102_{8,9,10,11}$ **use semicolon between independent clauses** ◊

$7.103_{4,5,6,9,10,11}$ **form the possessive of a singular noun by adding an apostrophe and s (e.g., baby's rattle)** ◊

$7.104_{4,5,6,9,10,11}$ **form the plural possessive of a noun that ends in s by adding apostrophe only (e.g., teachers' lounge)** ◊

$7.105_{4,5,6,9,10,11}$ **form the possessive of a plural noun that does not end in s by adding an apostrophe and s (e.g., women's)** ◊

7.106 use a hyphen to join the parts of compound numbers, to join two or more words that work together as one adjective before a noun, or to divide a word at the end of a line (e.g., fifty-five, well-developed paragraph) ◊

7.107 use dashes to show a break of

thought in a sentence (e.g., The posters -- curiously enough -- are done in watercolor.) ◊

7.108 use parentheses to enclose an explanation that is not of major importance to a sentence (e.g., Read chapter 10 (page 26) to find the answer.) ◊

7.109$_{1,2,4,5,6,9,10,11}$ **recognize proper and common nouns** ◊

7.110 **use correct subject-verb agreement with an intervening phrase** ◊

7.111$_{8}$ use the correct subject-verb agreement with a compound subject ◊

7.112 use a compound subject with "or" or "nor" with a verb that agrees with the nearer subject (e.g., He or his brothers are ready to work.) ◊

7.113$_{8,9,10,11}$ **use a pronoun that agrees with the noun to which it refers** ◊

7.114$_{5,6,8,9,10,11}$ **use correct pronoun case (e.g., nominative, objective, possessive)** ◊

7.115 use the different types of pronouns correctly in written expression (e.g., personal, compound personal, demonstrative, indefinite, interrogative, and relative) ◊

7.116 use in a sentence and identify a personal pronoun whose antecedent is an indefinite pronoun ◊

7.117$_{3,4,6,10,11}$ **identify and use adjectives correctly** ◊

7.118 differentiate the use of adjectives and adverbs ◊

7.119 **identify and correct sentence fragments** ◊

7.120$_{1,2,3,4,5,6,8,9,10,11}$ **identify and correct awkward sentence construction (e.g., The bird flew near the girl with red feathers.)** ◊

7.121$_{1,2,3,6,8,10,11}$ **identify and correct run-on sentences** ◊

7.122$_{1,2,3,6,8,10,11}$ **identify supporting sentences in written expression** ◊

7.123$_{3,4,5,6,9,10,11}$ **identify topic sentence in written expression** ◊

7.124$_{8,10,11}$ **identify and correct redundancy** ◊

7.125$_{1,2,4,5,6,8,9,10,11}$ **make decisions about relevant and appropriate content to eliminate extraneous sentences in writing** ◊

7.126$_{8,10,11}$ **identify and use appropriate transitions in writings (e.g., however, thus, and therefore)** ◊

7.127$_{8,10,11}$ **identify and correct faulty subordination (e.g., I like baseball since I want a car.)** ◊

7.128$_{8,10,11}$ **identify appropriate use of descriptive language in written expression** ◊

7.129 **use indefinite articles correctly in writing and editing (e.g., "a" and "an")** ◊

7.130$_{3,4,6,8,10,11}$ **write and edit text using correct past perfect tense** ◊

7.131 **use "have" and "of" correctly when editing text** ◊

7.132$_{1,2,3,4,6,8,10,11}$ **identify purpose and audience in written expression** ◊

Study Skills

7.133$_{4,9}$ **demonstrate appropriate use of parts of a book such as title page, introduction, table of contents, appendix, and references**

7.134$_{4,9,10}$ **use title page, copyright page, table of contents, appendix, bibliography, glossary, and index to locate specified information**

7.135 **predict the name of an informational book given chapter names**

7.136$_{4,9,10}$ **demonstrate appropriate use of the table of contents to locate where chapter specific information can be found**

7.137$_{3,4,5,6,9,11}$ **demonstrate appropriate use of the general reference sources (e.g., dictionary,**

thesaurus, atlas, almanac, and encyclopedia, Reader's Guide, Books in Print) ◊

7.138$_{5,6}$ **identify a word that will come first in alphabetical order according to its third, fourth, and fifth letter**

7.139 identify parts of a dictionary entry

7.140$_{3,5,6,9,10,11}$ **use a set of guide words from a dictionary page to select the word that would be found on that page, preceding page, and subsequent page**

7.141$_{3,5,8,9,10,11}$ **use the various meanings of a dictionary entry to determine the meaning of a word in a sentence** ◊

7.142$_{5,6,9,10,11}$ **use dictionary entries to select the best meaning for a multi-meaning word when used in context** ◊

7.143$_{5,6,8,9,10,11}$ **determine which entry in a dictionary definition best fits meaning of a word in a sentence** ◊

7.144$_{3,4,5,6}$ **use pronunciation guide to determine sounds of letters as they appear in individual words**

7.145$_{3,4,5,6}$ **use pronunciation guide to determine number of syllables in a word**

7.146 know how to access reading material and resources in traditional or electronic catalog systems ◊

7.147$_{9,10,11}$ **use the card catalog and electronic catalog systems to determine a book's call number, title, subject, copyright, publisher, and illustrator** ◊

7.148 adjust reading rate according to purpose, prior knowledge, and nature of material

7.149 use skimming to obtain an overview or general idea of a selection ◊

7.150 use scanning to locate specific information ◊

7.151 differentiate when to use skimming and when to use scanning to obtain information

7.152 write a paragraph using prepared notes ◊

7.153 write a paragraph using an outline ◊

7.154 develop an outline that includes topics, subtopics, and details ◊

7.155$_{3,4}$ **identify a main heading from a list of topics in order to organize a report** ◊

7.156 know the purpose and use of graphic organizers (e.g., web, Venn diagram, semantic feature, analysis, T-chart)

7.157$_{4,11}$ **construct and read a graphic organizer for a written report for a content area**

7.158 know the purpose and be able to interpret graphic aids (e.g., graphs, charts, tables, diagrams, maps, illustrations, schedules, and timelines)

7.159 become familiar with words used on standardized tests (e.g., paraphrase, enumerate, categorize, analyze, rank)

7.160 become familiar with modifiers used in testing material (e.g., all, none, invariably, and seldom)

7.161 become familiar with various test formats (e.g., objective, essay, quantitative, and standardized)

7.162 use appropriate test taking strategies based on format

Computer/Technology

7.163 use appropriate software to practice and master seventh grade English language arts instructional objectives

7.164 use a word processor to edit a document (adjust margins, select justification, change fonts, and paginate) (7.60)

7.165 using a word processor, demonstrate correct keying, editing, and formatting techniques (7.60)

7.166 identify work produced by using technology as intellectual property and thus protected copyright laws

7.167 discriminate between ethical and unethical access to information

7.168 identify technological skills

required for various careers

7.169 select and use appropriate software and/or other technologies to locate and use reference sources (7.137)

7.170 develop keyboarding skills: proper posture, finger placement, keying letters, numbers, symbols, and special keys (7.64)

7.171 use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts

7.172 use a word processing program to copy and move text (7.61)

7.173 use the editing functions of a word processor (spell check, grammar checker, thesaurus, outliner) (7.62, 7.65 and 7.87)

Grade Seven Mathematics

Pre-Algebra with Geometry

Replaces 7th Grade General Mathematics

The seventh grade year is an introduction to high school subjects such as algebra, geometry, probability, and statistics. Instruction focuses on preparing the student for Algebra I in the 8th grade . With less emphasis on paper/pencil computation, calculators are emphasized in all facets of the mathematics daily work as well as test situations. Students should, by this time, have a mastery of general mathematics topics; however, review of all basic mathematics skills occurs in a relevant context. Problem solving is embedded in the curriculum utilizing a variety of new concepts, while cooperative learning promotes communication skills. Students are routinely permitted to use available technology.

Number Theory and Number Sense

$7.1_{6,8}$ compare and order integers, decimals and fractions using symbols (<,>,=) manipulatives, or graphing on a number line

7.2_{8} find powers, squares, and square roots using manipulatives, models, calculators, tables, and mental math

7.3 determine the effect of absolute value on a number or expression

7.4_{8} convert between fractions, mixed numbers, decimals, whole numbers, and percents mentally, on paper, and with a calculator

7.5 recognize and write rational numbers in the form a/b

$7.6_{6,8}$ identify pictorial representations of fractions and decimals

$7.7_{5,6,8}$ identify the place value of a digit in a decimal

7.8_{8} distinguish between prime and composite numbers

Computation and Estimation

7.9 add, subtract, multiply, and divide integers using mental math, paper/pencil, and calculators

7.10 apply the commutative property of addition and multiplication, associative property of addition and multiplication, distributive property, identity property of addition and multiplication, inverse property of addition, and multiplicative property of zero to perform mental math operations with integers and whole numbers and to simplify expressions ◊

7.11_{8} select and use an appropriate process for estimating and computing fractions, decimals, percents, and whole numbers using mental math, paper/pencil, calculator and computer methods in traditional, non-routine

application problems ◊

7.12$_{5,6,8}$ **use appropriate estimation strategies (overestimation, underestimation, front-end estimation, range of estimates) in problem situations including evaluating the reasonableness of a solution and missing information ◊**

Patterns, Functions, and Algebra

7.13$_{5,6,8}$ **find missing elements in a variety of number patterns including sequences and series; apply a rule to generate a number pattern; use input/output models for functions (number machines) ◊**

7.14$_{5,6,8}$ **simplify numerical expressions including whole numbers, integers, absolute value, and exponents using the order of operations ◊**

7.15$_{8,9,10,11}$ **evaluate algebraic expressions containing variables with whole numbers, integers, absolute value, and exponents using the order of operations and exponent rules ◊**

7.16 add, subtract, multiply, and divide monomials, and put it in simplest form

7.17 find and use the Greatest Common Factor and Least Common Multiple of a set of monomials or algebraic fractions using prime factorization and exponent rules

7.18$_{8,9,10,11}$ **create algebraic expressions and equations from written statements ◊**

7.19$_{8,9,10,11}$ **use ratios and proportions to represent and solve a variety of problems, such as rates ◊**

7.20$_{8}$ use and apply formulas in problem solving situations such as perimeter, circumference, area, volume, surface area, distance, and Celsius/Fahrenheit ◊

7.21 use patterns to develop the concept of negative exponents

7.22$_{8}$ **use and apply scientific notation containing positive and negative exponents in problem solving situations ◊**

7.23 **solve linear equations containing whole numbers and integers using substitution or inverse operations for addition, subtraction, multiplication, and division**

7.24 graph inequalities (e.g., x>7) on a number line and explain the solution sets

7.25$_{3,4,5,6,8,9,10,11}$ **locate and plot points and lines with the Cartesian Coordinate Plane using ordered pairs and a table of values**

7.26$_{9,10,11}$ recognize the slope of a line through inspection and modeling and relate slope to real world situations

Probability and Statistics

7.27$_{8}$ **read and interpret multiple line graphs ◊**

7.28$_{8,9,10,11}$ **express probability as a ratio, decimal, or percent and predict outcomes from the data obtained through student experimentation or written information ◊**

7.29$_{9,10,11}$ construct sample spaces by listing, tree diagrams, and frequency distribution tables, and calculate combinations and permutations

7.30$_{8,9,10,11}$ **extrapolate information from multiple-line graphs, circle graphs, bar graphs, histograms, tables, and frequency distributions (tally charts) ◊**

7.31$_{9,10,11}$ collect, organize, graphically represent, and interpret data using frequency distributions, line-plots, stem-and-leaf plots, box-and-whisker plots, and scatter plots ◊

7.32$_{8,9,10,11}$ **determine measures of central tendency (mean, median, mode, range) and**

dispersion from data, graphs, tables, and experiments ◊

7.33$_{5,6,8}$ **determine combinations and permutations**

Geometry with Measurement

7.34$_{8}$ **identify, describe, and classify plane and space geometric figures including triangles, quadrilaterals, pentagons, hexagons, octagons, decagons, dodecagons, prisms, pyramids, cones, and spheres**

7.35 construct congruent segments and angles, perpendicular bisectors of segments, and angle bisectors using straightedge/compass, computer, and paper folding

7.36$_{2,3,4,5,6,8,9,10,11}$ **apply transformations (rotations, reflections, translations) to plane figures using physical models and graph paper**

7.37$_{2,3,4,5,6,8,9,10,11}$ discover lines of symmetry in any plane geometric figure; apply and demonstrate by paper folding, mirrors, and drawings

7.38$_{6,8,9,10,11}$ **define similar and congruent plane geometric figures and apply in problem solving situations involving proportions and scale drawings ◊**

7.39$_{8,9,10,11}$ **find perimeter, area, circumference, and volume of plane and solid geometric figures using measurement, diagrams, or calculations**

7.40$_{9,10,11}$ use the Pythagorean Theorem to find the length of any side of a right triangle

7.41 find length, mass, and capacity in both metric and standard units using indirect and direct methods

7.42$_{5,6,8}$ **solve application problems using measurement including elapsed time and conversion of units within the same system ◊**

7.43$_{6,8}$ **identify radius and diameter**

7.44$_{8}$ **identify parallel and perpendicular lines**

7.45$_{5,6}$ **classify angles**

Computer and Technology

7.46 use appropriate software to practice and master seventh grade instructional objectives in mathematics ◊

7.47 use a calculator to find squares, square roots, and exponential numbers (7.2)

7.48 use a calculator to convert between fractions, mixed numbers, decimals, whole numbers, and percents (7.4)

7.49 use a calculator to solve problems with integers (7.6)

7.50 use a calculator to find combinations and permutations (7.26)

7.51 use a calculator to determine measures of central tendency and dispersion from data, graphs, tables, and experiments (7.29)

7.52 use a calculator to find perimeter, area, circumference, and volume of plane and solid figures (7.35)

7.53 use a graphing calculator to locate and plot points and lines on a Cartesian Coordinate Plane using ordered pairs and/or a table of values (7.22)

7.54 use graphing software to create graphs frequency distributions, line-plots, and scatter plots (7.28) ◊

7.55 use a spreadsheet software to enter and edit data ◊

7.56 practice inputting data using correct keying, editing, and formatting techniques ◊

7.57 identify work produced by using technology as intellectual property and thus protected copyright laws ◊

7.58 discriminate between ethical and unethical access to information ◊

7.59 identify technological skills required for various careers ◊

Grade Seven Social Studies: World Geography

The seventh grade program of study includes the five themes of world geography-location, place, movement, human/environment interaction, and regions. The purpose of this program is to present a picture of a crowded world, a physical world more threatened, and global regions more competitive and interconnected, than previously existed. This study will be accomplished through the analysis of the physical and human characteristics of world regions.

Civics

7.1 **identify the different forms of government in various world regions** ◊

7.2$_{5,8,9,11}$ **compare and contrast individual rights of citizens in a variety of world regions** ◊

7.3 **explain the impact of the United States Constitution's Preamble and Amendments on the formation of various world governments** ◊

7.4$_{9}$ **compare and contrast the lawmaking processes of world governments** ◊

7.5 **participate in role playing exercises which demonstrate a knowledge of "trial by jury"**

7.6$_{11}$ outline the purposes and functions of major international governmental and non-governmental organizations

7.7 **compare and contrast the functions and structure of U.S. government to governments of other countries**

Economics

7.8$_{4,10,11}$ **describe the impact of technology on agriculture and industry throughout the world** ◊

7.9 **identify and compare different types of economic systems** ◊

7.10 analyze how geography influences the economy of a region

7.11$_{9}$ **identify the impact and global effects of a "strike" on an industry** ◊

7.12$_{3,4,5,6,9}$ **describe the relationship between supply, demand, and the price of a product** ◊

7.13$_{10}$ **define economic terms (e.g., balanced budget, budget deficit, infrastructure, primary sector, industrial sector)** ◊

7.14 explain how countries are economically interdependent ◊

7.15 identify and classify the different types of world trade organizations

7.16$_{10}$ **analyze the operation and the importance of stock markets in the global economy (e.g., New York, London, and Tokyo stock exchanges)** ◊

7.17 analyze the technological improvements in transportation and communication that have helped create a global society ◊

7.18$_{4,5,6,9}$ **compare and contrast social services provided by world governments**

7.19$_{3,4,5,6,8,9,10,11}$ **draw conclusions from economic maps, charts, graphs, and timelines** ◊

Geography

7.20 compare and contrast geographic regions (e.g., physical, cultural, perceptual, economic)

7.21 compare the physical, political, cultural, and economic environments of regions

7.22 use correct geographic terminology

7.23 **identify and explain the**

advantages and disadvantages of different map projections and their uses (e.g., aerial photos, globes, charts and graphs, and polar projection) ◇

7.24 identify how mental maps (perceptions) affect our judgments about people and places

7.25_{11} draw conclusions about information presented on special purpose maps and be able to differentiate among map types ◇

7.26 experiment with the use of directions (e.g., cardinal directions, subordinate directions, latitude, and longitude)

7.27_{9} **identify the seven continents of the world and their associated oceans, seas, rivers, and landforms**

7.28 identify countries, cities and transportation networks on maps ◇

7.29 **define the term "culture" and use the term in a geographic context (e.g., isolation, core area, movement)**

7.30 identify geographic factors and cultural factors that block the movement of ideas and innovations ◇

7.31_{9} **identify the world's climatic regions and the ways in which they influence lifestyle**

7.32 **identify how human processes impact on the world's physical environment (e.g., pollution, clear-cutting, strip mining)**

7.33 describe the physical and human characteristics in major world regions

7.34 analyze interconnections between regions (e.g., goods and services, music, language, and religion) ◇

7.35 analyze renewable and nonrenewable resources (e.g., fossil fuels and hydroelectric power) and explain how technology affects the ways in which culture groups perceive and use their resources ◇

$7.36_{4,9,10}$ **identify emerging agricultural methods used in different regions and compare them to methods used in various early civilizations**

7.37 compare and contrast the characteristics of demographic structure through population pyramids (e.g., total size, birth rates, age, distribution, and doubling time) ◇

7.38 **identify and describe the patterns of immigration and effects on the distribution of cultural patterns in a region (e.g., disease, language, religion, customs, diversity)**

7.39 explain cooperation and conflict over control of the world's resources ◇

7.40 investigate and describe new geographic frontiers such as the oceans, Antarctica, and air space

7.41 analyze the growth of tourism and its impact on regional environments and culture ◇

7.42 **explain the geographic factors in the past and present growth of the world's urban centers** ◇

7.43 locate major meridians of longitude and parallels of latitude

7.44 locate and identify major world rivers, climate areas, and rain forests

History

7.45 **identify social conditions that have influenced or altered the movement of people throughout the world (e.g., slavery)** ◇

$7.46_{3,6,9}$ **draw conclusions about the effect of the environment on native cultures (e.g., Native Americans, Australian Aborigines, African Berbers)**

7.47 **identify religious and secular celebrations observed around the world**

$7.48_{5,8,9,11}$ **analyze changes which immigration has made on the world's physical, political, and cultural environment**

7.49$_9$ **compare and contrast the beliefs, religion, and mythology of native cultures throughout the world**

7.50$_{4,6,11}$ **identify the role of racial and ethnic minorities and women in the advancement of civil rights and key figures** ◊

7.51$_{10}$ **trace the development of early civilizations (e.g., Mesopotamia, Egypt, Greece, China, India, Sparta, Sumeria)**

7.52 **explain what occurs when people from different regions interact** ◊

7.53$_{9,11}$ **describe the role geo-politics played in historic events of the twentieth century (e.g., Cold War, Vietnam, Persian Gulf War)**

7.54$_{3,4,5,6,8,9,10,11}$ **draw world geography/history conclusions from maps, globes, charts, posters, graphs, and timelines** ◊

Review for Assessment:

7.55 **know the role of trial by jury; and identify the purpose of the parole system in the United States**

7.56$_{4,5,6,9}$ **using basic economic vocabulary, apply the concept of supply and demand to a specific United States situation** ◊

7.57$_4$ **identify physical barriers to transportation in the Americas and how people adapted to the barriers (e.g., Appalachia and Rocky Mountains, Isthmus of Panama)**

7.58$_3$ **explain the relationship between government taxation and the provision of public services**

Computer/Technology

7.59 use appropriate software to practice and master seventh grade social studies instructional objectives ◊

7.60 use a variety of audio-visual and multi-media materials to practice and master seventh grade social studies instructional objectives ◊

7.61 practice inputting data using correct keying, editing, and formatting techniques ◊

7.62 use graphics software to create graphs, histograms, tables, and charts ◊

7.63 use graphics software to select the appropriate type of graph to display a set of data ◊

7.64 use a database to sort and search data to solve a specific problem ◊

7.65 explain how technology affects the ways in which people use their resources ◊

7.66 discriminate between ethical and unethical access to information ◊

7.67 identify technological skills required for various careers ◊

7.68 use on-line sources to obtain or exchange information ◊

Grade Seven Science

The Coordinated and Thematic Science (CATS) Seven objectives evaluate, interpret, and predict conditions and phenomena of the living and designed worlds. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth/space sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquires, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities. CATS Seven reviews motions and forces, ecosystems, diversity of life, energy transformations, plate tectonics, earth's resources, and weather. Major concepts introduced at the seventh grade level include elements, mixtures, and compounds, populations/ecosystems, conservation of matter and energy, and earth's history.

Nature of Science

7.1 develop a conceptual framework of scientific principles

7.2 recognize the interdependency of science themes and scientific concepts

7.3 evaluate the interrelationships of scientific concepts to everyday life by making informed decisions and choices using scientific reasoning and knowledge ◊

7.4$_{5,6}$ **investigate career choices in science and technology ◊**

7.5$_{5,6,,8}$ **apply skepticism, careful methods, logical reasoning, and/or creativity in investigating the observable universe (e.g., uses of natural resources, chemical and physical changes of matter; factors affecting living conditions in space vehicles)**

7.6 recognize and appreciate that scientific knowledge is subject to modification as new information challenges current theories

7.7 acquire a holistic view of scientific knowledge by integrating reading, writing, mathematics and other disciplines with the science curriculum

7.8 use a variety of activities and investigations to produce a sense of wonder about the natural world and the joy of discovery

7.9 recognize that the exploration of science is challenging and fulfilling and establishes patterns of lifelong curiosity and learning

Scientific Attitudes/Habits of Mind

7.10 cooperate and collaborate to ask questions, find answers, solve problems and conduct investigations to further an appreciation and joy of scientific discovery ◊

7.11 process and integrate experiences with prior knowledge to formulate new ideas

7.12 understand that the study of science is a dynamic process and the results are not always definite or complete

7.13$_{4,5,6,8,9,10,11}$ **formulate conclusions through close observations, logic, objectivity, perseverance and integrity in data collection (e.g., impact of natural phenomena on the environment, conservation of energy, concepts of chemical composition of living things) ◊**

Scientific Processes/Thinking Skills

7.14 recognize and apply facts, concepts, laws, and theories to explain phenomena

7.15$_{3,4,5,6,8,9,10}$ **compare and contrast objects, actions or phenomena according to similarities and**

differences in order to classify them (e.g., variations in systems and organisms, characteristics of geological time, models of earth structures)

7.16$_{3,4,5,6,8,9,10,11}$ **construct and use charts, graphs, and tables to organize, display, interpret, analyze, and explain data (e.g., extrapolation, interpolation)** ◊

7.17$_{3,4,5,6,8,9,10,11}$ **use inferential reasoning to make logical conclusions from collected data (e.g., causes and effects)** ◊

7.18$_{3,4,5,6,8,9,10,11}$ **utilize experimentation to demonstrate scientific processes (e.g., formulating questions, predicting, forming hypotheses, quantifying, identifying dependent and independent variables)**

7.19$_{3,4,5,6,8,9,10,11}$ **develop rational thinking processes that underlie scientific approaches to problem solving by employing critical-thinking skills in applying scientific knowledge, using imagination and creativity while working individually or cooperatively (e.g., sequencing of components and processes according to order of occurrence, cause and effect of interruptions in a sequence of a system, representations involving sequencing of processes and components of a system)** ◊

7.20$_{3,4,5,6,8,9,10,11}$ **develop skills in the use of laboratory materials and equipment; and proper communication of scientific data collected (e.g., meter sticks, balances, thermometers, scales, graduated cylinders)** ◊

Laboratory Investigations/Hands-On Learning

7.21 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

7.22 use a variety of materials and scientific instruments to conduct explorations and investigations of the natural world to explain science concepts (e.g., measure environmental conditions using appropriate instruments) ◊

7.23 demonstrate safe techniques for handling, manipulating and caring for science materials, equipment and living organisms ◊

Science Themes and Subject Matter

7.24 develop through the study of interdependent themes including systems, changes, and models an understanding of biological, earth/space, and physical science concepts

7.25 associate hands-on activities to daily life experiences

7.26 express ideas that illustrate the relevance of science, technology, and societal issues

7.27$_{9,11}$ **identify and describe disease causing organisms and the diseases they cause (e.g., bacteria, viruses, protozoa, fungi) - *systems***

7.28$_{3,4,5,6,8}$ **evaluate how the different adaptations and life cycles of plants and animals help them to survive in different niches and environments (e.g., inherited and acquired adaptations) - *systems***

7.29$_{8,9,10,11}$ **explain how human body systems work together (e.g., skeletal, muscular, and integumentary systems) - *systems***

7.30$_{3,4,5,6,8,9,10}$ **predict the trends of interdependent populations if one of the limiting factors is changed - *changes***

7.31$_{5,8}$ **analyze how changes in the environment have lead to variations in reproductive**

adaptations (e.g., seed dispersal, egg laying, live birth) - *changes*

7.32$_{6,8,9}$ **evaluate the consequences of the introduction of chemicals into the ecosystem (e.g., environmental consequences, human health risks, mutations) - *changes***

7.33$_{6,8}$ **analyze the differences in the growth, development and reproduction of plants (e.g., flowering and non-flowering plants) - *changes***

7.34 compare the variations in cells, tissues, and organs of the skeletal, muscular, and integumentary systems of different organisms - *changes*

7.35$_{3,4,5,6}$ **construct simple keys to differentiate among living things of similar characteristics - *models***

7.36 construct and manipulate models which show variations in living things (e.g.,skeletal, muscular, integrementary systems) - *models*

7.37$_{5,6}$ construct models of biologically important substances (e.g., organic and inorganic molecules) - *models*

7.38 differentiate among elements, compounds and mixtures - *systems*

7.39$_{3,4,6,8,10}$ differentiate mixtures as solutions, colloids or suspensions - *systems*

7.40$_{3,5,6,8,10,11}$ **evaluate types of solutions by solutes and solvents, relative concentrations, conductivity, pH, and nine types of solutions (e.g., liquid in gas, solid in solid, gas in gas) - *systems***

7.41$_{9,11}$ **studying chemical reactions involving acids and bases, follow the neutralization process using color indicators and identify the salt formed in the reaction - *changes***

7.42$_{6,8,9,10,11}$ **describe the behavior of individual particles and verify the conservation of matter while exploring the melting and freezing of pure substances - *changes***

7.43$_{6,8,9,10,11}$ **trace the energy flow into and out of materials and verify that melting and freezing occurs at the same temperature - *changes***

7.44 using pictures showing cyclical processes in nature, trace the water cycle, the nitrogen cycle, and the carbon dioxide cycle - *models*

7.45$_{6,9,11}$ **write word equations to describe chemical reactions - *models***

7.46$_{3,6,9}$ **relate characteristics of light and sound to waves (e.g., amplitude, pitch, wavelength, reflection, absorption rate, color) - *systems***

7.47 interpret characteristics of AC and DC circuits (e.g., batteries, transformers) - *systems*

7.48 experiment with simple machines to demonstrate the relationship between forces and distance - *systems*

7.49 explain the effect of gravity on falling objects (e.g., g= 9.8m/s^2, object dropped on earth and on moon) - *systems*

7.50$_{4,5,6,8,9,10,11}$ **relate physical changes to the Kinetic-Molecular Theory (e.g., molecular energy, molecular movement) - *changes***

7.51 explain qualitatively conservation of matter (e.g., water cycle, food chain, chemical reactions) - *changes*

7.52$_{8,9}$ **explain qualitatively conservation of energy (e.g., potential energy to kinetic energy) -*changes***

7.53$_{8,9}$ **recognize that energy can be changed from one form to another (e.g., electrical to heat, electrical to mechanical, heat to mechanical) - *changes***

7.54 **use vectors to represent direction of motion - *models***

7.55$_{5,6,8,9,10}$ **analyze motion graphically - *models***

7.56 **investigate application of lenses to science (e.g.,**

microscopes, telescopes, magnifying glass, periscopes) - *models*

7.57 **review fundamental earth science concepts including, motions of sun and moon, weather and topographic maps - *systems***

7.58 recognize that stars not only are different in age and size, but also in color, temperature and brightness - *systems*

7.59 **describe and compare the physical characteristics of celestial objects - *systems***

7.60_{10} **depict and relate causes of tides, surfs and currents - *systems***

7.61 examine the relationships among air masses, oceans, weather, convection currents and the sun's energy -*systems*

7.62 demonstrate how natural phenomena and societal behaviors impact the environment - *systems*

7.63 identify and summarize origin of the universe theories - *systems*

7.64 understand mans' responsibility to recognize and solve problems involving the environment including solid waste management - *systems*

7.65 identify factors affecting living conditions in space - *changes*

7.66 compare and contrast geologic time - *changes*

$7.67_{4,10}$ **construct and explain various models (e.g., motions of earth, sun and moon, ocean floor structures, coastal landforms and soil erosion) - *models***

$7.68_{3,8,10,11}$ **given a topographical model or map, identify land features (e.g., mountains, rivers, valleys, lakes, glaciers, volcanoes) - *models***

Science History

$7.69_{5,6}$ **articulate the historical significance of scientific discoveries (e.g., as influenced by technological demands, competition, controversy, world events, personalities, societal issues)**

$7.70_{5,6}$ **compare the evolution of science concepts and theories (e.g., cells, plate tectonics, atoms, genetics)**

$7.71_{5,6}$ **examine the contributions of men and women of diverse cultures to the development of science**

Science, Technology, and Society

$7.72_{5,6,8,10,11}$ give examples of how science and technology are used in daily living ◊

$7.73_{5,6,8,10,11}$ use the knowledge of science and technology to make personal decisions at the local and global levels ◊

7.74 evaluate and critically analyze mass media reports of scientific developments and events ◊

$7.75_{5,6,8,10,11}$ **critically analyze the effects and impacts of science and technology on global and local problems (e.g., mining, manufacturing, recycling, farming, water quality)**

$7.76_{5,6,10}$ **explore the connections between science, technology, society, and career opportunities**

$7.77_{5,6,8,10,11}$ **analyze the positive and negative effects of technology on society and the influence of societal pressures on the direction of technological advances**

Computer/Technology

7.78 use appropriate software, audio-visual, and/or multimedia materials to practice and master seventh grade instructional objectives in science

7.79 using the graphing application of appropriate software, select the suitable chart, table, or graph to display data

7.80 using the graphing application of appropriate software, create tables, charts, and/or graphs

7.81 use a calculator to perform mathematical functions in data

analysis

7.82 use a variety of instruments (i.e. probes, thermometers, measuring devices) to perform measurements and record data

7.83 use appropriate software to practice reading, interpreting, analyzing, and evaluating the data on a map, chart, graph, table, and diagram

7.84 use appropriate software, practice extrapolating and interpolating information from a graph

7.85 use appropriate software to practice drawing conclusions from maps, diagrams, charts, graphs, and tables

7.86 use appropriate software to practice making predictions, inferences, and hypothesis from maps, diagrams, charts, graphs, and tables

7.87 input data using correct keying, editing, and formatting techniques

7.88 use a database to sort and search data to solve a specific problem

7.89 demonstrate a knowledge of how technology affects the ways in which people use resources

7.90 discriminate between ethical and unethical access to information

7.91 associate computer/technology activities with related careers

7.92 retrieve current data from a variety of electronic sources which might include the Internet, and/or software reference programs

Grade Eight
English Language Arts

English Language Arts at the eighth grade level is designed to encourage students to develop strategies that deal with language in real life situations. Writing focuses on prewriting, composing, and editing with emphasis on audience and use of technology. Reading comprehension and vocabulary stresses development of reading and thinking skills that enable students to comprehend and react critically to various genre of national, international, and West Virginia works. Language objectives stress mechanics, language expression, and organization of ideas. Study skills emphasize collection and organization to analyze information. The English Language Arts curriculum is designed to prepare students for the workplace.

Listening/Speaking

8.1 identify and correct usage errors in oral communications ◊

8.2 exhibit proper speaking and listening etiquette (e.g., focusing on speaker, speaking in turn, using various communication technologies, demonstrating interpersonal communications) ◊

8.3 use public speaking strategies to prepare formal and informal speaking presentations (e.g., informational demonstrations, persuasive speeches, job interviews) ◊

8.4$_{5,6,7}$ **listen to oral communication and retell in oral form relating personal experiences and constructing new meaning** ◊

8.5$_{1,2,3,5,6,7}$ **understand multi-step oral instructions and complete task** ◊

8.6$_{2,4,5,6,7}$ **listen to specific information and construct meaning beyond the text (e.g., character's feeling)** ◊

8.7$_{2,4,5,6,7}$ **listen to specific information and sequence in proper order** ◊

8.8$_{2,4,5,6,7}$ **listen to specific information to make predictions** ◊

8.9$_{2,4,5,6,7}$ **listen to specific information to locate main idea** ◊

8.10$_{2,4,5,6,7}$ **listen to specific information; identify word meaning from context** ◊

8.11$_{2,4,5,6,7}$ **listen to information to identify purpose of writing** ◊

8.12$_{2,3,4,5,6,7}$ **use critical thinking to distinguish fact from opinion; form personal opinions; make predictions and analyze outcomes** ◊

8.13$_{5,6,7}$ **identify synonym of unknown words by using context clues in sentences read aloud** ◊

8.14$_{1,2,5,6,7}$ **think critically about a selection to lead to exploration, questioning, and imagining about a selection read orally** ◊

Reading Comprehension

8.15$_{1,2,3,4,5,6,7,9,10,11}$ **read literary works by national and international authors to include but not limited to: short stories, science fiction, contemporary fiction, historical fiction, biographies, narratives, poetry, and West Virginia authors** ◊

8.16$_{k,2,4,5,6,9,10,11}$ **determine the main idea of a passage** ◊

8.17$_{2,3,5,9,10,11}$ **determine author's purpose by analyzing information on style of writing** ◊

8.18$_{3,4,5,6,7,9,10,11}$ **locate specific details in a textbook passage to promote initial understanding** ◊

8.19$_{5,9,10}$ **use graphic organizers to construct meaning of a textbook passage showing**

important ideas and the relationship among those ideas ◊

8.20$_{k,3,4,5,6,7,9,11}$ draw a conclusion to describe characters based on their thoughts and actions ◊

8.21$_{6,9,10,11}$ justify conclusions or opinions reached from textbook information ◊

8.22$_{6,9,11}$ identify and apply comprehension strategies through the critical thinking of summarizing interpreting , evaluating, critiquing, and analyzing what is read ◊

8.23$_{10,11}$ infer meaning of a phrase used in context ◊

8.24$_{2,3,4,9,10}$ determine the sequence of events in a text to determine initial understanding ◊

8.25$_{1,2,3,4,5,6,7,9,10}$ use setting, plot, characterization and style to determine a text's genre (e.g., science fiction, folktale)

8.26$_{5,6,9,10,11}$ locate information in recreational reading to promote initial understanding

8.27$_{4,6,7,10}$ distinguish factual from opinion statements ◊

8.28$_{7,9,10,11}$ determine the meaning of persuasive language and propaganda to determine meaning of information in functional text (e.g., advertisement) ◊

8.29$_{3,4,6,7,9,10,11}$ make inferences from functional text to make analysis of information (e.g., advertisements) ◊

8.30$_{6,7,9,10,11}$ draw conclusions from functional materials to make analysis of information (e.g., advertisements) ◊

8.31$_{3,5,6,7,9,10,11}$ locate specific details in ads and other functional material to verify initial understanding

8.32$_{6,7,9,10,11}$ predict the action of a reader of persuasive writing

8.33 determine types of conflict in a short story (e.g., man vs. man, man vs. society, man vs. nature, man vs. self) ◊

8.34 identify literary techniques used in literature (e.g., irony, understatement, exaggeration, foreshadowing, etc.)

8.35 identify the elements of plot in a short story (exposition setting, complications, suspense, climax, and resolution

8.36 identify types of poetry found in literature (e.g., narrative poem, ballad, lyric poem)

8.37 identify figures of speech used by author's in selected pieces of literature (e.g., simile, metaphor, allusion, and personification)

Reading Vocabulary

8.38$_{k,2,3,4,5,6,7,9,10,1}$ determine the meaning of words from their use in context ◊

8.39$_{2,3,4,5,7,9,10,11}$ determine the definition of multiple meaning words used in context ◊

8.40$_{2,3,4,5,6,7,9,10,11}$ determine the synonym for words in text to improve quality (e.g., precise verbs, descriptive modifiers) ◊

8.41 make use of classifications to determine possible use of words

8.42 use analogy to determine relationship of new and familiar words ◊

8.43 examine connotation of words as used in selection and other possible uses ◊

8.44 identify root words and add prefixes and suffixes to change meaning ◊

8.45 identify synonyms and antonyms of selected words ◊

8.46 identify idioms and their use in passages ◊

8.47 identify homophones and homographs and determine their meaning in a selection ◊

Writing

8.48 use prewriting and drafting strategies to generate topics and plan approaches to writing tasks

8.49 use writing strategies to address specific writing purposes, (e.g., narrative, descriptive,

informative,and persuasive) in paragraphs or compositions ◊

8.50 use writing strategies to write for audiences, including peers, teachers, and employers ◊

8.51 use revision and editing strategies to delete or correct errors in organization, and content◊

8.52$_{4,7,10}$ use a writing prompt to develop a composition that contains a beginning, middle and end

8.53$_{4,7,10}$ develop a composition that is focused, coherent, and has a clear and logical progression of ideas

8.54$_{4,7,10}$ develop a composition that contains smooth transition

8.55$_{4,7,10}$ use a writing prompt to develop a composition that addresses the assigned topic

8.56$_{4,7,10}$ use a writing prompt to develop a composition that is complete, varied, and economical

8.57$_{4,7,10}$ use a writing prompt to develop a composition whose word choice is vivid, precise, and economical

8.58$_{4,7,10}$ use editing strategies to correct errors in usage, capitalization, punctuation, and spelling

8.59 demonstrate mastery of penmanship and keyboard in the writing process ◊

8.60 incorporate examples of specific parts of speech, phrases, and clauses in the writing process ◊

8.61 use and identify different types of sentences, paragraphs, and essays ◊

8.62 demonstrate the use of personal writing for pleasure and enjoyment (e.g., journals, friendly letters) ◊

8.63 make use of functional types of writing (e.g., book reports, friendly letters, essay questions, and outlining) ◊

8.64 use electronic and traditional editing strategies (e.g., symbols, dictionaries) to correct spelling errors in computer generated work (e.g., proper names, homophone, [in, inn].) ◊

Spelling

8.65 identify and spell common homophones/homonyms (words that have different spellings an meaning but one pronounced the same (e.g., stake and steak) ◊

8.66 **use generalization to spell words containing "c" sounded as "k" (e.g., candle)** ◊

8.67 **spell words containing "oi" and "oy" (e.g., soil, boy)** ◊

8.68 **use visual cues as a strategy to spell words containing the sound "sh" (e.g., partial, special, dish)** ◊

8.69 form plurals of words ending with "sh" (e.g., wish, wishes) ◊

8.70 **spell words containing "y" sounded as "I" (e.g., my) and comparative forms ending in "y" (e.g., busy, busier, busiest)** ◊

8.71 use meaning as a strategy for spelling prefixes "bi", "re", and "mis" (e.g., bilateral, reread, misunderstand) ◊

8.72 **spell words with suffix "tive" (e.g., protective)** ◊

8.73 form inflectional endings on words ending in "e" (e.g., participate, participation) ◊

8.74 **form correct spelling of word when adding common endings (e.g., s, es)** ◊

8.75 **develop spelling competency by recognizing one's own spelling weakness** ◊

8.76 use syllabication as a strategy for spelling words ◊

8.77 use visual and pronunciation cues as strategies for spelling (e.g., dessert, desert) ◊

8.78 distinguish between misuse and proper spelling of a contraction and possessive ◊

8.79 focus on problem words that are commonly misspelled ◊

8.80 use memorization and/or mnemonic strategies to help spell problem parts of words (e.g., Tell these mosquitoes to quit biting

me) ◊

8.81 acquire a written vocabulary from a wide variety of instructional sources and activities in written communication across the curriculum ◊

8.82 use electronic editing tools as well as traditional editing resources to correct spelling errors (e.g., electronic spell checker, dictionary, thesaurus) ◊

Language

8.83$_{1,2,3,4,5,6,7,9,10,11}$ **capitalize titles of people (e.g., President Jefferson)** ◊

8.84$_{6,7,9,10,11}$ **capitalize geographic names and directions that are used to name a region (e.g., The West has many very large states.)** ◊

8.85$_{6,7,10,11}$ **capitalize proper adjectives (e.g., German steel)** ◊

8.86 **capitalize brand names, organizations, business firms, institutions, and government bodies** ◊

8.87 capitalize historical events and periods, special events, and calendar events ◊

8.88 capitalize nationalities, races, religions, academic courses, and languages ◊

8.89 capitalize particular places, things, events, and awards ◊

8.90$_{7,9,10,11}$ **use a comma with an introductory phrase** ◊

8.91$_{4,6,7}$ **use commas with a conjunction between independent clauses (e.g., We had lunch on the bus, and it was fun.)** ◊

8.92$_{5,7,9,10,11}$ **use commas with appositives** ◊

8.93$_{4,9}$ **use commas with conjunctions in compound sentences** ◊

8.94 **use commas to separate items in a series** ◊

8.95 **use comma to separate two or more adjectives preceding a noun** ◊

8.96 use comma to set off nonessential clauses and nonessential participial phrases ◊

8.97 use commas to set off sentence interrupters (e.g., appositives, nonessential phrases and clauses) ◊

8.98 use commas in certain situations (e.g., dates and addresses, parts of letters, abbreviations after names) ◊

8.99$_{7,9,10,11}$ **use a semicolon between independent clauses** ◊

8.100 use a semicolon between items in a series if the items contain commas ◊

8.101$_{5,6,10,11}$ **use a colon to introduce a list of items** ◊

8.102 use a colon after the salutation of a business letter ◊

8.103 use a colon between numerals that represent hours and minutes and between chapter and verse in a biblical reference ◊

8.104 use correctly hyphens, dashes, and parentheses in written expression ◊

8.105 use quotation mark correctly when punctuating titles and dialogue ◊

8.106 identify parts of a sentence (e.g., subject, verb, and complement) ◊

8.107$_{7,9,10,11}$ **use correct pronoun antecedent in sentences** ◊

8.108 use correct pronoun case in written expression (e.g., nominative, objective, possessive) ◊

8.109 use the different types of pronouns correctly in written expression (e.g., personal, demonstrative, interrogative, compound personal, indefinite, and relative) ◊

8.110$_{7,9}$ **use the correct subject verb agreement with a compound subject** ◊

8.111$_{6}$ **differentiate the use of adjectives and adverbs** ◊

8.112$_{6}$ **use adverbs correctly in written expression** ◊

8.113$_{1,2,4,6,10,11}$ **write and edit text using**

correct present tense ◊

8.114 **write and edit text using correct past tense** ◊

8.115 write and edit text using correct future tense ◊

8.116$_{7,9,10,11}$ **identify appropriate use of descriptive language in written expression** ◊

8.117$_{7,10,11}$ **identify and correct misplaced modifiers** ◊

8.118$_{1,2,3,4,5,6,7,9,10,11}$ **identify and correct awkward sentence construction** ◊

8.119$_{3,4,5,7,9,10,11}$ **identify and correct run-on sentences** ◊

8.120$_{5,6,7,9,10,11}$ **identify and correct redundancy** ◊

8.121$_{5,10,11}$ **identify and correct faulty parallel sentence structure** ◊

8.122$_{6,7,9}$ **identify and correct faulty subordination (e.g., I like hamburgers since I want candy.)** ◊

8.123 identify and punctuate complex sentences ◊

8.124$_{7,9,10,11}$ **identify and use appropriate transitions in writings** ◊

8.25$_{1,2,4,5,6,7,9,10,11}$ **make decisions about relevant and appropriate content to eliminate extraneous sentences in writing** ◊

8.126$_{3,4,6}$ **organize information by combining sentences** ◊

8.127$_{1,2,3,4,5,6,7,9,10,11}$ **identify the purpose and audience in written expression** ◊

8.128 identify thesis statements in written expression ◊

8.129$_{1,2,3,5,6,7,10,11}$ **identify supporting sentences in written expression** ◊

Study Skills

8.130$_{4,9}$ **demonstrate appropriate use of parts of a book such as title page, introduction, table of contents, appendix and references**

8.131$_{9,10,11}$ **use the card catalog or on-line catalog systems to determine a book's call number, author, publisher, publisher and artist, (an artist is an illustrator)** ◊

8.132$_{3,4,5,6,7}$ **use a pronunciation guide to determine numbers of syllables in a word, and sounds of letters as they appear in individual words**

8.133$_{5,6,7,9,10,11}$ **use dictionary entries to select the best meaning for a multi-meaning word when used in context**

8.134$_{4,9,10}$ **demonstrate appropriate use of a contents page to locate which chapter specific information can be found** ◊

8.135$_{4,9,10}$ **use table of contents and index to locate information** ◊

8.136 **given chapter names in an informational book, predict the type of book**

8.137$_{4,10,11}$ **construct and read a graphic organizer for a written report for a content area**

8.138$_{3,4}$ **identify a main heading from a list of topics in order to organize a report (e.g., food, needs, clothing, and shelter)** ◊

8.13 use study skills of scanning, skimming, and reading for mastery to prepare for a test

8.140 develop strategies for effective reading prior to a test (e.g., scanning, skimming, finding main idea, and paraphrasing)

8.141 organize information to classify, compare and contrast, and make analogies to answer questions on a test

8.142 evaluate resources by gathering and evaluating evidence to make appropriate conclusions about information

8.143 develop skills in outlining main points, summarizing, and noting important examples to evaluate information ◊

8.144 use available technologies to gather information (e.g., thesaurus, and other software programs ◊

Computer/Technology

8.145 use appropriate software to practice and master eighth grade English language arts instructional objectives

8.146 convert a word processing document into a simple desktop publishing document

8.147 using a word processor, demonstrate correct keying, editing, and formatting techniques (8.51)

8.148 distinguish between private and public data/information

8.149 identify technological skills required for various communication careers

8.150 use a word processing program to copy and move text (8.51)

8.151 use the editing functions of a word processor (spell check, grammar checker, thesaurus, outliner) (8.58, 8.64 and 8.82)

8.152 use a word processing program to produce a report that contains centering, tabs, and more than one paragraph (8.51)

8.153 develop keyboarding skills: posture, finger placement, keying letters, numbers, symbols, and special keys (8.59)

8.154 use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts

8.155 select and use appropriate software and/or other technologies to locate and use reference sources (8.144)

Grade Eight Mathematics

Pre-Geometry with Algebra

Replaces 8th Grade General Mathematics

Pre-Geometry with Algebra provides an alternative course for students who do not elect to take Algebra I in the eighth grade or who have not successfully mastered the new skills from *Pre-Algebra with Geometry* in the seventh grade. In addition to reinforcing the concepts presented in *Pre-Algebra with Geometry*, this course extends problem solving to a more sophisticated level. Students will continue to apply integer operations, properties, expressions, and equations so as to reinforce these concepts in varied applications. Lessons involving cooperative learning, manipulatives, or technology will strengthen students' understanding of concepts while fostering communication and reasoning skills. Calculator use is emphasized for all mathematical tasks including assessment.

Number Theory and Number Sense

$8.1_{9,10,11}$ compare and order rational and irrational numbers using Venn Diagrams, number lines, symbols (<,>,=), manipulatives, calculators, computer, and definitions

8.2 describe the properties of terminating, repeating, and non-repeating decimals and convert between fractions, mixed numbers, and decimals mentally, with paper/pencil, or a calculator

8.3 extend scientific notation to numbers with a wide range of values using a calculator when appropriate ◊

8.4_{7} find powers, squares, and square roots

8.5_{7} distinguish between prime and composite numbers

$8.6_{6,7}$ identify pictorial representations of decimals

$8.7_{5,6,7}$ identify the place value of a digit in a decimal

Computation and Estimation

8.8 solve consumer application problems including tips, discounts, sales tax, and

simple interest using mental math, paper/pencil, or calculator ◊

8.9$_{6,7,9,10,11}$ **solve ratio and proportion problems including rates, scale drawings, similar polygons, and estimating populations** ◊

8.10$_{5,6,7}$ **use estimation techniques (front-end, rounding, clustering, and compatible numbers) with whole numbers, decimals, money, percent, fractions, and mixed numbers to solve or to verify solutions in application problems**

8.11$_{5,6,7}$ **add, subtract, multiply, or divide fractions, mixed numbers, and integers resulting from problem situations using mental math, paper/pencil, and calculators**

8.12 develop computational strategies based on the commutative, associative, and identity properties with emphasis on the inverse and distributive properties

8.13$_{9,10,11}$ **solve traditional and non-routine problems, which may include missing information, using appropriate tools** ◊

Patterns, Functions, and Algebra

8.14$_{9,10,11}$ **use order of operations and exponent rules to evaluate and simplify numerical and algebraic expressions containing whole numbers, integers, absolute value, fractions, or exponents** ◊

8.15$_{9,10,11}$ **solve one and two step linear equations and inequalities with integer, fraction and decimal solutions, graphing solutions when appropriate** ◊

8.16$_{9,10,11}$ analyze problems by identifying relationships, discriminating relevant from irrelevant information, sequencing, observing patterns, prioritizing, and questioning ◊

8.17$_{9,10,11}$ **identify algebraic equations and expressions equivalent to a problem expressed in words** ◊

8.18$_{9,10,11}$ solve problems using appropriate methods such as equations, formulas, expressions, charts or drawings ◊

8.19$_{9,10,11}$ **apply inductive reasoning to write a rule from data in a function table** ◊

8.20 disprove mathematical conjectures by using counter-examples

8.21$_{9,10,11}$ **plot lines within the Cartesian Coordinate Plane using ordered pairs and table of values**

8.22$_{5,6,7}$ **use input/output models for functions (number machines)**

8.23$_{k,1,2,3,4,5,6,7}$ **find missing elements in numeric patterns**

Probability and Statistics

8.24$_{5,6,7,9,10,11}$ **use combinations and permutations in application problems** ◊

8.25 investigate and describe the difference between the probability of an event found through simulation or experiment versus the theoretical probability of the same event

8.26$_{9,10,11}$ **extrapolate information from multiple-bar graphs, stem-and-leaf plots, histograms, scattergrams, tables, and frequency distributions (tally charts)** ◊

8.27$_{1,2,3,4,5,6,7}$ **analyze problem situations, such as games of chance or consumer applications, and use a statistical sampling to make predictions** ◊

8.28$_{5,6,7,9,10,11}$ **determine measures of central tendency (mean, median, mode, range), and dispersion from data, graphs, tables, and experiments** ◊

8.29 investigate and recognize

misuses of statistical or numeric information ◊

8.30$_{9,10,11}$ draw inferences and construct convincing arguments based on data analysis ◊

Geometry with Measurement

8.31 **calculate area and circumference of circles using radius and diameter**

8.32$_{7,9,10,11}$ **use the concept of volume for prisms/cylinders as the product of the area of the base and the height**

8.33 use the concept of volume for cone/pyramids as one-third the product of the base and the height

8.34$_{9,10,11}$ **find angle measures; estimate and solve application problems involving perimeter, area, surface area, and volume of plane and solid geometric figures** ◊

8.35$_{9,10,11}$ **solve problems involving missing measurements in plane and solid geometric figures using formulas and drawings including irregular figures, models, or definitions**

8.36$_{9,10,11}$ solve right triangle problems using the Pythagorean Theorem, indirect measurement, and definitions

8.37 discover and verify the value of pi using measurement of physical models

8.38 **create geometric patterns including tiling, art design, tessellations or scaling using transformations (rotations, reflections, and translations)**

8.39 construct segments, angles, perpendicular bisectors, and angle bisectors

8.40 draw two and three-dimensional figures as a means to solve problems

8.41 **graph similar figures, reflections, translations, linear equations, and linear equalities on a coordinate plane** ◊

8.42$_{7}$ **identify parallel and perpendicular lines**

8.43$_{9,10,11}$ investigate the relationship between angles when parallel lines are cut by a transversal using models, pencil/paper, or graphing calculator

8.44$_{5,6,7,9,10,11}$ **measure in both the customary and metric systems; convert units within the same system**

8.45 **classify polyhedrons by components (faces and edges)**

Computer and Technology

8.46 use appropriate software to practice and master eighth grade instructional objectives in mathematics

8.47 use a calculator to compare rational and irrational numbers (8.1)

8.48 use a calculator to convert between fractions, mixed numbers, and decimals (8.2)

8.49 use a calculator to solve consumer application problems (8.4)

8.50 use a calculator to solve problems with fractions, mixed numbers, and integers resulting from problem situations (8.7)

8.51 use a calculator to determine measures of central tendency, range, and dispersion from data, graphs, tables, and experiments. (8.22)

8.52 use a calculator to find area and circumference of a circle. (8.25)

8.53 use a scientific calculator to extend scientific notation to numbers with a wide range of values (8.3)

8.54 use a graphing calculator to solve one and two step linear equations and inequalities with integers, fractions and decimals (8.11)

8.55 use a graphing calculator to plot lines within the Cartesian Coordinate Plane using ordered pairs or tables of values (8.17)

8.56 use a graphing calculator to investigate the relationships between angles formed when parallel lines are cut by a transversal (8.36)

8.57 use a spreadsheet and/or database to sort and search data, set up formulas, create graphs and charts, and analyze data ◊

8.58 practice inputting data using correct keying, editing, and formatting techniques ◊

8.59 distinguish between private and public data/information ◊

8.60 identify technological skills required for various mathematical careers ◊

Grade Eight Social Studies: West Virginia Studies

The eighth grade program of study consists of a comprehensive course on West Virginia, from the Pre-Columbian period to present day. Special emphasis is placed on the interdependence of geographic, cultural, political, environmental, and economic factors involved in the history of the state.

Civics

8.1_{9} **identify major responsibilities and powers of the United States, West Virginia, and local governments as specified by the United States and West Virginia Constitutions**

$8.2_{3,4,5,6,7,9,10,11}$ **analyze the shared powers and responsibilities of the executive, legislative and judicial branches of United States and West Virginia state government and how the system of checks and balances limits those powers** ◊

$8.3_{3,5,6}$ **identify the duties and requirements for office of elected officials and representatives at the national, state and local levels (e.g., President, Governors, Senators, Representatives/Delegates, Members of Board of Public Works, County Commission)**

$8.4_{6,9,10}$ **identify fundamental American principles by using primary source documents and significant political speeches and writings**

8.5 identify major sources and uses of revenue for state and local governments (e.g., property tax, income tax, fees and licenses, excise tax, levies) ◊

8.6 identify the major purposes and provisions of the West Virginia Constitution and the processes by which it can be changed ◊

8.7 describe the components of the lawmaking process

$8.8_{3,5,10}$ **identify types of laws which are made at the national, state, and/or local levels**

8.9 **analyze the functions and jurisdictions of the federal, state, local, and juvenile courts (e.g., United States Supreme Court, State Supreme Court, Circuit Courts, Magistrate Courts, specialized courts)**

8.10_{6} **identify individual rights protected by the United States and West Virginia Constitutions and laws** ◊

8.11 identify various types of elections in West Virginia (e.g., primary/general, state/local, partisan/non-partisans)

8.12 **trace the evolution of suffrage from colonial America to the present and relate to West Virginia**

8.13 **describe how citizens can participate in government at the local, state, and national levels (e.g., voting, community service, letter writing), and**

benefit the individual and community ◇

8.14 research and describe how special interest groups influence government and the law-making process in West Virginia ◇

8.15 evaluate information from various sources (e.g., newspapers, advertisements, cartoons, editorials) and make choices on public issues and candidates for political office in West Virginia ◇

Economics

8.16 determine the factors that caused West Virginia to become a leader in the production of salt, coal, and electricity

8.17 identify industries and products (e.g., tourism, coal, glass, recreation, agriculture) that are important to the economy of the four regions of West Virginia ◇

8.18 **describe how West Virginia's economic condition affects social conditions (e.g., employment, in/out migration)** ◇

8.19 analyze the changes in West Virginia's economy and people due to industrial development ◇

8.20 define and explain the importance of West Virginia's renewable and non-renewable resources and how absentee ownership of these impact the state's economy ◇

8.21 identify the labor/management strategies that have affected West Virginia's economy (e.g., strikes, boycotts, yellow-dog contracts) ◇

8.22_{10} **analyze the effects of national and state governmental actions on West Virginia's economy** ◇

$8.23_{3,10}$ **use a graph to draw conclusions about how national spending affects West Virginia** ◇

8.24 **analyze the importance of banking in West Virginia's economy (e.g., savings, interest, loans)** ◇

8.25 **explain the benefits of trade to West Virginia's economy** ◇

$8.26_{6,11}$ **examine the effect of technological changes on West Virginia's economy (e.g., in employment, agriculture, tourism, education, industry)** ◇

8.27 **examine economic reasons for the deterioration of some "downtown" areas in twentieth century West Virginia and the renaissance of others** ◇

Geography

$8.28_{4,5,6}$ **describe West Virginia's location in relationship to the Prime Meridian, Equator, Tropic of Cancer, Tropic of Capricorn, Arctic and Antarctic Circles**

8.29 identify West Virginia's location by longitude and latitude including degrees, minutes, and seconds

8.30 identify West Virginia's man-made and natural borders

8.31 identify the location of West Virginia in relationship to neighboring states and the eastern United States

8.32 use a map to identify the four major geographic regions, major rivers, landforms, and points of interest in West Virginia ◇

$8.33_{3,4,5,9}$ **draw conclusions about climate, landforms, and resources in West Virginia's four geographic regions using special purpose maps** ◇

8.34 **identify West Virginia's geographic regions through reading descriptive literature** ◇

8.35 use a map to identify the counties and major cities in West Virginia

8.36_{5} **describe West Virginia's climate and its effect on people's lives**

8.37_{11} **use a map to explain the**

settlement, exploration, and population patterns of West Virginia in relation to geographic features ◊

8.38 cite reasons for the development of the West Virginia transportation system ◊

8.39$_{4,5,9,10,11}$ **identify the geographic factors which lead to development of agriculture, coal, glass, chemical, metallurgical and tourism industries in West Virginia** ◊

8.40$_{4,5,9,10,11}$ **explain how the cultural and economic isolation of different areas of the United States and West Virginia has been changed through technological advances (e.g., TV, radio, telephone, computers, highways)** ◊

History

8.41 identify characteristics of various Native American cultures in West Virginia from the pre-Columbian period to the arrival of Europeans

8.42 list reasons for exploration , major explorers, their routes, and discoveries on the western Virginia frontier

8.43 **compare and contrast French and English explorers, settlers, and settlements on the western Virginia frontier**

8.44$_{5,6}$ sequence the events and incentives for Virginia's expansion west to the Ohio River

8.45 describe the European-Native American cultural conflict as it relates to West Virginia

8.46 explain reasons for and resulting consequences of conflicts and wars as they pertain to the development of West Virginia (e.g., French and Indian War, American Revolution, Civil War) ◊

8.47$_{7,9}$ **explain the effect of immigration on West Virginia's and America's culture from European settlement through the early twentieth century**

8.48 explain the conflicts between eastern and western Virginia and sequence the events that led to the formation of the state of West Virginia

8.49$_{5,6}$ **identify men and women in West Virginia who have made significant contributions to our history in the public and/or private sectors (statehood movement, Abolition movement, education, industry, literature)** ◊

8.50$_{4,6,10}$ **match representative quotes about historical events in West Virginia and United States to the person who most likely held that view**

8.51$_{3}$ **identify the types of transportation which facilitated the growth of West Virginia and western expansion** ◊

8.52 **trace the evolution of the labor movement in West Virginia and the United States** ◊

8.53 identify the role of ethnic and racial minorities and women in West Virginia's history through contemporary society

8.54$_{4,11}$ **sequence and analyze the impact of contemporary social, economic, and technological developments on West Virginia's and the United States' people and culture** ◊

8.55$_{11}$ **draw conclusions about West Virginia and other areas from various types of charts, graphs, maps, pictures, models, and timelines** ◊

Review for Assessment:

8.56 **describe problems faced by Washington upon becoming the first United States President**

8.57$_{3,4,5,6,7,9,10,11}$ **explain the law of supply and demand** ◊

8.58 **describe the unique contributions and characteristics of Arab/Islamic society throughout history**

Computer/Technology

8.59 use appropriate software to practice and master eighth grade social studies instructional objectives ◊

8.60 use a variety of audio-visual and multi-media materials to practice and master eighth grade social studies instructional objectives ◊

8.61 practice inputting data using correct keying, editing, and formatting techniques ◊

8.62 use graphics software to create graphs, histograms, tables, and charts ◊

8.63 read, interpret, and draw conclusions from graphs, charts, and tables ◊

8.64 use a database to sort and search data to solve a specific problem ◊

8.65 distinguish between private and public data/information ◊

8.66 identify various careers in the field of technology ◊

8.67 discriminate between legal and illegal use of electronic information (including material that is protected by copyright) ◊

8.68 examine the effect of technological changes on WestVirginia's economy (employment, agriculture, tourism, education, industry, etc.) ◊

8.69 examine the effect of technological changes on West Virginia's culture (e.g., television, radio, telephone, computers, the Internet) ◊

8.70 use on-line sources to obtain or exchange information ◊

8.71 sequence technological developments (e.g., printing press, television, radio, and computer)

Grade Eight Science

The Coordinated and Thematic Science (CATS) Eight objectives analyze, quantify, and explain conditions and phenomena of the living and designed worlds. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy in the fields of biology, chemistry, physics, and earth/space sciences. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes and models. Students will engage in active inquires, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities. CATS Eight reviews elements, mixtures, and compounds, populations/ecosystems, conservation of matter and energy, and earth's history. Major concepts introduced at the eighth grade level include reproduction, genetics, behavior, chemical reactions, and environmental concerns.

Nature of Science

8.1 develop a conceptual framework of scientific principles

8.2 recognize the interdependency of science themes and scientific concepts

8.3 evaluate the interrelationships of scientific concepts to everyday life by making informed decisions and choices using scientific reasoning and knowledge ◊

$8.4_{5,6,7}$ **investigate career choices in science and technology ◊**

$8.5_{5,6,7}$ **apply skepticism, careful methods, logical reasoning, and/or creativity in investigating the observable universe (e.g., effect of human existence on the biosphere, fundamentals of genetics, sampling techniques involved in data collection)**

8.6 recognize and appreciate that

scientific knowledge is subject to modification as new information challenges current theories

8.7 acquire a holistic view of scientific knowledge by integrating reading, writing, mathematics and other disciplines with the science curriculum

8.8 use a variety of activities and investigations to produce a sense of wonder about the natural world and the joy of discovery

8.9 recognize that the exploration of science is challenging and fulfilling and establishes patterns of lifelong curiosity and learning

Scientific Attitudes/Habits of Mind

8.10 cooperate and collaborate to ask questions, find answers, solve problems and conduct investigations to further an appreciation and joy of scientific discovery ◊

8.11 process and integrate experiences with prior knowledge to formulate new ideas

8.12 understand the study of science is a dynamic process and the results are not always definite or complete

8.13$_{4,5,6,7,9,10,11}$ **formulate conclusions through close observations, logic, objectivity, perseverance and integrity in data collection (e.g., Newton's Laws of Motion, forces causing the construction and destruction of topographical features, how to illustrate the path of waves traveling through different media)** ◊

Scientific Processes/Thinking Skills

8.14 recognize and apply facts, concepts, laws, and theories to explain phenomena

8.15$_{3,4,5,6,7,9,10}$ **compare and contrast objects, actions or phenomena according to similarities and differences in order to classify them (e.g., refraction and reflection of light, how waves travel through different materials, how to represent forces as vectors)**

8.16$_{3,4,5,6,7,9,10,11}$ **construct and use charts, graphs, and tables to organize, display, interpret, analyze, and explain data (e.g., extrapolation, interpolation)** ◊

8.17$_{3,4,5,6,7,9,10,11}$ **use inferential reasoning to make logical conclusions from collected data (e.g., causes and effects)** ◊

8.18$_{3,4,5,6,7,9,10,11}$ **utilize experimentation to demonstrate scientific processes (e.g., formulating questions, predicting, forming hypotheses, quantifying, identifying dependent and independent variables)**

8.19$_{3,4,5,6,7,9,10,11}$ **develop rational thinking processes that underlie scientific approaches to problem solving by employing critical-thinking skills in applying scientific knowledge, using imagination and creativity while working individually or cooperatively (e.g., properties of substances and environmental impact, adaptations of organisms to their habitat, methods of classifying common organisms by observable characteristics)** ◊

8.20$_{3,4,5,6,7,9,10,11}$ **develop skills in the use of laboratory materials and equipment; and proper communication of scientific data collected (e.g., meter sticks, balances, thermometers, scales, graduated cylinders)** ◊

Laboratory Investigations/Hands-On Learning

8.21 engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and laboratory skills

8.22 use a variety of materials and scientific instruments to conduct explorations and investigations of the natural world to explain science concepts (e.g., measure environmental conditions using appropriate instruments) ◊

8.23 demonstrate safe techniques for handling, manipulating and caring for science materials, equipment and living organisms ◊

Science Themes and Subject Matter

8.24 develop through the study of interdependent themes including systems, changes, and models an understanding of biological, earth/space, and physical science concepts

8.25 associate hands-on activities to daily life experiences

8.26 express ideas that illustrate the relevance of science, technology, and societal issues

8.27 summarize problems related to water on earth as a life sustaining substance (e.g., quality and quantity of surface and ground water)

8.28_{10} **identify and explain the structures and functions of cell organelles (e.g., mitochondria, cell membrane, nucleus) - *systems***

8.29_{10} **discuss the interdependencies within and among organelles, cells, tissues, organs, and systems - *systems***

$8.30_{7,9,10,11}$ **explain how human body systems work together (e.g., circulatory, respiratory, reproductive systems) - *systems***

$8.31_{3,4,5,6,7,9,10}$ **analyze how structures, functions and behaviors of organisms lead to species continuity (e.g., reproductive/mating behaviors, seed dispersal) - *systems***

$8.32_{3,4,5,6}$ **group unknown organisms into correct taxonomy based on observable characteristics (e.g., use dichotomous keys) - *systems***

$8.33_{7,9,10,11}$ **compare the variations in cells, tissues, and organs of the circulatory, respiratory, and reproductive systems of different organisms - *changes***

$8.34_{4,5,6,9,10,11}$ **design an environment in which the chemical and energy needs for the growth, reproduction and development of plants are met (e.g., food pyramids, decomposition) - *models***

$8.35_{4,6,10,11}$ **demonstrate how living cells obtain the essentials of life (e.g., transpiration, respiration, photosynthesis) - *models***

$8.36_{9,11}$ demonstrate the basic principles of genetics (e.g., Mendel's laws, DNA, monohybrid crosses, production of sperm and egg, production of body cells, genes, chromosomes, inherited traits) - *models*

8.37 construct and manipulate models which show variations in living things (e.g., circulatory, respiratory, reproductive systems) -*models*

$8.38_{9,10,11}$ **classify chemical reactions as endothermic and exothermic - *systems***

8.39_{11} identify elements as metallic, non-metallic or metalloid and locate them on the periodic table - *systems*

8.40_{11} assign each element to its chemical family on the periodic table and note similarities in outer energy, level electrons within each family - *systems*

$8.41_{3,6,10,11}$ **utilize properties of acidity, conductivity, and solubility to classify substances - *systems***

$8.42_{6,9,11}$ classify chemical reactions as synthesis, decomposition, single replacement or double replacement and identify the oxidation reactions (e.g., elements or compounds combing with oxygen) - *systems*

$8.43_{9,10,11}$ **identify acid-base reactions and verify that matter is conserved in chemical reactions - *systems***

8.44$_{6,7,9,10,11,12}$ **identify chemical reaction factors that might affect the reaction rates including catalysts, temperature changes, light energies, and particle size - *changes***

8.45$_{10}$ evaluate gaseous systems noting the variation in diffusion rates - *changes*

8.46$_{6,7,9,10,11}$ **examine the behavior of gases at different temperature and pressures - *changes***

8.47$_{10}$ draw Bohr's Model for each element identifying protons, neutrons, and electrons for each element - *models*

8.48$_{11}$ **write word equations for chemical reaction - *models***

8.49$_{4,5,6,7,10,11}$ **relate physical properties of matter to everyday life (e.g., reflection/refraction, magnetism/compasses, density of regular/irregular objects, temperature/molecular movement, pendular motions and other vibrating objects) - *systems***

8.50 identify sources of energy (e.g., petroleum refinement, windmills, geothermal) - *systems*

8.51 describe Newton's Laws of Motion and identify examples (e.g., sailboat, bouncing balls, firing a rifle) - *systems*

8.52 interpret and illustrate changes in waves as they pass through various mediums (e.g., sound through water and metal, light through thicknesses of glass) - *changes*

8.53$_{7,9,10,11}$ **describe how sound is perceived by the ear (e.g., range of hearing, frequency, amplitude) - *changes***

8.54$_{7,9}$ **apply the conservation of energy theory to energy transformations (e.g., electrical/heat, heat/mechanical) - *changes***

8.55 quantitatively represent work, power, pressure (e.g., W=f x d, P=W/t, pressure =force/area) - *models*

8.56$_{5,6,7,9,10}$ **draw vector quantities (e.g., displacement, velocity, force) - *models***

8.57$_{5,6,7,9,10}$ **graph and interpret the relationships (e.g., distance versus time, speed versus time, acceleration versus time) - *models***

8.58$_{9,10}$ **illustrate qualitatively and quantitatively Newton's Laws of Motion (e.g., F=m x a, D=v x t, p= m x v, simple machines, W= f x d) - *models***

8.59 illustrate quantitatively mechanical advantage of simple machines - *models*

8.60 **review fundamental earth science concepts including the characteristics of stars, topographic maps and weather maps - *systems***

8.61 **compare and contrast the orbits of planets and comets - *systems***

8.62 **relate rock formation to the types of fossil fuels - *systems***

8.63 identify resources as being renewable or non-renewable - *systems*

8.64 summarize and explain the principle of plate tectonics - *systems*

8.65 explore the societal effects of meteorological phenomena - *systems*

8.66 describe the factors involved in mining resources - *systems*

8.67 compare and contrast the different types of galaxies (e.g., shape, size, components) - *systems*

8.68 recognize societal concerns with exploration and colonization of space - *systems*

8.69$_{3,5}$ **relate climatic patterns and change to Earth's revolution and tilt of the axis - *changes***

8.70 examine energy transfer in Earth science (e.g., forces in construction of topographical features, causes of geological phenomena, interaction of atmosphere and oceans) - *changes*

8.71$_{3,4,5,6,7,9,10,11}$ **diagram the motions of the Sun, Moon, and Earth and explain the astronomical**

phenomena associated with these motions with an emphasis on gravitational variances - *models*

8.72$_{5,6}$ **use a variety of instruments to gather data (e.g., mass, temperature, electrical current, air pressure, wind direction, wind speed, and humidity) - *models***

8.73 construct and interpret rock layer models through stratigraphic interpretation (e.g., age, environment when deposited) - *models*

8.74$_{5}$ **determine the relationship between the Earth's magnetism and directions on the Earth's surface through the construction and use of a compass - *models***

Science History

8.75$_{5,6,7}$ **articulate the historical significance of scientific discoveries (e.g., as influenced by technological demands, competition, controversy, world events, personalities, societal issues)**

8.76$_{5,6,7}$ **compare the evolution of science concepts and theories (e.g., cells, plate tectonics, atoms, genetics)**

8.77$_{5,6,7}$ **examine the contributions of men and women of diverse cultures to the development of science**

Science, Technology, and Society

8.78$_{5,6,10,11}$ give examples of how science and technology are used in daily living ◊

8.79$_{5,6,7,10,11}$ **use the knowledge of science and technology to make personal decisions at the local and global levels** ◊

8.80 evaluate and critically analyze mass media reports of scientific developments and events ◊

8.81$_{5,6,10,11}$ **critically analyze the effects and impacts of science and technology on global and local problems (e.g., mining, manufacturing, recycling, farming, water quality)**

8.82$_{5,6,10}$ **explore the connections between science, technology, society, and career opportunities**

8.83$_{5,6,10,11}$ **analyze the positive and negative effects of technology on society and the influence of societal pressures on the direction of technological advances**

Computer/Technology

8.84 use appropriate software, audio-visual and/or multimedia materials to practice and master eighth grade instructional objectives in science

8.85 input data using correct keying, editing, and formatting techniques

8.86 using the graphing application of appropriate software, select the suitable chart, table or graph to display data

8.87 using the graphing application of appropriate software, create tables, charts, and/or graphs

8.88 use a calculator to perform mathematical functions in data analysis

8.89 use a variety of instruments (i.e. probes, thermometers, measuring devices) to perform measurements and record data

8.90 use appropriate software to practice reading, interpreting, analyzing, and evaluating the data on a map, chart, graph, table, and diagram

8.91 use appropriate software, practice extrapolating and interpolating information from a table, chart, and graph

8.92 use appropriate software to practice drawing conclusions from maps, diagrams, charts, graphs, and tables

8.93 use appropriate software to practice making predictions, inferences, and hypothesis from maps, diagrams, charts, graphs, and tables

8.94 use appropriate software to

practice reading an instrument or gauge

8.95 use a database to sort and search data to solve a specific problem

8.96 identify various careers in the field of technology

8.97 discriminate between legal and illegal use of electronic information (including material that is protected by copyright)

8.98 retrieve current data from a variety of electronic sources which might include the Internet, and/or software reference programs

Adolescent English Language Arts Education

The adolescent education program of study maintains an integrated approach to the English Language Arts. Through literature study, the refinement of research skills, and an emphasis on mastering the conventions of standard English, the learner grows in English Language Arts competency. To promote life-long learning, the student gains refined media/technology skills, work-related literacy skills, and clearer understanding of the interrelationships of these areas to the English Language Arts. All students must be provided the opportunity to select honors and/or advanced placement courses to fulfill the four units of English Language Arts credits currently required for graduation. In addition to the required yearly courses offered throughout this programmatic level, elective course development is encouraged. These elective courses must expand and enhance the English Language Arts in the areas of reading, writing, speaking, listening, and viewing. Examples of electives include, but are not limited to, courses in:

Drama
Theatre
Journalism
Mass Media
Television
Film
Speech
Creative Writing
Technical Writing
Desk Top Publishing
AP English
College Courses

It is strongly recommended that students in Advanced Placement English courses take the AP exam.

English Language Arts electives, with the exception of AP and college composition courses, (e.g., expository, persuasive/research) cannot be used as a substitute course for the required four units of English Language Arts. Course descriptions for these electives must include the appropriate West Virginia Goals and Objectives for English Language Arts (9-12) that are applicable to the elective course. All English Language Arts electives must be approved by county boards of education.

Grade Nine
English Language Arts

English Language Arts Nine will focus on the effective use of written language in educational and occupational endeavors and interpersonal communication. Instructional delivery will be enhanced by computer technology. Frequent interaction with a broad array of quality literature will encourage an appreciation for the power of the spoken and written word. Test data will provide direction and focus for prioritizing the instructional objectives that will be needed to ensure student mastery.

Listening and Speaking

$9.1_{K,1,2,3,4,5,6,7,8}$ review appropriate interpersonal communication skills (e.g., asking and answering questions, following directions) ◊

9.2 review the listening behaviors prior to a school-wide audience activity (e.g., stay alert, resist distractions, identify and adapt to the speaker's purpose) ◊

$9.3_{1,2,3,4,5,6,7,8}$ identify and record main idea, linking details, and summary (e.g., dictated material, media)

$9.4_{2,3,4,5,6,7,8}$ identify the purpose, make predictions, distinguish fact from opinions and construct meaning in and beyond the text (e.g., lecture, speech, media) ◊

9.5 recognize and correct standard usage errors in dictated sentences and paragraphs ◊

9.6 recognize situations where the use of colloquial, dialectical, and slang are appropriate (e.g., peer conversation versus formal presentations) ◊

9.7 match the level of language formality to the situation/audience (e.g., peer conversation versus adult interaction) ◊

$9.8_{1,2,3,5,8}$ write a set of complex directions and successfully communicate the directions ◊

$9.9_{2,3,4,5,6,7,8}$ make predictions, distinguish fact from opinion, and construct meaning in and beyond the text (e.g., lecture, speech, media) ◊

9.10 ask questions in the proper form and tone at the appropriate time (e.g., classroom lecture, conversation, panel discussion) ◊

$9.11_{5,6,7,8}$ understand the importance of listening for the purpose of asking questions to foster comprehension (e.g., lecture, discussion, conversation) ◊

Reading Comprehension

$9.12_{1,2,3,4,5,6,7,8,10,11}$ **read literary works by national and international authors to include but not limited to: novels, drama, short story, poetry, biographies, folktales, legends and nonfiction for cultural literacy, appreciation and application**

$9.13_{1,2,3,4,5,6,7,8,10,11}$ **identify the elements and structures of the various genres as separate entities with distinctive structures and styles (e.g., use of graphic organizer or Venn diagram)**

9.14_{10} identify the influences of historical, cultural and biographical (author) factors in shaping styles and voice of literary works, by genre, (e.g., group research via Internet, CD-ROM, and guest speaker(s) such as authors and historians) ◊

$9.15_{10,11}$ identify common careers found in short stories and evaluate their desirability ◊

$9.16_{10,11}$ locate and identify literary criticism applicable to the genre being studied by using electronic retrieval systems (e.g.,

Internet/CD ROM)

9.17$_{10,11}$ evaluate, whenever applicable to the genre being studied, writing samples from the local community (e.g., brochures, editorials, poetry, community history)

9.18 identify the different reading strategies necessary for various reading purposes (e.g., literary experience, information, and task performance) ◊

9.19$_{2,3,5,10}$ **read directions necessary to perform a sequential task, then perform the task, (e.g., critique directions of a household task, perform the task and report what happened)** ◊

9.20 **interpret and discuss an illustrator's purpose relative to the specific text, (e.g., critique illustrations contained in a textbook to determine their relevance to the context of the text)** ◊

9.21$_{2,3,5,6,10,11}$ **read and state the theme of a text (e.g., in short stories, novels, drama and poetry)** ◊

9.22$_{2,3,4,5,6,7,8,11}$ **identify central characters of a text by (e.g., graphic organizers, outlines)** ◊

9.23$_{3,7,8,10,11}$ **make reasonable logical predictions based upon events in a story or text (e.g., predicting the ending of a story based on the introduction or predicting the outcome of a historical event or person beyond the information in the text)** ◊

9.24$_{2,3,5,10}$ **form opinions and conclusions based upon a text** ◊

9.25$_{3,4,5,6,8,10,11}$ **locate specific information in reading text (e.g., main idea, specific fact/statistic, definition, character)** ◊

9.26$_{K,5,8,10}$ **recognize and explain the function of an illustration within a specific text (e.g., graphic organizers such as maps, charts, lists, graphs)** ◊

9.27 create an illustration that supports a specific text (e.g., graphic organizer such as map, chart, list, graph) ◊

9.28$_{2,3,4,5,6,7,8,10,11}$ **use context clues to establish word meaning** ◊

9.29$_{3,7,8,10,11}$ **recognize the function of a text (e.g., technical manual, almanac, advertisement, short story)** ◊

9.30$_{3,7,8,10,11}$ **recognize differences in structure, content, and tone of various texts (e.g., exposition versus persuasion as in job applications, technical manual, almanac, advertisement, and literary genres, including audio/film version versus written texts)** ◊

9.31$_{3,4,5,6,8,10,11}$ develop different strategies of reading (e.g., skimming, scanning, analytical note taking) ◊

9.32$_{5,6,10,11}$ **recognize literary devices (e.g., personification, symbolism, imagery, metaphor, simile, humor, rhythm, rhyme, meter, alliteration, assonance)**

9.33$_{2,3,5,8,10,11}$ **recognize literary style (e.g., genre, point of view, theme, author's voice including humor)** ◊

Reading Vocabulary

9.34$_{2,3,4,5,6,7,8,10,11}$ **select vocabulary that is vivid, precise, and economical for oral and written communication including real life situations, using a variety of resources (e.g., thesaurus, dictionary, computer)** ◊

9.35$_{10,11}$ **expand specialized vocabulary commonly used in content areas through reading and writing in progressive levels on instructional materials** ◊

9.36$_{9,10,11}$ recognize how words can function in different uses in oral

and written communication (e.g., Swimming [verbal noun/subject] is an Olympic sport; John is swimming [verb phrase] in the pool) ◊

9.37$_{2,3,4,5,6,7,8,10,11}$ recognize the multiple meanings of words in the context of oral and written communication ◊

9.38$_{2,3,4,5,6,7,8,10,11}$ **recognize the function of antonyms, synonyms, homonyms, homophones, and homographs in oral and written communication** ◊

Writing Skills

9.39 recognize writing strategies to address specific writing purposes, (e.g., narrative, informative and persuasive, in paragraphs or compositions ◊

9.40 recognize writing strategies to write for audiences including peers, teachers, and employers (e.g., formal versus informal/informational versus conversational) ◊

9.41 use prewriting strategies to generate topics and plan approaches to writing tasks (e.g., clustering, idea tree, networking) ◊

9.42 use drafting strategies for specific writing tasks (e.g., rough draft all paragraphs, essays, book reports) ◊

9.43$_{4,7,10}$ use a writing prompt to develop a composition that contains a beginning, middle, and end ◊

9.44$_{4,7,10}$ develop a composition that addresses the assigned topic with a clearly worded and correctly placed thesis statement ◊

9.45$_{4,7,10}$ develop a composition that is focused and coherent and has a clear, logical progression of ideas (e.g., spatial order in a descriptive essay/chronological order in a process essay) ◊

9.46$_{4,7,10}$ recognize different transitional devices (e.g., introductory and internal transitional phrases/conjunctions) ◊

9.47$_{4,7,10}$ develop a composition that uses complete sentences ◊

9.48$_{4,7,10}$ develop a composition with appropriate and precise word choice ◊

9.49$_{4,7,10}$ develop a composition in which errors in standard written English usage and mechanics (punctuation, spelling, capitalization) do not detract ◊

9.50 use revision and editing strategies to correct errors in organization, content, usage, mechanics, and spelling (e.g., write-re-write) ◊

9.51 demonstrate competence in penmanship and keyboarding/word processing in the writing process to produce a clear, legible product ◊

9.52 use electronic editing and traditional editing strategies (e.g., symbols, dictionaries) to spell words correctly in computer generated work (e.g., proper names, in, inn, [homographs]) ◊

Spelling

9.53 recognize and understand the social, cultural, technical/media influences on the evolution of word origins (e.g., technology, mythology, foreign languages) ◊

9.54 **apply rules to the spelling and pronunciation of affixes (prefixes and suffixes) in communications, both academic and real life (e.g., numeric (mono, bi, tri); negation (non, un); degrees of comparison (er, est, less); directional (trans, inter, intra)** ◊

9.55 **expand pronunciation and spelling skills to include specialized vocabulary commonly used in content areas (e.g., algae)** ◊

9.56 **apply rules to the pronunciation and spelling of homophonic consonant and vowel sounds in**

communications, both academic and real life (e.g., context clues; editing process; phonetic principles "ph" for "f"; "ee" for "ea") ◊

9.57 apply rules to the pronunciation and spelling of inflectional endings in communications, (e.g., tion, ly, ing) ◊

9.58 students will use a variety of resources and strategies to ensure choices of pronunciation and spelling (e.g., dictionary, spell check, thesaurus) ◊

Language

$9.59_{1,2,3,4,5,6,7,8,10,11}$ use editing strategies to recognize and correct errors in capitalization of titles of people, proper and common nouns and adjectives (e.g., use of graphic organizer to categorize errors and show corrections) ◊

$9.60_{1,2,3,4,5,6,7,8,10,11}$ use editing strategies to recognize and correct errors in subject and verb agreement (e.g., peer record of errors in listening to oral presentation)◊

$9.61_{7,8,10,11}$ use editing strategies to recognize and correct errors in pronoun and antecedent relationships (e.g., collect and correct errors found in newspapers, magazine articles)◊

$9.62_{1,2,3,4,5,6,7,8}$ use editing strategies to recognize and correct run-on sentences and fragments, misplaced modifiers, and awkward construction (e.g., students edit a peer's mistakes in exchanging written drafts or word processor screens)◊

$9.63_{3,4,5,6,7,8,10,11}$ apply rules in compositions and editing relevant to commas, semicolons, quotation marks, and apostrophes to ensure accuracy of expression in student writing ◊

$9.64_{5,6,7,8,10,11}$ apply editing strategies to correct errors in redundancy and faulty subordination (e.g., student writing, advertisements, magazine articles) ◊

$9.65_{2,3,4,5,6,7,8,10,11}$ determine audience for whom a specific piece of writing will be generated to ensure appropriately content and style (e.g., letter of complaint, composition for peers versus teacher)◊

$9.66_{3,4,5,6,7,10,11}$ use prewriting/drafting strategies to generate topic sentences and thesis statements (e.g., brainstorming, mapping outlining, personal journal entries)◊

$9.67_{7,8,10,11}$ use writing strategies to identify and use transitional conjunctions, phrases, clauses, and sentences ◊

$9.68_{2,8,10,11}$ use graphic organizers and other writing strategies to provide logical sequencing of ideas (e.g., diagram of a space, listing of process steps, charts of similarities/differences, inverted pyramid for general to specific, domino arrangement for cause and effect)◊

Study Skills

$9.69_{1,2,3,4,5,6,7,10,11}$ use guide words to locate words in a dictionary ◊

$9.70_{2,3,4,5,6,7,8,10,11}$ determine which number in a dictionary definition best fits the meaning of a word in context ◊

9.71 expand word choices through the use of a thesaurus (e.g., composition revision) ◊

$9.72_{10,11}$ use Bartlett's Familiar Quotations and other resources to select quotations and anecdotes on a variety of topics (e.g., use Bartlett's to select a quotation for use in the beginning paragraph of an essay ◊

9.73 consult Reader's Guide to select a variety of periodical resources relevant to a given topic (e.g., small groups work as teams to seek resources on assigned topics) ◊

9.74$_{8,10,11}$ **use the card catalog or an on-line catalog to retrieve information (e.g., reports, speeches, projects)** ◊

9.75 retrieve information from electronic media (e.g., access the Internet, CD ROM and other technologies as they become available for research purposes) ◊

9.76 use word processing skills to produce a multi-page document (e.g., copy and move text, adjust margins, select justifications, use tools, change fonts, and paginate) ◊

9.77$_{4,8,10}$ **use parts of books (e.g., table of contents or index) to locate information** ◊

9.78$_{10,11}$ **use book's glossary to find the definition of an unfamiliar word** ◊

9.79$_{10}$ **know the parts of a newspaper and locate information in a newspaper** ◊

9.80$_{10}$ **know the parts of a telephone directory and use them to locate information** ◊

9.81$_{10,11}$ **use outlining to organize text and composition information by selecting main points and supporting details (e.g., take notes from a text and organize them in outline form; prewrite an essay in outline form)** ◊

9.82 practice correct use of bibliographic format in research documentation (e.g., compile a bibliography in standard MLA format) ◊

9.83 practice notetaking skills to process and organize information (e.g., listening and recording from teacher or text; interviewing) ◊

9.84 know and respond appropriately to directives in essay prompts (e.g., "compare"/"contrast"; "discuss";" interpret"; "evaluate") ◊

9.85 select appropriate study/review techniques for particular materials (e.g., read headings and transform them into questions) ◊

9.86 apply research skills to daily situations (e.g., use technology to learn about a community event or to make informed career decisions) ◊

9.87 explain the concept of intellectual property (e.g., media copyright laws) ◊

9.88 use memorization techniques to facilitate retention (e.g., mnemonics, acronyms)

9.89 set goals for learning in school and beyond, and review progress in meeting goals ◊

Computer/Technology

9.90 use appropriate software to practice and master ninth grade English language arts instructional objectives

9.91 use a variety of audiovisual and multimedia materials to practice and master ninth grade English language arts instructional objectives

9.92 using a word processor, demonstrate correct keying, editing, and formatting techniques

9.93 use appropriate software to practice and master the five step writing process including prewriting, drafting, editing, revising, and publishing

9.94 use appropriate software to practice and master desktop publishing incorporating text, graphics, and various fonts in a variety of formats

9.95 select and use appropriate technologies to locate and use reference sources

9.96 use graphic software to organize, analyze and present information

9.97 select and use appropriate technologies to create and deliver presentations

9.98 use simulation software for

investigating open-ended problems, formatting questions, and extending problem solving situations

9.99 use simulation software to practice critical thinking and decision making

Grade Ten
English Language Arts

The English Language Arts Ten emphasis will be on the use of written language for educational, occupational, and personal endeavors. Preparation will include critiquing oral presentations and using speaking and listening while reading and writing.
Instructional delivery will be enhanced by computer technology. Frequent interaction with a broadened array of literature will encourage an increased appreciation for the power of the spoken and written word. Testing data will provide direction and focus for prioritizing the instructional objectives that will ensure student mastery.

Listening and Speaking

10.1 review appropriate classroom speaking and listening skills (e.g., asking questions, answering questions and following directions) ◊

10.2 review the listening behaviors prior to a school-wide audience activity (e.g., stay alert, resist distractions, identify the speaker's purpose and adaptation) ◊

10.3 understand principles and values of group discussion (e.g., reaching a decision, soving a problem)

$10.4_{5,6,7,8}$ use interviewing skills of questioning, note taking, exploring, summarizing and roles to explored extend meaning beyond the text ◊

10.5 listen to text containing common errors in standard English usage (e.g., subject verb agreement, double subjects, double negatives, misuse of pronouns, verbs and/or verb tenses) and to identify and correct those errors ◊

10.6 recognize and record common usage errors from daily experiences and analyze the errors for type, extent and audience ◊

$10.7_{5,6,7,8}$ listen to and use context clues to identify meaning of words and/or structures (e.g., malapropisms, oxymorons)

$10.8_{5,6,7,8}$ relate personal experience to information heard to construct new meaning (e.g., watch a television show and compare/contrast the new knowledge with personal experience)

$10.9_{5,6,7,8}$ listen to a speech (e.g., the funeral orations from Shakespeare's Julius Caesar) to identify specific examples of central idea, fact versus opinion and persuasive devices (e.g., human interest, emotional appeal, repetition)

10.10 revise a text from a written to an oral one to show adaptations a writer makes from writing to speaking (e.g., how to paper) ◊

$10.11_{1,2,3,5,6,7,8}$ listen to a speech and analyze adaptations of text from written to oral to include audience, sequence, and style

Reading Comprehension

$10.12_{1,2,3,4,5,6,7,8,9,11}$ **read literary works by national and international authors to include but not limited to novels, drama, short**

story and poetry for cultural literacy, appreciation and application ◊

10.13 **identify and research the influences of historical, cultural and biographical (author) factors in shaping styles and voice of literary works (e.g., group research via Internet or CD-ROM, guest speakers)** ◊

10.14$_{2,3,5,8,9,11}$ **given a variety of selections from the various genres, compare/contrast characteristics of author's style, purpose and tone (e.g., class discussion, panel presentation, newspaper/scrapbook)** ◊

10.15$_{9,11}$ identify common careers found in fiction (novels) and evaluate their desirability ◊

10.16$_{9,11}$ locate and identify literary criticism applicable to the genre being studied by using electronic retrieval systems (e.g., Internet/CD ROM)

10.17$_{9,11}$ evaluate, whenever applicable to the genre being studied, writing samples from the local community (e.g., brochures, editorials, poetry, community history)

10.18 classify texts according to various reading purposes (e.g., literary experience, information and task performance) ◊

10.19$_{5,8,9}$ **use graphic organizers such as webbing/charting to show important ideas and relationships of ideas (e.g., read three poems by an author to identify commonalities)** ◊

10.20$_{4,6,7,8,9}$ **differentiate between fact and opinion in text (e.g., review of a cultural event)** ◊

10.21$_{9,11}$ **classify information in text as necessary or unnecessary to understanding the selection (e.g., review advertisements, brochures, and schedules to determine necessary information)** ◊

10.22$_{11}$ **determine point of view in expository text (e.g., compare/contrast the differences between author/subject in two or more newspaper editorials)** ◊

10.23$_{5,8,9,11}$ **make generalizations from implicit ideas (e.g., trace the implicit ideas that lead to a surprise ending in a short story such as those of O'Henry or Saki)** ◊

10.24$_{2,3,5,9}$ **read directions necessary to sequentially perform a task, then perform the task** ◊

10.25$_{9,11}$ **after locating specific information in a text, classify the information as necessary or unnecessary to understanding the text (e.g., essential facts versus supplementary description, value of a figure of speech, author's biographical background/experience)** ◊

10.26$_{K,5,8,9}$ **create an illustration/graphic organizer to demonstrate the importance of and relationship between ideas** ◊

10.27$_{2,3,4,5,6,7,8,9,11}$ **continue to use context clues to establish word meaning** ◊

10.28$_{3,7,8,9,11}$ **by analyzing content and structure, identify the source of a piece of text by analyzing content and structure (e.g., exposition versus persuasive essay, author/genre advertisement, biographical dictionary)** ◊

10.29$_{3,7,8,9,11}$ **compare/contrast types of texts, according to content, structure, and tone (e.g., exposition versus persuasion as in technical manual, almanac, advertisement, and literary genre)** ◊

10.30$_{11}$ **properly follow a specific set of instructions (e.g., following directions on a test)** ◊

10.31$_{3,6,8,9,11}$ **make decisions by comparing facts** ◊

10.32$_{11}$ **infer ideas from literature and**

exposition ◊

10.33$_{7,8,9,11}$ **recognize persuasive language and techniques (e.g., in particular propaganda in advertising)** ◊

Reading Vocabulary

10.34$_{2,3,4,5,6,7,8,9,11}$ **select vocabulary that is vivid, precise, and economical for oral and written communication including real life situations, using a variety of resources (e.g., thesaurus, dictionary, computer)** ◊

10.35$_{9,11}$ **expand specialized vocabulary commonly used in content areas through reading and writing in progressive levels of instructional materials** ◊

10.36$_{9,11}$ **show how words can function in different uses in oral and written communication including real life situations (e.g., Jim (noun/subject) is my friend, my friend is Jim (predicate nominative)** ◊

10.37$_{2,3,4,5,6,7,8,9,11}$ **recognize the multiple meanings of words in the context of oral and written communication including real life situations (e.g., short story, speech, conversation)** ◊

10.38$_{2,3,4,5,6,7,8,9,11}$ **recognize and understand the function of antonyms, synonyms, homonyms, homophones, and homographs in oral and written communication and real life situations** ◊

Writing Skills

10.39 use writing strategies to address specific writing purposes (e.g., narrative, descriptive, informative and persuasive) in paragraphs or compositions ◊

10.40 use writing strategies to write for audiences including peers, teachers, and employers (e.g., formal versus informal/informational versus conversational) ◊

10.41 use prewriting strategies to generate topics and plan approaches to writing tasks (e.g., brainstorming, mapping, outlining) ◊

10.42 use drafting strategies for all specific writing tasks (e.g., rough draft all paragraphs, essays, book reports) ◊

10.43$_{4,7}$ **use a writing prompt to develop a composition that contains a beginning, middle, and end** ◊

10.44$_{4,7}$ **develop a composition that addresses the assigned topic with a clearly worded thesis statement which is supported by relevant details** ◊

10.45$_{4,7}$ **develop a composition that is focused and coherent and has a clear, logical progression of ideas (e.g., spatial order in a descriptive essay/chronological order in a process essay)** ◊

10.46$_{4,7}$ **use and identify different transitional devices (e.g., introductory and internal transitional phrases/conjunctions)** ◊

10.47$_{4,7}$ **develop a composition that demonstrates variation in sentence structure** ◊

10.48$_{4,7}$ **develop a composition where word choice is vivid, precise, and economical** ◊

10.49$_{4,7}$ **develop a composition in which errors in standard written English usage and mechanics (e.g., punctuation, spelling, capitalization) do not occur** ◊

10.50 use revision and editing strategies to delete or correct errors in organization, content, usage, mechanics, and spelling (e.g., write-re-write) ◊

10.51 demonstrate competence in penmanship and keyboarding/word processing in the writing process to produce a

clear, legible product ◊

10.52 use electronic editing tools and traditional editing strategies (e.g., symbols, dictionaries) for words not detected by electronic tools in computer generated work (e.g., proper names [in, inn] [homographs]) ◊

Spelling

10.53 **recognize and understand the social, cultural, technical/media influences on the evolution of word origins (e.g., from technology, mythology, foreign language) ◊**

10.54 **apply rules to the spelling and pronunciation of affixes (prefixes and suffixes) in communications, both academic and real life (e.g., numeric (mono, bi, tri); negation (non, un); degrees of comparison (er, est, less); directional (trans, inter, intra) ◊**

10.55 **expand pronunciation and spelling skills to include specialized vocabulary commonly used in content areas (e.g., algae) ◊**

10.56 **apply rules to the pronunciation and spelling of homophonic consonant and vowel sounds in communications both academic and real life (e.g., context clues; editing process; phonetic principles "ph" for "f"; "ee" for "ea") ◊**

10.57 **apply rules to the pronunciation and spelling of inflectional endings in communications both academic and real life (e.g., tion, ly, ing) ◊**

10.58 **students will use a variety of resources and strategies to ensure choices of pronunciation and spelling (e.g., dictionary, spell check, thesaurus) ◊**

Language

10.59$_{1,2,3,5,6,7,8,11}$ **recognize content and organizational strategies that identify supporting sentences and paragraphs (e.g., example/illustration, personal anecdote, extended definition, analogy)◊**

10.60$_{7,8,9,11}$ **recognize content and organizational strategies that identify transitional devices (e.g., repetition of key words and sentences/sentence links, in particular contrast, cause-effect, addition, time, and person/place/thing relationships)◊**

10.61$_{3,4,5,6,7,9,11}$ **recognize content and organizational strategies to identify topic sentences and thesis statements (e.g., placement, figurative or literal, singular or multiple focus, implied versus stated)◊**

10.62$_{7,8,11}$ **recognize descriptive language (e.g., connotation, repetition, sensory language [imagery], figurative language [personification, metaphor, apostrophe], symbolism, musical effect)◊**

10.63$_{1,2,3,4,5,6,7,8,9}$ **use capitalization rules to generate sentences containing correct capitalizations of proper/common nouns, proper adjectives, direction as a region, and titles of people (e.g., students generate incorrect sentences to be corrected by peers)◊**

10.64$_{3,4,5,6,7,8,9}$ **use punctuation rules to recognize and correct sentences with errors in use of commas as interrupters; apostrophes with possessives; quotation marks with dialogue; colons with lists; semicolons between independent clauses; and commas with appositives (e.g., in a student-generated composition that includes usage of all these skill areas,**

peers identify and edit errors)◇

10.65$_{1,2,3,4,5,7,8,9}$ **use correct verb tense by recognizing appropriate situations for tense shifts (e.g., rewrite a paragraph in a different tense)**◇

10.66$_{7,8}$ **recognize and correct errors in subject/verb agreement with emphasis on indefinite pronouns** ◇

10.67$_{8,9}$ **correct errors in parallel structure in paragraphs and compositions (e.g., student work, newspaper articles, editorials)**◇

10.68$_{5,6,7,8,9}$ **correct errors in redundancy in paragraphs and compositions (e.g., student work)**◇

10.69$_{7,8,9}$ **correct errors of misplaced modifiers in sentences and paragraphs, (e.g., advertisements)**◇

10.70$_{2,3,4,5,6,7,8,9}$ **recognize the specific audience for whom a piece of writing has been generated (e.g., letter of job application/scholarship application, essay, personal letter)**◇

Study Skills

10.71$_{1,2,3,4,5,6,7,9,11}$ **use guide words to locate increasingly more difficult words in a dictionary (e.g., two-part words, foreign terms/phrases, archaic words)** ◇

10.72 **determine which word choice in a dictionary entry that best fits the shades of meaning implied in the context of a given sentence** ◇

10.73 expand word choices through the use of a thesaurus (e.g., revise compositions with more vivid word choices) ◇

10.74$_{9,11}$ **use Bartlett's Familiar Quotations and other resources to select quotations and/or anecdotes on a variety of topics (e.g., reference a quotation to introduce a speech or composition)** ◇

10.75 consult the Reader's Guide to select a variety of periodical resources relevant to a given topic (e.g.,individual student assignment to seek resources on assigned topics) ◇

10.76$_{8,9,11}$ use the card catalog or an on-line catalog system to retrieve information (e.g., reports, projects, speeches) ◇

10.77 retrieve information from electronic media for research purposes (e.g., access Internet, CD ROM and other technologies as available) ◇

10.78 apply word processing skills to produce a multi-page document (e.g., copy and move text, adjust margins, select justifications, use tools, change fonts, and paginate) ◇

10.79$_{4,8,9}$ **use parts of books to locate information (e.g., table of contents, index)** ◇

10.80$_{9,11}$ **use the glossary of a book to find the definition of an unfamiliar word (e.g., allusions, technical terms)** ◇

10.81$_{9}$ **know the parts of a newspaper and a telephone directory to locate information** ◇

10.82$_{9}$ **use outlining to organize text and information by selecting main points and supporting details (e.g., take notes from a text and organize them in outline form; prewrite an essay)** ◇

10.83 practice correct use of bibliographic format in research documentation (e.g., compile an annotated bibliography in standard MLA format) ◇

10.84 practice note taking skills to process and organize information (e.g., listening and recording from video tapes, film strips, audio tapes) ◇

10.85 know the respond appropriately to directives in essay prompts (e.g., "analyze", "interpret",

synthesize") ◊

10.86 use appropriate study/review techniques for given materials (e.g., paraphrase, paragraphs, mnemonics) ◊

10.87 apply research skills to daily situations (e.g., use technology to make informed career decisions) ◊

10.88 explain the concept of intellectual property in all media, as it is protected by copyright laws (e.g., integrity of the research process; video copyright restrictions) ◊

10.89 set goals for learning in school and beyond, and review progress in meeting goals ◊

Computer/Technology

10.81 use appropriate software to practice and master tenth grade English language arts instructional objectives

10.82 use a variety of audiovisual and multimedia materials to practice and master tenth grade English language arts instructional objectives

10.83 using a word processor, demonstrate correct keying, editing, and formatting techniques

10.84 use appropriate software to practice and master the five step writing process including prewriting, drafting, editing, revising, and publishing

10.85 use appropriate software to practice and master desktop publishing incorporating text, graphics, and various fonts in a variety of formats

10.86 select and use appropriate technologies to locate and use reference sources

10.87 use graphic software to organize, analyze and present information

10.88 select and use appropriate technologies to create and deliver presentations

10.89 use simulation software for investigating open-ended problems, formatting questions, and extending problem solving situations

10.90 use simulation software to practice critical thinking and decision making

Grade Eleven English Language Arts

In English Language Arts Eleven, fundamental literary and communication skills are refined and enhanced. Indeed, English Language Arts Eleven represents another leap in academic rigor and depth. In addition, career formalization, including college entrance exam preparation and workplace readiness skills, becomes a primary focus. Student proficiency will be diagnosed to determine instructional priorities. As the need for challenging research skills becomes more vital, the incorporation of technology will be emphasized.

Listening and Speaking

$11.1_{1,2,3,4,5,6,7,8,9,10}$ review appropriate classroom speaking and listening skills (e.g., asking questions, answering questions, following directions) ◊

$11.2_{1,2,3,4,5,6,7,8,9,10}$ prior to a school-wide audience activity, review listening behaviors (e.g., stay alert, resist distractions, identify speaker's purpose and adapt to it) to become a responsible audience member ◊

11.3 identify barriers to listening and generate methods to overcome them ◊

$11.4_{5,6,7,8}$ compare and contrast shared personal cultural experiences

with information gathered from resources in the media center ◊

11.5 listen and respond to the sensory appeal of poetry with any medium of personal expression (e.g., art/illustration, music, response journal)

11.6_{10} practice efficient notetaking skills with careful attention to identifying purpose, main ideas/key facts, overall themes in order to synthesize information into a well-developed essay ◊

11.7 determine purpose, appropriate usage and audience by listening to a variety of formal, informal and colloquial discourse ◊

$11.8_{2,3,4,5,6,7,8,10}$ identify various speaking techniques used to influence an audience through emotional appeal (propaganda, bias, distortion) by listening to vehicles from the media (e.g., news broadcasts, commercials, public addresses) ◊

11.9 demonstrate questioning and critical thinking skills in a structured class discussion of literary topics and/or cultural connections ◊

11.10 analyze, interpret and evaluate a literary selection via some group activity (e.g., panel group discussion)

11.11 utilize effective argumentation techniques in a formally prepared and rehearsed speech delivered to the class ◊

11.12 interview primary sources as part of the research process ◊

11.13 project shifts in cultural trends from the present to the future (21st Century) and demonstrate through oral presentation (e.g., discussion, panel presentation, role play) ◊

11.14 recognize speaking styles appropriate to the given audience and deliver oral presentation accordingly ◊

Reading Comprehension

$11.15_{1,2,3,4,5,6,7,8,9,10,11}$ read literary works by national and international authors to include, but not be limited to novels, drama, short story, poetry, and nonfiction for cultural literacy, appreciation and application ◊

11.16 research, analyze and evaluate the influences of historical, cultural and biographical (author) factors in shaping styles and voice of literary works (e.g., independent analysis of historical documents, periodicals and appropriate resources) ◊

11.17 analyze and evaluate characteristics of author's style and purpose given a variety of selections from the various genres (e.g., written character analysis or critique) ◊

11.18 examine the effects of technical and stylistic components in an author's work(s) in determining literary merit (e.g., write a feature article or critical review) ◊

11.19 read examples of various genres written by a single author and compare/contrast style and literary merit (e.g., read a passage from Twain's Huckleberry Finn, Twain's epigrams, and his "The Celebrated Jumping Frog of Calaveras County")

11.20 read a piece written in one format and, retaining theme and author's intent, rewrite it in a different genre (e.g., reproduce "The Pit and the "Pendulum" as a poem or

"Stopping by the Woods on a Snowy Evening" as a descriptive essay) ◊

11.21 compare/contrast the style, content, merit and impact of a literary piece produced in various forms of media (e.g., evaluate The Great Gatsby as a novel and as a film; conduct a debate with the "author" versus the "director")

$11.22_{9,10}$ identify common careers found in nonfiction and fictional works and evaluate their desirability ◊

$11.23_{9,10}$ locate and identify literary criticism applicable to the genre being studied by using electronic retrieval systems (e.g., Internet/CD ROM)

$11.24_{9,10}$ evaluate, whenever applicable to the genre being studied, writing samples from the local community (e.g., brochures, editorials, poetry, community history)

11.25 **demonstrate use of reading strategies necessary for various reading purposes (e.g., literary experience, information and task performance) ◊**

$11.26_{3,4,5,6,7,8,9,10}$ **draw conclusions substantiated by text, (e.g., read an educational catalog and determine the desirability of attending that school) ◊**

$11.27_{6,8,9,10}$ **infer implicit ideas and draw conclusions during the act of reading (e.g., using historical journal articles, speeches or statistical data) ◊**

$11.28_{K,3,5,6,7,8,9}$ **interpret character traits based on the context of the entire story (e.g., the roles of Willie Lowman, Hester Prynne, Richard Cory)**

$11.29_{K,8,9,10}$ **make generalizations from implicit ideas (e.g., first paragraph of The Declaration of Independence) ◊**

$11.30_{9,10}$ **identify consequences for not properly following a specific set of instructions (e.g., applying for a job, college, or financial aid or following directions on a test) ◊**

$11.31_{9,10}$ **locate specific information in a text, classifying the information as necessary or unnecessary to understanding the text (e.g., essential facts versus supplementary description, value of an author's imagery, author's biographical background/experience) ◊**

$11.32_{K,5,8,9,10}$ **create a graphic organizer to show important ideas in text◊**

$11.33_{2,3,4,5,6,7,8,9,10}$ **continue to use context clues to establish word meaning ◊**

$11.34_{3,7,8,9,10}$ **identify the type or genre of a text by analyzing content, language, and style (e.g., expository versus persuasive essay, author/genre, advertisement, biographical dictionary) ◊**

$11.35_{9,10}$ **recognize the organizational pattern of expository text (e.g., process, comparison/contrast, classification, cause-effect, narrative) ◊**

$11.36_{3,7,8,9,10}$ **continue to compare/contrast types of texts, according to content, structure, and tone (e.g., Puritan poetry versus free verse poetry, author/genre, expository versus persuasive) ◊**

$11.37_{5,8,10}$ **identify a particular author's work and recognize the use of tone (e.g., Mark Twain's use of humor, Jonathan Edwards' religious fervor, Frederick Douglass's advocacy)**

11.38$_{3,8,9,10}$ continue to differentiate between fact and opinion in order to make decisions by comparing facts (e.g., consumer magazines, travel brochures, letters to the Editor) ◊

11.39$_{2,3,9,10}$ differentiate between human interest elements and hard fact/opinion in a text (e.g., subjective versus objective news reporting as in human interest versus straight news story) ◊

11.40$_{10}$ continue to determine point of view in expository text (e.g., objective versus subjective, first/second/third person, omniscient versus episodic) ◊

11.41$_{7,8,9,10}$ recognize persuasive language and techniques (e.g., authority of speaker, special interest bias, propaganda in advertising)

11.42$_{5,6,8,9,10}$ interpret various literary devices and techniques, in particular, figurative language (e.g., personification, archetypes, allegorical patterns) ◊

11.43$_{3,4,5,6,,8,9}$ continue to practice different reading strategies, in particular skimming for overall understanding and scanning for keywords and ideas (e.g., Reader's Guide listings, chronology of events, captioned illustrations) ◊

Reading Vocabulary

11.44$_{2,3,4,5,6,7,8,9,10}$ select vocabulary that is vivid, precise, and economical for oral and written communication including daily situations, using a variety of resources (e.g., thesaurus, dictionary, computer) ◊

11.45$_{9,10}$ expand specialized vocabulary commonly used in content areas through reading and writing in progressive levels of instructional materials ◊

11.46$_{9,10}$ identify and demonstrate how words can function in different uses in oral and written communication including daily situations and formal writing (e.g., John finished his science fair project [noun/direct object]; Economists project [verb] an increase in retail sales) ◊

11.47$_{2,3,4,5,6,7,8,9,10}$ compare and contrast the multiple meanings of words in the context of oral and written communication including daily situations (e.g., short story, speech, conversation)

11.48$_{2,3,4,5,6,7,8,9,10}$ discriminate between antonyms, synonyms, homonyms, homophones, and homographs

Writing

11.49 use writing strategies to develop text to address specific writing purposes, to include, but not be limited to, narrative, informative, persuasive and poetical ◊

11.50 adapt a short piece of text to multiple audiences (e.g., peers, teachers, general public) ◊

11.51 use a writing prompt to experiment with point of view (e.g., distance between the writer and his/her subject) ◊

11.52 identify rhetorical devices (e.g., parallel structure, antithesis, an appeal to emotion) ◊

11.53 identify types of written propaganda (e.g., bandwagon, plain folk, and testimonials)◊

11.54 develop a personal style and voice in student's writing (e.g., gender, humor, sentence patterns) ◊

11.55 identify and begin to use more subtle forms of transition in a composition (e.g., sentence links, repetition of key words or sentences) ◊

11.56 select a prose quotation and use it correctly in a piece of writing ◊

11.57 write an analysis of a poem, short story, novel, or play using terminology and characteristics of the genre ◊

11.58 write a letter of application with a resume ◊

11.59 produce an informative or persuasive research paper following a style sheet (MLA, APA, or teacher generated) ◊

11.60 demonstrate competence in word processing and, when possible, desktop publishing in the publication of written text ◊

$11.61_{4,7,10}$ produce written text in which errors in standard written English usage and mechanics (punctuation, spelling, capitalization) do not occur ◊

11.62 use traditional editing strategies (e.g., symbols, dictionaries) for words not detected by electronic editing devices in computer generated work (e.g., proper names, in inn [homohyms]) ◊

Spelling

11.63 **recognize and understand the social, cultural, technical/media influences on the evolution of word origins (e.g., from technology, mythology, foreign language)** ◊

11.64 **apply rules to the spelling and pronunciation of (prefixes and suffixes in communications (e.g., numeric [mono-, bi-, tri-] ; negation [non, un]; degrees of comparison [er, est-, less]; directional [trans-, inter-, intra]** ◊

11.65 **expand pronunciation and spelling skills to include specialized vocabulary commonly used in content areas (e.g., algae)** ◊

11.66 **apply rules to the pronunciation and spelling of homophonic consonant and vowel sounds in communications (e.g., context clues; editing process; phonetic principles "ph" for "f"; "ee" for "ea")** ◊

11.67 **apply rules to the pronunciation and spelling of inflectional endings in communications both academic and real life (e.g.,-tion, -ly, -ing)** ◊

11.68 use a variety of resources and strategies to ensure choices of pronunciation and spelling (e.g., spell check, thesaurus) ◊

Language

$11.69_{1,2,3,4,5,6,7,8,9,10}$ **evaluate written text and correct for errors in capitalization (e.g., proper/common nouns, proper adjectives, direction as region, and titles of people)** ◊

$11.70_{4,5,6,7,8,9,10}$ **use punctuation rules to recognize and correct sentences with errors in use of commas as interrupters; apostrophes with possessives; quotation marks with dialogue; colons with lists; semicolons between independent clauses, and commas with appositives (e.g., in a student-generated composition which includes usage of all these skill areas, peers identify and edit errors, where necessary)** ◊

$11.71_{1,2,3,4,5,7,8,9,10}$ **use correct verb tense by recognizing appropriate situations for tense shifts (e.g., write a paragraph composition to illustrate correct tense)** ◊

$11.72_{7,8,10}$ **recognize and correct errors in subject/verb agreement with emphasis on indefinite pronouns (e.g., within a composition,**

indefinite pronouns for various nouns functioning as subjects and change verbs, appropriately) ◇

11.73$_{8,9}$ **correct errors in parallel structure in paragraphs and compositions (e.g., student work, newspaper articles, editorials) ◇**

11.74$_{5,6,7,8,9,10}$ **correct errors in redundancy in paragraphs and compositions (e.g., student work, newspaper articles and editorials) ◇**

11.75$_{7,8,9}$ **correct errors of misplaced modifiers in sentences, paragraphs, and essays (e.g., advertisements, student essays, articles) ◇**

11.76$_{2,3,4,5,6,7,8,9,10}$ **recognize the specific audience for whom a piece of writing has been generated (e.g., letter of job application/scholarship application, essay, personal letter) ◇**

11.77$_{1,2,3,5,6,7,8,10}$ **use content and organizational strategies to identify supporting sentences and paragraphs (e.g., example/illustration, personal anecdote, extended definition, analogy) ◇**

11.78$_{7,8,9,10}$ **use content and organizational strategies to identify transitional devices (e.g., repetition of keywords and sentences; sentence links; particular relationships in contrast, cause-effect, time, and person/place/thing relationships) ◇**

11.79$_{3,4,5,6,7,9}$ **use content and organizational strategies to identify topic sentences and thesis statements (e.g., placement, figurative or literal, singular or multiple focus, implied versus stated) ◇**

11.80$_{7,8,10}$ **analyze text for the use of descriptive language (e.g., connotation, repetition, sensory language [imagery], figurative language [personification, metaphor, apostrophe], symbolism, musical effect) ◇**

Study Skills

11.81 develop a sound notetaking skill that can be applied to classroom, library, interview and other life circumstances ◇

11.82$_{8,9,10}$ **identify the role and function of the library/media center including all electronic retrieval systems (e.g., CD ROM Reader's Guide and card catalog, encyclopedia, Internet) (uses cross referencing while gathering information for a research topic) ◇**

11.83 identify copyright and plagiarism laws in the editing process ◇

11.84 **judge the reliability of sources for bias and authority ◇**

11.85$_{9,10}$ **demonstrate the ability to use the dictionary by using guide words to locate a dictionary entry and identify the best definition for the word's context ◇**

11.86$_{9,10}$ **demonstrate the ability to use a variety of reference sources (e.g., thesaurus, Bartlett's Familiar Quotations, atlas, almanac, specialized dictionaries, and the glossaries) ◇**

11.87 follow a style sheet (e.g., MLA, APA, teacher-generated) ◇

11.88$_{10}$ **collect and organize information through systematic note taking and outlining ◇**

11.89 use available primary sources when gathering information, taking into consideration the motives and perspective of those sources ◇

11.90 consult various career sources

(e.g., Occupational Outlooks Handbook, community resources, college/training center catalogs) ◊

11.91 set goals for learning in school and beyond, and review progress in meeting goals ◊

Computer/Technology

11.92 use appropriate software to practice and master eleventh grade English language arts instructional objectives

11.93 use a variety of audiovisual and multimedia materials to practice and master eleventh grade English language arts instructional objectives

11.94 using a word processor, demonstrate correct keying, editing, and formatting techniques

11.95 use appropriate software to practice and master the five step writing process including prewriting, drafting, editing, revising, and publishing

11.96 use appropriate software to practice and master desktop publishing incorporating text, graphics, and various fonts in a variety of formats

11.97 select and use appropriate technologies to locate and use reference sources

11.98 use graphic software to organize, analyze and present information

11.99 select and use appropriate technologies to create and deliver presentations

11.100 use simulation software for investigating open-ended problems, formatting questions, and extending problem solving situations

11.101 use simulation software to practice critical thinking and decision making

Grade Twelve
English Language Arts

English Language Arts Tweleve provides focus and polish in personal goals and academic proficiency. Experiences such as a senior project or a sophisticated persuasive research paper should culminate the twelve-year career. Readiness for the work place or post secondary education is the final reality check. The expansion and appreciation of language and literature is the focus of the senior year. Shakespeare can speak to students, but the anxiety of an uncertain future haunts them.

Listening and Speaking

12.1 review appropriate classroom speaking and listening skills (e.g., asking questions, answering questions, following directions) ◊

$12.2_{5,6,7,8}$ continue to develop skills in recognizing and overcoming barriers to listening in a variety of large and small group, formal and informal settings (e.g., absence of modulation in voice, the speaker's pace, poor enunciation, physical behaviors or obstacles) ◊

$12.3_{1,2,3,4,5,6,7,8}$ continue to adapt/apply listening skills in order to interpret a variety of situations (e.g., note taking, interview, broadcast media including television, radio, CD ROM, Internet, and live oral performance) ◊

$12.4_{2,3,4,5,6,7,8}$ continue to identify organizational patterns and interpret messages in narrative,

informational, and persuasive contexts (e.g., fact vs. opinion, propaganda, bias, and emotional appeal) ◊

12.5 understand the difference between argumentation and debate (e.g., structure, organization, research, presentation) ◊

$12.6_{1,2,3,4,5,6,7,8}$ continue to adapt/apply speaking skills in order to participate in a variety of situations (e.g., panel/group discussion, debate, telephone/teleconference, interview, oral report) ◊

$12.7_{1,2,3,4,5,6,7}$ continue to broaden speaking skills by editing and correcting usage according to conventional Standard English, distinguishing dialectal, colloquial, and slang variations (e.g., comparing a local news anchor person's pronunciation to a national news anchor's standard delivery, "shuck" versus "husk" corn, accepted use of slang expressions) ◊

Reading Comprehension

$12.8_{1,2,3,4,5,6,7,8,9,10,11}$ read literary works by national and international authors to include, but not be limited to, novels, drama, short story, poetry and nonfiction for cultural literacy, appreciation and application ◊

12.9_{11} research, analyze, and evaluate the influences of historical, cultural and biographical (author) factors in shaping styles and voice of two literary works to compare and contrast them (e.g., independent analysis of historical documents, periodicals, and appropriate resources) ◊

12.10_{11} analyze and evaluate characteristics of author's style and purpose given a variety of selections from the various genres (e.g., written character analysis or critique) ◊

12.11_{11} examine the effects of technical and stylistic components in an author's work(s) in determining literary merit (e.g., write a feature article or critical review) ◊

12.12_{11} read examples of various genres written by a single author and compare/contrast style and literary merit (e.g., read the play Murder in the Cathedral and "The Love Song of Alfred Prufrock" by T.S. Elliot)

12.13_{11} read a piece written in one format and, retaining theme and author's intent, rewrite it in a different genre (e.g., reproduce Hamlet as an epic poem; rewrite Yeat's "The Lake Isle of Innisfree" as a descriptive essay) ◊

12.14_{11} compare/contrast the style, content, merit and impact of a literary piece produced in various forms of media (e.g., evaluate Wuthering Heights as a novel and as a film; conduct a debate with the "author" versus the "director") ◊

$12.15_{9,10,11}$ identify common careers found in nonfiction and fictional works ◊

$12.16_{9,10,11}$ locate and identify literary criticism applicable to the genre being studied by using electronic retrieval system (e.g., Internet/CD ROM) ◊

$12.17_{9,10,11}$ evaluate, whenever applicable to the genre being studied, writing samples from the local community (e.g., brochures, editorials, poetry, community history) ◊

12.18 demonstrate and apply use of reading strategies necessary for various reading purposes (e.g., literary experience, information, and task performance) ◊

$12.19_{3,4,5,6,7,8,9,10,11}$ draw conclusions substantiated by text (e.g., read two educational catalogs to determine which offers the best program of study for a particular career choice ◊

$12.20_{6,8,9,10,11}$ recognize implicit

ideas and draw, conclusions during the act of reading (e.g., using historical journal articles, speeches or statistical data) ◊

12.21$_{K,3,5,6,7,8,9,11}$ interpret character traits based on the context of the entire story (e.g., the roles of Lady Macbeth, Heathcliff, Beowulf)

12.22$_{K,8,9,10,11}$ make generalizations from implicit ideas (e.g., Francis Beacon's "Of Studies" and its relevance to study skills today) ◊

12.23$_{9,10,11}$ recognize consequences for not following a specific set of instructions (e.g., scholarship, financial aid applications, selective service and voter registration) ◊

12.24$_{9,10,11}$ locate specific information in a text ,classifying the information as necessary or unnecessary to understanding the text (e.g., essential facts versus supplementary description, value of an author's imagery author's biographical background/experience ◊

12.25$_{K,5,8,9,10}$ create graphic organizers to compare and contrast ideas within text ◊

12.26$_{2,3,4,5,6,7,8,9,10,11}$ continue to use context clues to establish word meaning ◊

12.27$_{3,7,8,9,10,11}$ identify the type or genre of a text, by analyzing content, language, and style (e.g., expository versus persuasive essay, author/genre, advertisement biographical dictionary) ◊

12.28$_{9,10,11}$ analyze the organizational pattern of expository text (e.g., process, comparison/contrast, classification, cause effect narrative ◊

12.29$_{3,7,8,9,10,11}$ continue to compare/contrast types of texts, according to content, structure, and tone (e.g., blank verse, free verse, authorization, expository versus persuasive) ◊

12.30$_{5,8,10,11}$ analyze a particular author's, use of tone (e.g., A. E. Housman's use of humor, O'Henry's use of irony, Jonathan Swift's use of satire)

12.31$_{3,8,9,10,11}$ continue to differentiate between fact and opinion in order to make decisions by comparing facts (e.g., college pamphlets, military recruitment brochures, junk mail advertising) ◊

12.32$_{2,3,9,10,11}$ differentiate between human interest elements and hard fact/opinion in a text (e.g., subjective versus objective news reporting as in human interest versus straight news story) ◊

12.33$_{10,11}$ continue to determine point of view in expository text (e.g., objective versus subjective, first/second/third person, omniscient versus episodic) ◊

12.34$_{8,8,9,10,11}$ interpret persuasive language and techniques (e.g., authority of speaker, special interest bias, propaganda in advertising) ◊

12.35$_{5,6,8,9,10,11}$ interpret various literary devices and techniques, in particular, figurative language (e.g., personification, archetypes, allegorical patterns) ◊

12.36$_{3,4,5,6,8,9,11}$ continue to practice different reading strategies, in particular, skimming for overall understanding and scanning for keywords and ideas (e.g., yellow pages, classified job ads, headline of a newspaper) ◊

Reading Vocabulary

12.37$_{2,3,4,5,6,7,8,9,10,11}$ select vocabulary that is vivid, precise, and economical for oral and written communication including real life situations, using a variety of resources (e.g., personalized word bank) ◊

12.38$_{9,10,11}$ expand specialized vocabulary commonly used in content areas through reading and writing in progressive levels of instructional materials ◊

12.39$_{9,10,11}$ use words to function as different parts of speech in oral and written communication including daily situations (e.g., my wants exceed my reach [noun]; I can reach [verb] any goal) ◊

12.40$_{2,3,4,5,6,7,8,9,10,11}$ internalize the multiple meanings of words in the context of oral and written communication including daily situations (e.g., short story, speech, conversation) ◊

12.41$_{2,3,4,5,6,7,8,9,10,11}$ apply the concepts of antonyms, synonyms, homonyms, homophones, and homographs ◊

Writing

12.42 use writing strategies to develop text to address specific writing purposes to include, but not be limited to, narrative, informative, persuasive, research, and creative works ◊

12.43 write a short piece of text to multiple audiences (e.g., peers, teachers, general public) ◊

12.44 use a writing prompt to illustrate various points of view (e.g., limited or omniscient) ◊

12.45 identify and use rhetorical devices (e.g., parallel structure, antithesis, an appeal to emotion) ◊

12.46 identify and correct types of fallacious reasoning (e.g., red herring, circular reasoning, either/or reasoning) ◊

12.47 develop a personal writing with appropriate style voice direction, and sentencing ◊

12.48 use more subtle forms of transition in a composition (e.g., sentence links, repetition of key words or sentences) ◊

12.49 select various types of quotations and use them correctly in writing (e.g., prose, poetry, drama) ◊

12.50 write an analysis of a poem, short story, novel, or drama using terminology and characteristics of the genre ◊

12.51 write and send a letter of application with a resume ◊

12.52 produce a persuasive research paper following a style sheet (MLA, APA, or teacher generated) or a senior project ◊

12.53 demonstrate competence in word processing and desktop publishing in the publication of written text

12.54$_{4,7,10}$ produce written text in which errors in standard written English usage and mechanics (punctuation, spelling, capitalization) do not occur

12.55 use electronic editing and traditional editing strategies (e.g., symbols, dictionaries) to correct spelling errors (e.g., proper names, in/inn [homonyms])

Spelling

12.56 recognize and understand the social, cultural, technical/media influences on the evolution of word origins (e.g.,from technology, mythology, foreign languages) ◊

12.57 apply rules to the spelling and pronunciation of affixes (prefixes and suffixes in communications, both academic and real life (e.g., numeric [mono-, bi-, tri-]; negation [non-, un-]; degrees of comparison [-er, -est, -less]; directional [trans-, inter-, intra-]) ◊

12.58 expand pronunciation and spelling skills to include specialized vocabulary commonly used in content areas (e.g., algae) ◊

12.59 apply rules to the pronunciation and spelling of homophonic consonant and vowel sounds in communications both academic and real life (e.g., context clues; editing process; phonetic principles "ph" for "f"; "ee" for "ea") ◊

12.60 apply rules to the pronunciation and spelling of inflectional endings in communications both

academic and daily (e.g.,- tion,- ly,- ing) ◊

12.61 will use a variety of resources and strategies to ensure choices of pronunciation and spelling (e.g., spell check, thesaurus) ◊

Language

$12.62_{1,2,3,4,5,6,7,8,9,10,11}$ use capitalization rules to generate sentences containing correct capitalization of proper/common nouns, proper adjectives, direction as region, and titles of people (e.g., students generate incorrect sentences to be corrected by peers) ◊

$12.63_{3,4,5,6,7,8,9,10,11}$ use punctuation rules to recognize and correct sentences with errors in use of commas as interrupters, apostrophes with possessives; quotation marks with dialogue; colons with lists; semicolons between independent clauses, and commas with appositives (e.g., in a student generated composition which includes usage of all these skill areas, peers identify and edit errors, where necessary) ◊

$12.64_{1,2,3,4,5,7,8,9,10,11}$ verb tense by recognizing appropriate situations for tense shifts (e.g., rewrite a paragraph/composition to illustrate correct tense shift) ◊

$12.65_{7,8,10,11}$ recognize and correct errors in subject/verb agreement with emphasis on indefinite pronouns (e.g., take a composition, substitute a variety of indefinite pronouns for a variety of nouns functioning as subjects and change verbs, where appropriate, to agree) ◊

$12.66_{8,9}$ correct errors in parallel structure in paragraphs and compositions (e.g., student work, newspaper articles, editorials) ◊

$12.67_{5,6,7,8,9}$ correct errors in redundancy in paragraphs and compositions (e.g., student work, newspaper articles, editorials) ◊

$12.68_{7,8,9}$ correct errors of misplaced modifiers in sentences, paragraphs, and essays paragraphs (e.g., advertisements, student essays, articles) ◊

$12.69_{2,3,4,5,6,7,8,9}$ recognize the specific audience for whom a piece of writing has been generated (e.g., letter of job application/scholarship application, essay, personal letter) ◊

$12.70_{1,2,3,5,6,7,8,11}$ use content and organizational strategies to identify supporting sentences and paragraphs (e.g., example/illustration, personal anecdote, extended definition, analogy) ◊

$12.71_{7,8,9,10,11}$ use content and organizational strategies to identify transitional devices (e.g., repetition of keywords and sentences; sentence links, in particular relationships in contrast, cause-effect, time, and person/place/thing relationships) ◊

$12.72_{3,4,5,6,7,9,11}$ use content and organizational strategies to identify and use topic sentences and thesis statements (e.g., placement, figurative or literal, singular or multiple focus, implied versus stated) ◊

$12.73_{7,8,10,11}$ recognize descriptive language (e.g., connotation, repetition, sensory language [imagery], figurative language [personification, metaphor, apostrophe], symbolism, musical effect) ◊

Study Skills

12.74 develop a sound notetaking skill that can be applied to classroom, library, interview, and other life circumstances ◊

$12.75_{8,9,10,11}$ know and understand the role and function of the library/media center including ll electronic retrieval systems (e.g., CD Rom)

12.76 know and understand the use of the Reader's Guide and card catalog, encyclopedia, Internet ◊

12.77 know and understand the use of cross referencing while gathering information for a research topic ◊

12.78 apply copyright and plagiarism laws in the editing process ◊

12.79 judge the reliability of sources for bias and authority ◊

$12.80_{9,10,11}$ use guide words to locate a dictionary entry and identify the best definition for the word's context ◊

$12.81_{9,10,11}$ demonstrate the ability to use a variety of reference sources (e.g., thesaurus, Bartlett's Familiar Quotations, atlas, almanac, specialized dictionaries, and the glossaries) ◊

12.82 understand and follow a style sheet (e.g., MLA, APA, teacher-generated) ◊

$12.83_{9,10,11}$ collect and organize information through systematic note taking and outlining ◊

12.84 use available primary sources when gathering information, taking into consideration the motives and perspective of those sources ◊

12.85 consult various career information sources (e.g., Occupational Outlooks Handbook, community resources, college/training center catalogs) ◊

12.86 applies the necessary research skills in the production of a senior project or a persuasive research paper ◊

12.87 set goals for learning beyond high school ◊

Computer/Technology

12.88 use appropriate software to practice and master twelfth grade English language arts instructional objectives

12.89 use a variety of audiovisual and multimedia materials to practice and master twelfth grade English language arts instructional objectives

12.90 using a word processor, demonstrate correct keying, editing, and formatting techniques

12.91 use appropriate software to practice and master the five step writing process including prewriting, drafting, editing, revising, and publishing

12.92 use appropriate software to practice and master desktop publishing incorporating text, graphics, and various fonts in a variety of formats

12.93 select and use appropriate technologies to locate and use reference sources

12.94 use graphic software to organize, analyze and present information

12.95 select and use appropriate technologies to create and deliver presentations

12.96 use simulation software for investigating open-ended problems, formatting questions, and extending problem solving situations

12.97 use simulation software to practice critical thinking and decision making

Adolescent Mathematics Education

The mathematics program represents a core curriculum from which students will select at least three, and preferably four, courses for mathematics credit toward high school graduation.

Required Courses
Algebra I or Applied Math I and II

Elective Courses
Applied Mathematics I*
Applied Mathematics II*
Geometry and Applied Geometry*
Algebra II*
Trigonometry
Probability and Statistics
Pre-Calculus
Discrete Mathematics
Algebra/Geometry Preparation
Algebra Support
AP Courses
College Courses

*Required to be offered
Schools must offer four courses in mathematics at a level above Algebra I.
It is strongly recommended that students in Advanced Placement mathematics courses take the AP exam.

Credit for Algebra I may be granted through two paths: successful completion of Algebra I or successful completion of Applied Mathematics I and Applied Mathematics II. The Algebra/Geometry Preparation course is designed to allow students the opportunity to acquire the mathematical maturity necessary to proceed to Algebra I or Applied Mathematics I. Algebra support is an elective course designed for students who have completed Algebra I or Applied Math I and II, but have not demonstrated mastery on an Algebra I end-of course exam. The Algebra Support class may be taken concurrently with Geometry and Applied Geometry. Elective credit will be given for the Algebra Support class and the Algebra/Geometry Preparation class. The Algebra Support Class may not be used to fulfill the three mathematics credits required for graduation.

An integrated mathematics program is an alternative method of delivery if the integrity of the course objectives as defined in this document is maintained. The objectives specified in this document offer a challenging and rewarding curriculum for all students.

County school systems or individual high schools may opt to offer additional mathematics courses. Instructional goals and objectives must be developed for these courses and approved by the county board of education.

Applied Mathematics I

Applied Mathematics I and Applied Mathematics II reflect the content of a complete course in Applied Mathematics. Applied Mathematics I is the first half of the Applied Mathematics course. One Applied Mathematics credit will be given for successful completion of this course. Upon successful completion of both courses, Algebra I credit will be given. Applied Mathematics I is a lab based course taught with teacher-led, concrete activities. This course is designed to develop algebraic concepts applicable in the work place as well as in traditional areas.

AM1.1 use a scientific calculator to perform the basic operations of whole numbers, fractions, and decimals ◊

AM1.2 estimate using both a rough estimate and truncating before solving a problem involving computation ◊

AM1.3 write numbers in scientific notation and combine numbers written in scientific notation to solve problems

AM1.4 distinguish between counting and measuring using precision tools to make measurements

AM1.5 solve problems and interpret results using signed numbers and vectors

AM1.6$_{9,10,11}$ **simplify numerical expressions and evaluate algebraic expressions using grouping symbols and order of operations**

AM1.7$_{9,10,11}$ **translate word phrases into algebraic expressions or word sentences into equations and inequalities**

AM1.8 justify steps in the simplification of expressions and the solving of equations based on the properties of real numbers

AM1.9$_{9,10,11}$ **solve literal equations (i.e. formulas) for a given variable and apply the skills toward solving practical problems**

AM1.10$_{9,10,11}$ **represent problems and solve linear algebraic equations and inequalities using a four step problem solving approach**

AM1.11$_{9,10,11}$ **collect, organize, and interpret data using graphs, charts, and tables** ◊

AM1.12 solve absolute value equations in one variable and interpret the results on the number line

AM1.13 use the laws of exponents to perform operations on expressions with integral exponents

AM1.14$_{9,10,11}$ **estimate and simplify square roots**

Computer and Technology

AM1.15 use appropriate software to practice and master Applied Mathematics I instructional objectives ◊

AM1.16 use a scientific calculator to preform basic operations with whole numbers, fractions, and decimals (AM1.1)

AM1.17 use graphic software to create graphs, charts, and tables from given data. (AM1.11) ◊

AM1.18 use a spreadsheet to solve linear equations ◊

AM1.19 use an integrated software package to develop a formula table, a measurement table, and an equality table ◊

Applied Mathematics II

Applied Mathematics II is the second half of the Applied Mathematics course. Upon successful completion of both courses, Algebra I credit will be given. Algebraic concepts will be taught using laboratory activities based on several strategies that include the use of the graphing calculator. Working in groups will be used to develop problem solving skills and social skills needed in the work place as well as in traditional areas.

AM2.1$_{9,10,11}$ **factor polynomials by applying various methods**

AM2.2 add, subtract, multiply, and divide polynomials

AM2.3$_{9,10,11}$ **determine the slope of a line given an equation of the line, the graph of the line, two points on the line, or information that allows two points to be identified. Applications, such as graph interpretation, will be utilized**

AM2.4 graph linear equations by identifying and applying an appropriate technique-methods include slope intercept, point-slope, and x and y intercept

AM2.5$_{9,10,11}$ **write an equation of a line using sufficient given information such as the graph of a line, two points on the line, the slope and a point, or the slope and y intercept**

AM2.6$_{9,10,11}$ **analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, determine the domain and range, and determine if the relation is a function**◇

AM2.7$_{9,10,11}$ **solve quadratic equations by graphing, by factoring, and by the quadratic formula** ◇

AM2.8 solve systems of linear equations graphically and by multiple algebraic methods, such as elimination and substitution with application

AM2.9 add, subtract, multiply, and divide rational expressions

AM2.10$_{9,10,11}$ **collect, organize, interpret data, and predict outcomes using the mean, mode, median, range, and standard deviation**

AM2.11$_{9,10,11}$ **predict the outcomes of simple events using the rules of probability**

AM2.12 load and use single spreadsheet template to solve practical problems ◇

AM2.13$_{9,10,11}$ **use process charts and histograms, run charts, scatter diagrams, and normal distribution curves in order to perform statistical process (quality) control** ◇

Computer and Technology

AM2.14 use appropriate software to practice and master Applied Mathematics II instructional objectives ◇

AM2.15 use a graphing calculator to determine the slope of a line, the graph of a line, two points on the line, or identification of those two points (AM2.3 and AM2.4)

AM2.16 use a graphing calculator to graph linear equations given slope-intercept, point-slope, and x and y intercept (AM2.4)

AM2.17 use a graphing calculator to solve quadratic equations (AM2.7)

AM2.18 use graphing software to create graphs, charts, histograms, and tables of given data; to find frequency distribution and standard deviation (AM2.10) ◇

AM2.19 use graphing software to create process charts and histograms, run charts, scatter diagrams, and distribution curves

(AM2.13) ◊

AM2.20 use spreadsheet software to solve given problems. (AM2.12) ◊

Algebra I

Algebra I is a course that provides the gateway to all higher mathematics courses. This course uses a conceptual approach to mathematics and does not focus on algorithmic methods. Algebraic representations will be used to generalize, and the algebraic method will be viewed as a problem solving tool. In planning for instruction, consideration should be given to the student's readiness for abstract concepts. Manipulatives, such as algebra tiles, should be used to bridge the gap from the concrete to the abstract. Available technology such as calculators, computers, and graphing utilities are to be used as tools to enhance learning.

AI.$1_{9,10,11}$ **simplify numerical expressions and evaluate algebraic expressions using grouping symbols and order of operations**

AI.$2_{9,10,11}$ **translate word phrases into algebraic expressions and word sentences into equations or inequalities** ◊

AI.3 justify steps in the simplification of expressions and in the solving of equations based on the properties of real numbers ◊

AI.$4_{9,10,11}$ **solve multi-step linear equations and inequalities in one variable and apply the skills toward solving practical problems** ◊

AI.$5_{9,10,11}$ **solve literal equations (i.e. formulas) for a given variable and apply the skills toward solving practical problems and better equip students for calculator usage** ◊

AI.$6_{9,10,11}$ **analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, determine the domain and range, and determine if the relation is a function** ◊

AI.7 solve absolute value equations in one variable and interpret the results on a number line.

AI.8 use the laws of exponents to perform operations on expressions with integral exponents

AI.$9_{9,10,11}$ **determine the slope of a line given an equation of the line, the graph of the line, or the information that allows two points to be identified. Appropriate applications, such as graph interpretation, will be utilized**◊

AI.10 graph linear equations by identifying and applying an appropriate technique--methods include slope intercept, point slope, and x and y intercept

AI.$11_{9,10,11}$ **write an equation of a line using sufficient given information such as the graph of a line, two points on the line, the slope and a point, or the slope and the y intercept**

AI.12 solve systems of linear equations graphically and by multiple algebraic methods, such as elimination and substitution

AI.13 add, subtract, multiply, and divide polynomials

AI.14 factor polynomials by applying various methods

AI.15 solve quadratic equations by graphing, factoring, and by the quadratic formula

AI.16 add, subtract, multiply, and divide rational expressions

AI.$17_{9,10,11}$ **identify the effects of parameter changes on a function** ◊

AI.$18_{9,10,11}$ **solve equations**

containing radicals

Al.$19_{9,10,11}$ **solve inequalities**

Computer and Technology

Al.20 use appropriate software to practice and master Algebra I instructional objectives

Al1.21 use a graphing calculator to solve linear equations and to graph linear equations (Al1.5 and Al1.10)

Al1.22 use a graphing calculator to determine the slope of a line. (Al1.9)

Al1.23 use a graphing calculator to solve quadratic equations. (Al1.15)

Geometry and Applied Geometry

Geometry is a course designed for students who have successfully completed the objectives for Algebra I. The study of geometry should include experiences and activities that foster in students a feeling for the value of geometry in their lives. Students should be encouraged to develop conjectures by inductive processes using manipulatives and computer software such as Geometer's Sketchpad. Cooperative learning groups are particularly effective in allowing students to become proficient in analyzing conjectures and in formulating proofs. Emphasis should be placed on applications to the work place and everyday life and on connections to other branches of mathematics and other disciplines.

Applied Geometry is a course for students who have successfully completed the objectives of Algebra I. Upon completion of this course a geometry credit will be given. Applied Geometry will use manipulatives to enhance the understanding of geometric concepts and terminology. Working in groups will allow students to analyze applications of geometry in their lives and in the work place. Concepts will be taught using laboratory activities including the use of tools such as the graphing calculator and the Geometer's Sketchpad. The objectives for Applied Geometry will be the same as those for Geometry.

G.1 represent points, lines, and planes pictorially with proper identification, as well as basic concepts derived from these undefined terms, such as segments, rays, and angles

G.2 differentiate between inductive and deductive reasoning ◇

G.3 use the basic concepts of symbolic logic including identifying the converse, inverse, and contrapositive of a conditional statement and testing the validity of conclusions with Venn diagrams ◇

G.4 construct logical arguments using various formats with emphasis on paragraph form, flow proofs, and indirect approaches ◇

G.5 apply definitions, theorems, and postulates related to such topics as complementary, supplementary, and vertical angles perpendicular and parallel line in geometric proofs, in algebraic problems, and in practical applications

G.$6_{10,11}$ **explore the relationship between angles formed by two lines cut by a transversal when lines are and are not parallel, and use the results to develop methods to show parallelism**

G.7 investigate and verify congruence relationships in triangles

G.$8_{9,10,11}$ **explore and identify properties of quadrilaterals and verify properties for parallelogram, rectangle, rhombus, square, and trapezoid**

G.9 investigate measures of angles and lengths of segments to determine the existence of triangles (triangle inequality) and the order of sides and angles

G.$10_{9,10,11}$ **apply properties of similar triangles to determine inaccessible heights and distances, construct scaled drawings, and derive the basis for the trigonometric ratios**

G.$11_{9,10,11}$ **using trigonometric ratios, determine lengths of sides and measures of angles in right triangles**

G.$12_{10,11}$ **apply the Pythagorean Theorem and its converse in solving practical problems and in deriving the special right triangle relationships**

G.13 investigate measures of angles and the relationship to the arcs of a circle

G.$14_{9,10,11}$ **discover the measures of angles of a polygon and connect the results to tessellating pattern** ◇

G.$15_{9,10,11}$ **discover the lengths of sides of polygons from given data** ◇

G.16_{9} **develop and apply formulas for area, perimeter, surface area, and volume and apply them in the modeling of practical problems** ◇

G.$17_{9,10,11}$ **develop and apply basic concepts of analytical geometry such as formulas for distance, slope, and midpoint** ◇

G.18 construct by Euclidean methods a triangle's medians, altitudes, angle bisectors, and perpendicular bisectors and make conjectures about their relationships

G.$19_{9,10,11}$ **recognize terminology associated with transformational geometry. Given a figure, create a reflection, translation, rotation, glide reflection or dilation of that figure**

G.20 compare and contrast other geometries to Euclidean geometry

G.$21_{9,10,11}$ **find the area of a closed figure inscribed within another closed figure**

G.$22_{9,10,11}$ **using the Cartesian Coordinate system, find the dimensions of a polygon, given the coordinates of the polygon**

Computer and Technology

G.23 use appropriate software to practice and master Geometry and Applied Geometry instructional objectives ◇

G.24 use a calculator to perform operations on whole numbers, fractions, and decimals

Algebra II

Listed below are the objectives for Algebra II. It is an underlying assumption that a mastery of Algebra I has been achieved since Algebra II continues the study of concepts introduced in Algebra I. Graphing calculators are an integral part of instruction in the Algebra II objectives. Students will have the opportunity to make conjectures and test them by using any graphing utility. Manipulatives and other available technology should be used as appropriate.

A2.1 continue to identify and formalize the justification of the use of the field properties, axioms of equality and inequality, and properties of order that are valid for the set of real numbers, complex numbers, and matrices

A2.$2_{9,10,11}$ **continue to review the concept of slope of a line, write equations of lines given various information, and graph linear equations. Graphing**

calculators will be used as a teaching aid ◇

A2.3$_{9,10,11}$ **continue to factor polynomials by applying various methods of factoring including the sum and difference of two cubes**

A2.4$_{9,10,11}$ **solve and graph the solution of a linear inequality and systems of linear inequalities in two variables. Graphing calculators will be used to enhance the solving and confirming of solutions**

A2.5 perform operations with complex numbers and give answers in simplest form

A2.6$_{9,10,11}$ **simplify radicals and expressions involving fractional exponents and convert between the two forms**

A2.7 use the complex number system to define I and a+bi, and simplify powers and products of I

A2.8 solve a quadratic equation over the set of complex numbers by selecting and applying factoring, graphing, the quadratic formula or completing the square. Use the discriminate to determine the nature of the roots. Graphing calculators will be used for solving and/or confirming solutions

A2.9 perform basic matrix operations and solve a system of linear equations using the inverse matrix method. Graphing calculators will be used to perform the calculations

A2.10$_{9,10,11}$ **solve equations containing radicals and exponents**

A2.11$_{9,10,11}$ **recognize linear, quadratic, absolute value, step, and exponential functions. Convert between a graph, table and an equation**

A2.12$_{9,10,11}$ **find the domain, range, zeros, and inverse of a function, the value of a function for a given element in its domain, and the composition of multiple functions**

A2.13$_{9,10,11}$ **graph quadratic functions, solve problems using quadratic equations, and solve quadratic inequalities**

A2.14$_{9,10,11}$ **find the maximum and minimum values of a function over a region using linear programming techniques ◇**

A2.15 solve problems involving direct, inverse, and joint variation. Applications to practical problems will be investigated

A2.16 recognize, identify, and sketch the graphs of a parabola, circle, ellipse, and hyperbola. Graphing calculators will be used as a teaching aid ◇

A2.17 solve absolute value equations and inequalities graphically and algebraically. Graphing calculators will be used as a primary method of solution and to verify algebraic solutions ◇

A2.18 define a logarithmic function, transform equations from exponential form into logarithmic form, and apply the basic properties of logarithms to simplify or expand an expression

A2.19$_{9,10,11}$ **solve problems using non-routine strategies◇**

Computer and Technology

A2.20 use appropriate software to practice and master Algebra II instructional objectives ◇

A2.21 use graphing software to explore, analyze, and display algebraic relationships ◇

A2.22 use a graphing calculator to graph linear equations (A2.2 and A2.9)

A2.23 use a graphing calculator to graph linear inequalities and systems of inequalities with two variables (A2.4)

A2.24 use a graphing calculator to graph quadratic functions, and to solve quadratic equations and inequalities (A2.8 and A2.13)

A2.25 use a graphing calculator to investigate functions (A2.12)

A2.26 use a graphing calculator to find the maximum and minimum

values of a function over a region (A2.14)

A2.27 use a graphing calculator to graph a parabola, circle, ellipse, and hyperbola (A2.16)

A2.28 use a graphing calculator to solve absolute value equations and inequalities (A2.17)

Trigonometry

Trigonometry is designed for students who have successfully completed Algebra II. Connections between right triangle trigonometry and circular functions should be emphasized. Graphing utilities such as calculators and computers will be used to enhance student learning and to aid in finding the values of trigonometric functions and their inverses.

T.1 define the six trigonometric functions in terms of a right triangle and find the values of the functions of an angle in standard position, given a point on the terminal side of the angle. Circular function definitions will be connected with trigonometric function definitions

T.2 find the values of the other trigonometric functions, given the value of one trigonometric function

T.3 develop recall of the values of the six trigonometric functions of special angles as related to the unit circle

T.4 use a calculator to find the values of the trigonometric functions for any angle and to find the measure of an angle given the value of one of its trigonometric functions

T.5 convert angle measures from radians to degrees and vice versa

T.6 verify trigonometric identities by making substitutions and recalling basic identities ◊

T.7 solve trigonometric equations that include both infinite solutions and solutions with a restricted domain

T.8 find the value of inverse trigonometric functions

T.9 find the area of a triangle given the measures of two sides and the included angle or the measures of three sides (Heron's formula)

T.10 express complex numbers in polar form and perform operations. This will include adding, subtracting, multiplying, and dividing complex numbers in polar form, evaluating powers of complex numbers using De Moivre's Theorem, and finding the roots of a complex number

T.11$_{9,10,11}$ **solve practical problems involving triangles using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines**

T.12 recognize the graph of the six trigonometric functions. Given an equation in the form y=ASin(Bx+C)+D, the student will identify the domain and range, determine the period, phase shift, amplitude and vertical shift, and sketch at least one period of the graph. The graphing calculator will be used to investigate how A, B, C, and D affect the graph of the function ◊

T.13 recognize and graph the inverse of trigonometric functions. Restrictions on the domain will be included

T.14 develop and use formulas such as sum or difference of two angles, double-angle, and half-angle

Computer and Technology

T.15 use appropriate software to practice and master trigonometric instructional objectives ◊

T.16 use a scientific calculator to find

the values of the trigonometric functions for an angle, and the measure of an angle given its trigonometric functions (T.4)

T.17 use a scientific calculator to convert angle measures from radius to degrees and vice versa (T.5)

T.18 use a scientific calculator to find the value of inverse trigonometric functions (T.8)

T.19 use a scientific calculator to solve practical problems involving triangles (T.9)

T.20 given an equation in the form $y=ASin(Bx+C)+D$, use a graphing calculator to investigate how A, B, C, and D effect the graph of a function (T.12)

T.21 use a graphing calculator to graph the inverse of a trigonometric function (T.13)

Probability and Statistics

Probability and Statistics is one of the most important branches of the mathematical sciences. Knowledge of these topics is critical to decision making and to the analysis of data. Using concepts of probability and statistics, individuals are able to predict the likelihood of an event occurring, organize and evaluate data, and identify the significance of statements. Connections between content and applications to the students' world will be emphasized. Prerequisites for this course are successful completion of Algebra II and Geometry.

PS.1 distinguish between experimental and theoretical probability

PS.$2_{9,10,11}$ **create and interpret data using various methods of displaying numerical data, including frequency distributions, circle graphs, histograms, and frequency curves, and make predictions about outliers** ◊

PS.3 determine possible outcomes using tree diagrams and the counting principles of permutations and combinations

PS.$4_{9,10,11}$ **express the chances of events occurring either in terms of a probability or odds**

PS.$5_{9,10,11}$ **use the normal distribution and the binomial distribution including Pascal's triangle, to determine probability of events**

PS.$6_{9,10,11}$ **interpret and calculate measures of central tendency (mean, median, and mode) from data presented in a variety of forms such as charts, tables, and graphs or from data created through experimentation** ◊

PS.$7_{9,10,11}$ **interpret and calculate measures of dispersions (range and standard deviation) from data presented in a variety of forms such as charts, tables and graphs or from data created through experimentation** ◊

PS.8 describe individual performances in terms of percentiles, z-scores, and t-scores

PS.9 describe the role of sampling, randomness, bias, and sample size in data collection and interpretation

PS.10 explain and illustrate the use and misuse of statistics ◊

PS.11 test the validity of a hypothesis using appropriate statistical concepts ◊

PS.$12_{9,10,11}$ **determine the correlation values for given data or for data generated by students and use the results to describe the association of the variables within the given data. Identify whether this association is systematic or predictable** ◊

PS.13 calculate the Chi-Square values for a given population

PS.14 perform a t-test for a designated

set of data, and use the results to test the validity of a hypothesis

PS.15$_{10,11}$ **perform a regression analysis on a set of data, either given or created through experimentation, and use the results to predict specific values of a variable. Identify the equation for the line of regression for a scattergram**

PS.16 perform an analysis of variance (ANOVA) and interpret the results

PS.17$_{9,10,11}$ **make a prediction based upon a statistical sample**◊

PS.18$_{9,10,11}$ **make a statistical conclusion based on information in a chart or table** ◊

Computer and Technology

PS.19 use appropriate software to practice and master Probability and Statistics instructional objectives ◊

PS.20 use graphing software to create frequency distribution charts, graphs, histograms, and frequency curves (PS.2) ◊

PS.21 use spreadsheets to calculate central tendency, frequency distribution and standard deviation from given data (PS.6) ◊

PS.22 use a calculator to find measures of dispersions (PS.7)

PS.23 use a calculator to find the Chi-Square values for a given population (PS.13)

PS.24 use a calculator to perform the t-test on a given set of data (PS.14)

PS.25 use a calculator to perform a regression analysis on a set of data (PS.15)

PS.26 use a calculator to perform an analysis of variance (ANOVA) (PS.16)

Pre-Calculus

Pre-Calculus is intended for students who have mastered the concepts of Algebra II. It will extend students' knowledge of functions as well as provide appropriate preparation for a calculus course. Available technology will be used by students and teachers to enhance learning. Graphing utilities are powerful tools for solving and verifying equations and inequalities. They also aid in investigating functions and their inverses.

PC.1 investigate and identify the characteristics of polynomials and rational functions and use these to sketch the graphs of the functions. These characteristics include zeros, upper and lower bounds, y-intercepts, symmetry, asymptotes, and maximum and minimum points. Graphing calculators will be used to verify these characteristics ◊

PC.2 solve higher order polynomial equations utilizing techniques such as Descartes' Rule of Signs, upper and lower bounds, and Rational Root Theorem

PC.3 perform mathematical operations on complex numbers and graph complex numbers

PC.4 expand binomials with positive integral exponents by the use of Pascal's triangle and the Binomial Theorem

PC.5 establish the relationship between exponential and logarithmic functions and graph the functions. Graphing calculators will be used to investigate the characteristics ◊

PC.6 perform calculations involving exponential and logarithmic expressions to solve equations and practical problems. This will include natural and common logarithms, laws of exponents and logarithms, and the solution of logarithmic and exponential equations

PC.7 recognize and use properties of matrices to solve practical problems

PC.$8_{9,10,11}$ **solve problems involving the sum of finite and infinite sequences and series. Sigma (summation) notation will be included**

PC.9 find the limit of a function, a sequence, or a series by intuitive reasoning, algebraic methods, and numerical substitution

PC.10 use properties of parallel and perpendicular lines to analyze systems of equations ◊

PC.11 perform mathematical operations with vectors and use vectors to solve practical problems. This will include addition, subtraction, scalar multiplication, inner (dot) product, norm (magnitude) of a vector, unit vector, graphing, perpendicular components, and cross products

PC.12 apply the method of mathematical induction to prove formulas and statements ◊

PC.13 use graphs to investigate and describe the continuity of functions. The functions will include rational, piece-wise defined, and step functions. Graphing calculators will be used to investigate and verify the graphs ◊

PC.14 graph functions and conic sections using translation and rotation of axes. Graphing calculators will be used to investigate and verify the graphs ◊

PC.$15_{9,10,11}$ **estimate the area under a curve**

Computer and Technology

PC.16 use appropriate software to practice and master Pre-Calculus instructional objectives ◊

PC.17 use a graphing calculator to graph the functions of polynomials and rational functions (PC.1)

PC.18 use a graphing calculator to graph complex numbers (PC.3)

PC.19 use a graphing calculator to graph exponential and logarithmic functions (PC.5)

PC.20 use a calculator to solve equations with exponential and logarithmic expressions (PC.6)

PC.21 use a graphing calculator to perform operations with vectors and use vectors to solve problems (PC.11)

PC.22 use a graphing calculator to investigate the continuity of functions (PC.13)

PC.23 use a graphing calculator to graph functions of conic sections (PC.14)

Discrete Mathematics

Discrete mathematics is an advanced course which may be an alternative to pre-calculus, trigonometry, or calculus. The emphasis will be placed on learning and creating algorithms to perform certain computations or to process information within a discrete (finite) set. Counting, optimization, recursively defined functions, modeling situations with graphs, arranging objects, sequences, and series are a few of the topics that will be explored. As the use of computers (a discrete machine) continues to increase, so will the expansion and importance of discrete mathematics.

DM.1 analyze and evaluate graphs made of vertices and edges that model real world problems ◊

DM.2 define, use, and differentiate such concepts as Eulerian path, Eulerian circuit, Hamiltonian path, Hamiltonian circuit, and isomorphism

DM.3 define and use algorithms, such as breadth-first, depth-first, minimum spanning tree algorithm, the shortest path, and the four color conjecture to solve problems ◊

DM.4 understand and apply graph coloring to real situations, such as scheduling ◊

DM.$5_{9,10,11}$ **find the number of possible ways independent objects from a given set may be selected or find the number of ways events may occur**

DM.6 analyze and evaluate situations where elements are ordered or repeated

DM.7 differentiate between random and ordered selections and apply these concepts in a variety of settings

DM.$8_{9,10,11}$ **calculate the probability of a given event occurring**

DM.9 solve problems by applying the exclusion-inclusion principle, pigeonhole, and catalan numbers

DM.10 recognize types of codes, including error-correcting codes, and apply decoding techniques

DM.11 define and identify various number and geometric patterns (including tessellations), symmetries, and apply to real world settings

DM.12 create and use matrices. Explain the connection between graphs and matrices

DM.13 perform basic operations on matrices and apply to real world applications

DM.14 distinguish between convergent and divergent sequences and series

DM.$15_{9,10,11}$ **use recurrence relations to solve problems**

DM.16 construct fractals using a recursive process (use calculator or computer)

DM.17 identify and explain the characteristics of self-similarity (symmetry of scale)

DM.18 explain the characteristics of a fractal

Computer and Technology

DM.19 use appropriate software to practice and master Discrete Mathematics instructional objectives ◊

DM.20 use software for analyzing and evaluating graphs made of vertices and edges that model real world problems (DM.1) ◊

DM.21 using spreadsheets, create, analyze, and use matrices ◊

DM.22 use graphing software, apply graph coloring to real world situations (DM.4) ◊

DM.23 perform basic operations on matrices and apply to real world use (DM.13) ◊

DM.24 use fractal construction software, create fractals using a recursive process (DM.17) ◊

DM.25 using fractal created, identify and explain characteristics of

symmetry of scale. (DM.18)

Algebra/Geometry Preparation

Algebra/Geometry preparation is an elective course designed to be a bridge between the concrete elementary curriculum and the more formal mathematics curriculum ahead. In this course students will explore algebraic concepts in an informal way to build a foundation for subsequent formal study of algebra. Such informal explorations should emphasize physical models, data, graphs, and other mathematical representations rather than facility with formal algebraic manipulations. The study of geometry is to assist students to represent and make sense of the world. Geometric models will provide a perspective from which students are to analyze and solve problems, and geometric interpretations are to help make abstract representations more easily understood. The study of geometry at this level should simply provide increased opportunities for students to engage in more systematic explorations.

AGP.1 identify and use properties of numbers (commutative, associative, distributive, etc)

AGP.2 add, subtract, multiply, and divide decimals, integers, fractions and mixed numbers

AGP.3 use order relations to compare, order, or locate whole numbers, integers, fractions, and decimals on a number line

AGP.$4_{9,10,11}$ **read, interpret, and construct graphs to solve problems.**

AGP.$5_{9,10,11}$ **use data to determine mean, median, mode, and range**

AGP.$6_{9,10,11}$ **find the probability of complementary events and exclusive events**

AGP.7 estimate, measure, and perform operations involving length, mass, and capacity using customary and metric units

AGP.8 use a protractor to measure and draw angles

AGP.9 use a compass to construct congruent angles, bisect angles, and bisect line segments

AGP.$10_{9,10,11}$ **estimate and find circumference and area of a circle**

AGP.$11_{9,10,11}$ **estimate and find the area and perimeter of polygons**

AGP.$12_{9,10,11}$ **estimate and find the surface area and the volume of three dimensional figures**

AGP.13 identify angle relationships: complementary, supplementary, vertical, and adjacent

AGP.$14_{9,10,11}$ **identify angle relationships; involving parallel lines and apply in solving problems (corresponding angles, alternate interior angles, and alternate exterior angles)**

AGP.$15_{9,10,11}$ **investigate similar triangles and apply proportions in problem solving situations**

AGP.$16_{9,10,11}$ develop and explore circle relationships, emphasizing the vocabulary of circles

AG1.$17_{9,10,11}$ **substitute values, evaluate expressions involving variables, and calculate formulas to solve application problems**

AGP1.$18_{9,10,11}$ **solve equations with at least two operations**

Computer and Technology

AGP.19 use appropriate software to practice and master Algebra/Geometry Preparation instructional objectives ◊

AGP.20 use a spreadsheet to determine mean, median, mode, and range of a selected group of data (AGP.5) ◊

AGP.21 use a calculator to find the probability of complementary and exclusive events (AGP.6)

AGP.22 use a calculator to find the

circumference of a circle (AGP.10)

AGP.23 use a calculator to find the area and perimeter of a polygon (AGP.11)

AGP.24 use a calculator to find the volume of a three dimensional figure (AGP.12)

AGP.25 use a calculator to find the value of an expression (AGP.17)

AGP.26 use a calculator to solve an equation with at least two operations (AGP.18)

Advanced Placement (AP) Calculus

Calculus AB is an Advanced Placement curriculum in elementary functions and calculus for students who have successfully completed Pre-Calculus. The major topics include differential and integral calculus. Calculus BC is an intensive course in the calculus of functions for a single variable. In addition to the topics covered in Calculus AB, the BC course also includes infinite series and differential equations. Calculus AB and Calculus BC represent college-level mathematics for which most colleges grant Advanced Placement credit. The instructional objectives for these courses are outlined in the College Board Publications. It is strongly recommended that students in Advanced Placement Calculus take the AP exam.

Advanced Placement (AP) Statistics

The AP Statistics course is designed for students who have successfully completed an Algebra II course. Its purpose is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Four broad conceptual themes are emphasized: (1) exploring data: observing patterns and departures from patterns; (2) planning a study: deciding what and how to measure; (3) anticipating patterns in advance: producing models using probability and statistics; and (4) statistical inference: confirming models.

Algebra Support

Algebra support is an elective course designed for students who have completed Algebra I or Applied Mathematics I and II, but have not demonstrated mastery on an Algebra I end-of-course exam. This class should be small enough to allow for individualized instruction thus strengthening each student's weaknesses. Manipulatives and technology should be used where appropriate. A student may progress to geometry while taking this course.

Review for Assessment Grades 9,10,11

The following instructional objectives require review prior to the administration of spring standardized tests in grades 9, 10, and 11.

Applied Mathematics I

AM1.6$_{9,10,11}$ **simplify numerical expressions and evaluate algebraic expressions using grouping symbols and order of operations**

AM1.7$_{9,10,11}$ **translate word phrases into algebraic expressions or word sentences into equations and inequalities**

AM1.9$_{9,10,11}$ **solve literal equations (i.e. formulas) for a given variable and apply the skills toward solving practical problems**

AM1.10$_{9,10,11}$ **represent problems and solve linear algebraic equations and inequalities using a four step problem solving approach**

AM1.11$_{9,10,11}$ **collect, organize, and interpret data using graphs, charts, and tables ◊**

AM1.14$_{9,10,11}$ **estimate and simplify square roots**

Applied Mathematics II

AM2.1$_{9,10,11}$ **factor polynomials by applying various methods**

AM2.3$_{9,10,11}$ **determine the slope of a line given an equation of the line, the graph of the line, two points on the line, or information that allows two points to be identified. Applications, such as graph interpretation, will be utilized**

AM2.5$_{9,10,11}$ **write an equation of a line using sufficient given information such as the graph of a line, two points on the line, the slope and a point, or the slope and y intercept**

AM2.6$_{9,10,11}$ **analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, determine the domain and range, and determine if the relation is a function◊**

AM2.7$_{9,10,11}$ **solve quadratic equations by graphing, by factoring, and by the quadratic formula ◊**

AM2.10$_{9,10,11}$ **collect, organize, interpret data, and predict outcomes using the mean, mode, median, range, and standard deviation**

AM2.11$_{9,10,11}$ **predict the outcomes of simple events using the rules of probability**

AM2.13$_{9,10,11}$ **use process charts and histograms, run charts, scatter diagrams, and normal distribution curves in order to perform statistical process (quality) control ◊**

Algebra I

AI.1$_{9,10,11}$ **simplify numerical expressions and evaluate algebraic expressions using grouping symbols and order of operations**

AI.2$_{9,10,11}$ **translate word phrases into algebraic expressions and word sentences into equations or inequalities ◊**

AI.4$_{9,10,11}$ **solve multi-step linear equations and inequalities in one variable and apply the skills toward solving practical problems ◊**

AI.5$_{9,10,11}$ **solve literal equations (i.e. formulas) for a given variable and apply the skills toward solving practical problems and better equip students for**

calculator usage ◊

Al.$6_{9,10,11}$ analyze a given set of data for the existence of a pattern, represent the pattern algebraically and graphically, determine the domain and range, and determine if the relation is a function ◊

Al.$9_{9,10,11}$ determine the slope of a line given an equation of the line, the graph of the line, or the information that allows two points to be identified. Appropriate applications, such as graph interpretation, will be utilized◊

Al.$11_{9,10,11}$ write an equation of a line using sufficient given information such as the graph of a line, two points on the line, the slope and a point, or the slope and the y intercept

Al.$17_{9,10,11}$ identify the effects of parameter changes on a function ◊

Al.$18_{9,10,11}$ solve equations containing radicals

Al.$19_{9,10,11}$ solve inequalities

Geometry and Applied Geometry

G.$6_{10,11}$ explore the relationship between angles formed by two lines cut by a transversal when lines are and are not parallel, and use the results to develop methods to show parallelism

G.$8_{9,10,11}$ explore and identify properties of quadrilaterals and verify properties for parallelogram, rectangle, rhombus, square, and trapezoid

G.$10_{9,10,11}$ apply properties of similar triangles to determine inaccessible heights and distances, construct scaled drawings, and derive the basis for the trigonometric ratios

G.$11_{9,10,11}$ using trigonometric ratios, determine lengths of sides and measures of angles in right triangles

G.$12_{10,11}$ apply the Pythagorean Theorem and its converse in solving practical problems and in deriving the special right triangle relationships

G.$14_{9,10,11}$ discover the measures of angles of a polygon and connect the results to tessellating pattern ◊

G.$15_{9,10,11}$ discover the lengths of sides of polygons from given data ◊

G.16_{9} develop and apply formulas for area, perimeter, surface area, and volume and apply them in the modeling of practical problems ◊

G.$17_{9,10,11}$ develop and apply basic concepts of analytical geometry such as formulas for distance, slope, and midpoint ◊

G.$19_{9,10,11}$ recognize terminology associated with transformational geometry. Given a figure, create a reflection, translation, rotation, glide reflection or dilation of that figure

G.$21_{9,10,11}$ find the area of a closed figure inscribed within another closed figure

G.$22_{9,10,11}$ using the Cartesian Coordinate system, find the dimensions of a polygon, given the coordinates of the polygon

Algebra II

A2.$2_{9,10,11}$ continue to review the concept of slope of a line, write equations of lines given various information, and graph linear equations. Graphing calculators will be used as a teaching aid ◊

A2.$3_{9,10,11}$ continue to factor polynomials by applying various methods of factoring including the sum and difference of two cubes

A2.$4_{9,10,11}$ solve and graph the solution of a linear inequality and systems of linear inequalities in two variables.

Graphing calculators will be used to enhance the solving and confirming of solutions

A2.6$_{9,10,11}$ simplify radicals and expressions involving fractional exponents and convert between the two forms

A2.10$_{9,10,11}$ solve equations containing radicals and exponents

A2.11$_{9,10,11}$ recognize linear, quadratic, absolute value, step, and exponential functions. Convert between a graph, table and an equation

A2.12$_{9,10,11}$ find the domain, range, zeros, and inverse of a function, the value of a function for a given element in its domain, and the composition of multiple functions

A2.13$_{9,10,11}$ graph quadratic functions, solve problems using quadratic equations, and solve quadratic inequalities

A2.14$_{9,10,11}$ find the maximum and minimum values of a function over a region using linear programming techniques ◊

A2.19$_{9,10,11}$ solve problems using non-routine strategies◊

Trigonometry

T.11$_{9,10,11}$ solve practical problems involving triangles using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines

Probability and Statistics

PS.2$_{9,10,11}$ create and interpret data using various methods of displaying numerical data, including frequency distributions, circle graphs, histograms, and frequency curves, and make predictions about outliers ◊

PS.4$_{9,10,11}$ express the chances of events occurring either in terms of a probability or odds

PS.5$_{9,10,11}$ use the normal distribution and the binomial distribution including Pascal's triangle, to determine probability of events

PS.6$_{9,10,11}$ interpret and calculate measures of central tendency (mean, median, and mode) from data presented in a variety of forms such as charts, tables, and graphs or from data created through experimentation ◊

PS.7$_{9,10,11}$ interpret and calculate measures of dispersions (range and standard deviation) from data presented in a variety of forms such as charts, tables and graphs or from data created through experimentation ◊

PS.12$_{9,10,11}$ determine the correlation values for given data or for data generated by students and use the results to describe the association of the variables within the given data. Identify whether this association is systematic or predictable ◊

PS.15$_{10,11}$ perform a regression analysis on a set of data, either given or created through experimentation, and use the results to predict specific values of a variable. Identify the equation for the line of regression for a scattergram

PS.17$_{9,10,11}$ make a prediction based upon a statistical sample◊

PS.18$_{9,10,11}$ make a statistical conclusion based on information in a chart or table ◊

Pre-Calculus

PC.8$_{9,10,11}$ solve problems involving the sum of finite and infinite sequences and series. Sigma (summation) notation will be included

PC.15$_{9,10,11}$ estimate the area under a curve

Discrete Mathematics

DM.5$_{9,10,11}$ **find the number of possible ways independent objects from a given set may be selected or find the number of ways events may occur**

DM.8$_{9,10,11}$ **calculate the probability of a given event occurring**

DM.15$_{9,10,11}$ **use recurrence relations to solve problems**

Algebra Geometry Preparation

AGP.4$_{9,10,11}$ **read, interpret, and construct graphs to solve problems.**

AGP.5$_{9,10,11}$ **use data to determine mean, median, mode, and range**

AGP.6$_{9,10,11}$ **find the probability of complementary events and exclusive events**

AGP.10$_{9,10,11}$ **estimate and find circumference and area of a circle**

AGP.11$_{9,10,11}$ **estimate and find the area and perimeter of polygons**

AGP.12$_{9,10,11}$ **estimate and find the surface area and the volume of three dimensional figures**

AGP.14$_{9,10,11}$ **identify angle relationships; involving parallel lines and apply in solving problems (corresponding angles, alternate interior angles, and alternate exterior angles)**

AGP.15$_{9,10,11}$ **investigate similar triangles and apply proportions in problem solving situations**

AG1.17$_{9,10,11}$ **substitute values, evaluate expressions involving variables, and calculate formulas to solve application problems**

AGP1.18$_{9,10,11}$ **solve equations with at least two operations**

Adolescent Social Studies Education

The social studies curriculum prepares students for gainful employment, post secondary education or college, to participate responsibly in society, and to be lifelong good citizens of the community. Each course will provide experiences and will emphasize skills which enable students to make the transition from the classroom to the workplace.

Required Courses
United States Studies to 1900
World Studies to 1900
Twentieth / Twenty-First Centuries Studies

Elective Courses
Civics / Government*
Economics*
Geography
AP Courses
College Courses

* Required to be offered.
It is strongly recommended that students in Advanced Placement social studies courses take the AP exam.

County school systems or individual high schools may opt to offer additional social studies courses. Instructional goals and objectives must be developed for these courses and approved by the county board of education.

Grade Nine: United States Studies to 1900

This program of study follows the evolution of the Constitution as a living document and the role of participatory democracy in the development of a rapidly changing technological society. This study of the United States is an examination of the formative years from the Pre-Columbian civilizations to its transformation as a dominant political and economic influence in the world. Special emphasis is placed on how the challenges of settling expansive and widely-differing environments were met by a diverse population.

Civics

9.1_{10} **analyze the content of the Declaration of Independence and the factors that led to its creation** ◊

$9.2_{5,6}$ **summarize the impact of documents and philosophies that were the basis for the United States governmental system** ◊

9.3_{10} **explain the major challenges faced by the members of the Constitutional Convention and how the design of the Constitution affects national, state, and local powers** ◊

9.4 analyze the United States Constitution as a response to the political, economic, and social conditions that existed after the American Revolution (e.g., federation and confederation, power of taxation, interstate commerce, adaptability of the United States Constitution, Bill of Rights) ◊

$9.5_{3,4,5,6,7,8,10,11}$ **explain the Constitutional basis for resolving disputes among branches of government** ◊

9.6_{10} **explain the steps required to amend the Constitution** ◊

9.7_{11} **describe the presidential election process (e.g., reasons for the creation and continued use of the Electoral College, the duties of the president, and the order of the presidential succession process)** ◊

$9.8_{3,4,5,6,7,8,10,11}$ **describe how the legislative process works to resolve a specific legal problem** ◊

9.9 compare and contrast various American people's responses to controversial government actions ◊

$9.10_{3,8,10}$ **describe the different types of local government, and compare their functions and powers**

$9.11_{6,8}$ discuss the complexity and variety of issues facing local governments (e.g., zoning laws) ◊

9.12_{10} **explain the evolution of representative democracy in the United States**

$9.13_{3,4,5,6,7,8,11}$ **explain the purpose, organization, and function of the legislative, executive, and judicial branches**

$9.14_{7,8}$ **summarize the Articles of and Amendments to the**

Constitution

9.15 demonstrate the ability to work cooperatively and resolve conflict peacefully ◊

Economics

9.16$_{3,4,5,6,7,8,10,11}$ **draw conclusions, make inferences, and suggest generalizations about United States economic issues using various types of graphs, charts, and tables** ◊

9.17 describe how the United States economic system changed from mercantilism to free enterprise capitalism ◊

9.18 **examine the role of the United States government in the banking, finance, and monetary systems** ◊

9.19 analyze the effects of foreign trade and tariff policies on the United States through the use of charts and graphs ◊

9.20 differentiate among various types of taxes and relate them to taxation controversies in the United States during their era ◊

9.21$_{11}$ **describe the cause and effect relationship between the labor movement and industrialization in the United States** ◊

9.22 **identify and analyze the role of market factors in the settlement of the United States and the development of the free enterprise system** ◊

9.23$_{6,10}$ **understand and explain the concept of capitalism and compare the basic components to other economic systems (e.g., socialism and communism)** ◊

9.24$_{3,4,5,6,7,8,10,11}$ **determine the relationship between the law of supply and demand, production, and consumption**◊

9.25$_{3,4,5,7}$ **understand the concept of taxation (e.g., income, property, sales, and estate)** ◊

Geography

9.26 **explain settlement, population patterns, and the growth of service centers from reading and interpreting maps, graphs and charts** ◊

9.27 **identify and describe major landforms, cities, and climate areas of the United States** ◊

9.28 **show how the climates, landforms and rivers of the United States compare to those throughout the world**

9.29 $_{3,6,7}$ **analyze the relationship of Native American cultures to their physical environment**

9.30 **describe geographic differences which contributed to economic development and regionalism prior to the Civil War**

9.31 **locate and place on a blank map, states and capitals, landforms, and major events in United States history**

9.32$_{11}$ **analyze the effect of geography on immigration and settlement patterns** ◊

9.33$_{7}$ **locate major meridians of longitude and parallels of latitude**

9.34$_{7}$ **locate and identify major world rivers, climate areas, and rain forests**

9.35 **explain the impact of health and cultural considerations on the quality of life over different historical time periods**

History

9.36 chart the contacts that occurred between Native Americans and European settlers

9.37 analyze the effect of United States policy on Native Americans

9.38$_{5}$ **analyze the factors that led to settlement and expansion**

across the United States ◊

9.39$_{7,11}$ **explain major United States conflicts in terms of causes and consequences** ◊

9.40 analyze the effect of European empire building and how it led to the American Revolution ◊

9.41 **analyze how nationalism affected the constitutional, political, economic and foreign policy issues faced by the U. S. in its formative years** ◊

9.42 **compare the political, economic, and social conditions in the United States before and after the Civil War** ◊

9.43 **evaluate the effects of technological change on the United States** ◊

9.44 analyze the goals and actions of reformers and reform movements during this era ◊

9.45 **describe the influence and impact of diverse cultures on United States society and their assimilation into American life**

9.46$_{3,4,5,6,7,8,10,11}$ **draw conclusions about America from maps, graphs, charts, cartoons and timelines** ◊

9.47$_{4,7}$ **explain how technological development has affected agriculture**

Review for Assessment

9.48 **trace the development of religion in early civilizations**

9.49 **analyze the contributions of Russian rulers to the development of that country**

9.50$_{7,11}$ **analyze twentieth century foreign policy and wars**

Computer/Technology

9.51 use appropriate software to practice and master grade nine social studies instructional objectives ◊

9.52 use a variety of audio-visual and multi-media materials to practice and master ninth grade social studies instructional objectives ◊

9.53 practice inputting data using correct keying, editing, and formatting techniques

9.54 use graphics software to create graphs, histograms, tables, and charts ◊

9.55 use graphics software to select the appropriate type of graph to display a set of data ◊

9.56 design and use a database to analyze, compare, and interpret the relationship between United States historical and geographical events ◊

9.57 use simulation software for investigating open-ended problems, formulating questions and extending problem-solving situations as they relate to United States history ◊

Grade Ten: World Studies to 1900

This study of the world emphasizes the historic, economic, geographic, political, and social structure of various cultural regions of the world from the dawn of civilization to the

interdependent world of the twentieth century. Special attention is given to the formation and evolution of societies into complex political and economic systems. Geography /map skills and critical thinking skills are emphasized.

Civics

10.1 identify and evaluate the contributions of the classical civilizations to the development of the United States Constitution.

10.2 **discuss world historical events which affected the evolution of democracy in various countries as well as the United States**

10.3 analyze the nature of civic responsibility in a diverse society

10.4 analyze the causes and resolution of conflict ◊

$10.5_{3,4,5,6,7,8,9,11}$ **identify the powers delegated to the United States Constitution by local, state and national governments and qualifications of state leaders**

10.6_{9} **explain the section of the United States Constitution that describes the election, duties and replacement of the president and vice president**

10.7_{9} **explain the process used to amend the United States Constitution** ◊

10.8_{9} **analyze the Declaration of Independence**

10.9 **define the powers of the federal government**

Review for Assessment

$10.10_{6,11}$ **explain the significance of Supreme Court decisions that have affected civil rights**

10.11_{9} **explain the major challenges of the Constitutional Convention**

10.12 **analyze cause and effect of the War Powers Act of 1973**

Economics

10.13 **describe the main imports and exports of regions of the world** ◊

10.14 analyze and describe how various societies developed economic systems (e.g., goods and services produced and how they were distributed) ◊

10.15 analyze the role of exchange/trade systems as economic systems developed ◊

10.16 **analyze and compare monetary and fiscal policies of several world societies**

10.17 **identify a cause and effect relationship of economic change** ◊

$10.18_{3,4,5,6,7,8,9,11}$ **read and interpret relevant charts, graphs, and tables** ◊

10.19 **compare the advantages and disadvantages of developing economic systems**

Review for Assessment

10.20_{7} **identify the role of stock ownership**

10.21 **analyze the economics systems that developed or changed following the Civil War**

$10.22_{3,4,5,6,7,8,9,11}$ **differentiate between services supplied by public and private sectors**

10.23 **describe economic development and changes in the United States before and after 1900 (e.g., federal deficit and the origins of the national debt)** ◊

10.24 **identify and describe problems between the British Parliament and the American colonies (e.g., Parliament's right to rule, taxation, and trade restrictions)**

Geography

$10.25_{3,4,5,6,7,8,9,11}$ **read and interpret information using maps, graphs and charts** ◊

10.26 **identify and label geographic features of the world (e.g., continents, mountain ranges, and bodies of water)**
10.27 **identify and label geographic features of the continents (e.g., plateaus, highpoints, low points and major river valleys)**
10.28 **identify world language patterns**
10.29 **identify world resources and explain how the location of resources influenced economic development and the global economy**
10.30 **identify and explain geographic reasons for the development of major world cities and the recent trends in urban population growth** ◊
10.31 explain the development of major political boundaries of the world, and relate these to the theme of geo-politics ◊
10.32 describe the evolution of significant world trade routes ◊
10.33 describe and analyze the migration of people during this era
10.34 analyze the physical and cultural patterns of settlement
10.35 **identify the effect of geographic features upon the environment**

History

10.36 identify and evaluate the interaction of early humans with their environment ◊
10.37 **analyze the causes for the rise and decline of civilizations (e.g., the river civilizations, Greek and Roman Empires)**
10.38 **identify, compare, and evaluate the political, economic and cultural contributions of significant world societies**
10.39 analyze the cyclical nature of dynasties
10.40 **explain the basic tenets of major world religions and philosophies**
10.41 compare feudalism around the world
10.42 identify and evaluate the political and economic role and the cultural contributions of the Christian church in medieval society
10.43 describe the role and impact of the Crusades
10.44 relate the worth of the individual in society to the growth of the concept of the "Renaissance Man"
10.45 describe the location, unique contributions, and characteristics of Arab/Islamic society
10.46 analyze the historical developments of the Reformation, including the effects of theological, political, and economic differences ◊
10.47 describe how European needs/wants for foreign products contributed to the Age of Exploration ◊
10.48 **identify the impact of British colonization**
10.49 **identify and assess the impact of the Industrial Revolution**
10.50 **describe how late 19th century social reformers improved the conditions for working class people through social changes** ◊
10.51 **identify and explain the development of various forms of government in Latin America** ◊
10.52 analyze and assess the impact of revolutions ◊
10.53 analyze and assess the concept of nation building ◊
10.54 **examine key people, places, events and ideas of the period** ◊
$10.55_{3,4,5,6,7,8,9,11}$ **read and interpret historical charts, tables, graphs, narratives, primary source documents, political cartoons, and timelines** ◊
10.56 **analyze the development of the French, English, and Spanish navies**

10.57 **identify legal systems which had an impact on western civilization**

10.58 **identify the major causes for the fall of the Roman Empire**

Review for Assessment

10.59_{5} **identify the major goals for the New Deal**

10.60 **analyze and sequence important events of the Civil War**

10.61 **explain the meaning of the United States "Open Door" policy**

$10.62_{6,9}$ **analyze the commonalities and differences of Fascism, Nazism, and Communism**

Computer/Technology

10.63 use appropriate software to practice and master grade ten social studies instructional objectives ◊

10.64 use a variety of audio-visual and multi-media materials to practice and master tenth grade social studies instructional objectives ◊

10.65 practice inputting data using correct keying, editing, and formatting techniques ◊

10.66 use graphics software to create graphs, histograms, tables, and charts ◊

10.67 use graphics software to select the appropriate type of graph to display a set of data ◊

10.68 design and use a database of countries of the world to analyze, compare, and interpret the relationship between historical and geographical events ◊

10.69 use simulation software for investigating open-ended problems, formulating questions and extending problem-solving situations as they relate to world studies ◊

Grade Eleven: Twentieth / Twenty-First Centuries Studies

The focus of this course is an identification and study of the interaction of geographic, political, economic, and historical factors. Such factors provide students a framework to examine and appreciate the changing nature of societies and the increasing interdependency of the United States and the world. Students will contrast and evaluate past and present world concerns and hypothesize about problems and solutions for the future. Students will realize the importance of well-informed citizens in a diverse society and their place in the democratic process.

Civics

11.1 analyze the changing nature of federalism and the growth of national government

11.2 **examine Supreme Court cases and explain their Constitutional basis** ◊

11.3 explain the role of the president in the formation of national and foreign policy ◊

11.4 $_{3,4,5,6,7,8,9,10}$ **identify the responsibilities and interaction of the executive, legislative, and judicial branches in an increasingly complex society**

11.5 **identify the reasons for amendments ratified since 1900 and analyze the effects**

$11.6_{6,9}$ **analyze the election process and the functions of political parties**

11.7 **evaluate the formation, role, and impact of third parties in the United States political process** ◊

$11.8_{4,6,7}$ **analyze and compare the goals and actions of reformers with regard to the extension of civil rights** ◊

11.9 examine historical and current political conflicts and compare resolutions within the framework of constitutional and totalitarian states ◊

11.10_{10} analyze the changing nature of civic responsibility in a diverse society

11.11 **develop generalizations and make inferences from primary and secondary sources** ◊

11.12 compare and contrast totalitarian and democratic governments and list representative examples ◊

11.13 **outline the purposes and functions of major international governmental and non-governmental organizations**

11.14 cite examples of working cooperatively and resolving conflict peacefully ◊

11.15 analyze and evaluate the influence of citizen action on public policy and law making ◊

11.16 formulate positions and possible actions on the problems of today and possible challenges of the future ◊

Review for Assessment

11.17_{5} **identify compromises in the formation of the United States Constitution**

Economics

$11.18_{3,4,5,6,7,8,9,10}$ **identify the basic economic systems and explain how each attempts to allocate scarce resources** ◊

11.19 analyze national and international economic interdependency ◊

11.20 **apply the law of supply and demand in the production of services in developed and developing nations** ◊

11.21 explain the business cycle and how different political systems formulate policy ◊

11.22 explain monetary policy and its effect on society ◊

11.23 analyze the causes and consequences of the U.S. national debt and its effect on the world economic system ◊

11.24 **explain the impact of technology and industrialization on the development of mass production and mass consumption** ◊

11.25 **analyze the economies of developing nations** ◊

11.26 **explain how Gross Domestic Product and per capita income are calculated and used to compare the economies of different nations** ◊

11.27 **explain how industrialization/technology changes life styles**

11.28 compare and evaluate basic economic systems according to how the system deals with demand, supply, labor unions, savings, investment, and capital ◊

11.29 **review ideas of noted economists**

Geography

11.30 **identify U.S. settlement patterns after 1900, and draw conclusions about causes and effect**

11.31 **relate and interpret the importance of geographic resources to international conflicts and cooperation since 1900 (e.g., discuss how**

U. S. dependence on Middle Eastern oil resulted in geo-political consequences) ◊

11.32 **relate and interpret the importance of geographic factors to social, political, economic and technological change (e.g., discuss the supposed increased "cost of doing business" since the establishment of the Environmental Protection Agency, or the lack of water west of the Mississippi)** ◊

11.33$_{3,4,5,6,7,8,9,10}$ **read and interpret maps, graphs, charts, cartoons, and timelines** ◊

11.34 transform primary data into maps, graphs, and charts ◊

11.35 identify on a blank map the places significant to each period of study

11.36 analyze the impact of human decision making and technology on the environment. (e.g., discuss the geographic discrimination suffered by minority neighborhoods) ◊

11.37$_{10}$ apply geographic factors/features in relationship to development of civilizations ◊

11.38 **draw conclusions about the advantages and disadvantages of annual flooding in the world**

11.39 **analyze and describe the effect of the Gulf Stream**

History

11.40 assess the impact of United States foreign policy on different world regions ◊

11.41$_{7,9}$ **identify and analyze the causes and consequences of world conflicts (e.g., World War I, World War II, Korea, Vietnam, and Gulf War)** ◊

11.42 identify and analyze the causes and consequences of regional conflicts (e.g., Middle East, Latin America, Africa, and Europe) ◊

11.43 **critique United States immigration policies**

11.44$_{9}$ **describe the development and impact of the United States labor movement**

11.45 describe the growth and development of social, economic, and political reforms ◊

11.46 **explain the rise and fall of Communism in the former Soviet Union**

11.47 **analyze the advent and implications of the Nuclear Age**

11.48$_{7}$ **analyze the origins and implications of the Cold War**

11.49 **trace and analyze the development of civil and human rights in the U.S. and in the world** ◊

11.50 analyze the challenges to national and world security by extremists and terrorists ◊

11.51 **identify major historical events in chronological order**

11.52 **trace and analyze the global concern for human rights (e.g., Holocaust, ethnic cleansing)**

11.53 **describe the impact of important African-American leaders**

Review for Assessment

11.54 **identify the Supreme Court decision which institutionalized slavery**

Computer/Technology

11.55 use appropriate software to practice and master grade eleven social studies instructional objectives ◊

11.56 use a variety of audio-visual and multi-media materials to practice and master eleventh grade social studies instructional objectives ◊

11.57 practice inputting data using correct keying, editing, and formatting techniques ◊

11.58 use graphics software to create graphs, histograms, tables and charts ◊

11.59 use graphics software to select the appropriate type of graph to display a set of data ◊

11.60 design and use a database to analyze, compare, and interpret the relationship between historical and geographical

events of the twentieth and early twenty-first century ◊

11.61 use simulation software for investigating open-ended problems, formulating questions and extending problem-solving situations as they relate to the twentieth and early twenty-first centuries ◊

11.62 critically evaluate information obtained from telecommunications and other technology sources ◊

Economics

Understanding economics is essential so students will know that most decisions have economic consequences. As resources become scarce, as the economic environment changes, and as the economic impact of decisions becomes more immediate, students must know how to use economic analysis to solve the complex problems they face now and in the future. This course will emphasize the need to make sense of the array of economic facts, events, observations and issues in everyday life and the ability to make effective decisions about economic issues.

E.1 give examples showing how scarcity of goods and services forces people to make choices about needs and wants ◊

E.2 analyze how the scarcity of natural, technological, capital, and human resources requires economic systems to make choices about the distribution goods and services ◊

E.3 explain the role supply and demand, prices, incentives, and profits play in determining what is produced and distributed in a free enterprise system ◊

E.4 compare and contrast examples of private and public goods and services ◊

E.5 evaluate the costs and benefits of allocating goods and services through public and private means ◊

E.6 describe and compare relationships among economic institutions (e.g., households, businesses, banks, government agencies, and labor unions) ◊

E.7 explain how specialization and division of labor in economic systems increase productivity ◊

E.8 describe the role of money and other forms of exchange in the economic process ◊

E.9 compare and analyze how values and beliefs influence economic decisions in different economic systems ◊

E.10 evaluate economic systems according to how laws, rules, and procedures deal with demand, supply, and prices ◊

E.11 evaluate historical and current social developments and issues from an economic perspective ◊

E.12 explain historical and current developments and issues in local, national, and global contexts from an economic perspective ◊

E.13 define inflation and explain its effects on economic systems ◊

E.14 define and analyze the use of fiscal and monetary policy in the national economic system ◊

E.15 explain the process of international trade from an economic perspective ◊

E.16 analyze and evaluate growth and stability in different economic systems ◊

E.17 analyze a public issue from an economic perspective and propose a socially desirable solution ◊

Civics/Government

Civic education is essential for active participation by informed citizens. This course will emphasize a study of government and individual rights and responsibilities. Examination of rules and laws and the need for authority is crucial to maintaining a safe society for diverse individuals and groups. Civic understanding increases as students develop the skills to make informed decisions, to resolve conflicts peacefully, to articulate and defend positions, and to engage in the civic and political life of their communities.

C.1 use documents such as the Declaration of Independence and the Constitution to explain the primary purposes of government ◊

C.2 describe the characteristics of government and civil society that relate to civic participation ◊

C.3 explain the significance of the consent of the governed in the formation of a democratic society ◊

C.4 explain the rule of law and why accepted rules must be followed by the government and those governed ◊

C.5 compare and contrast the tension between individual liberty and society's need for order ◊

C.6 identify examples of how individual rights are protected and how the government promotes the common good ◊

C.7 explain the rights of people to express their views and positions on proposed governmental actions ◊

C.8 compare and contrast direct and representative democracy ◊

C.9 explain why the founding fathers chose a republic as a form of government ◊

C.10 explain the roles of elected officials and their relationship to citizens ◊

C.11 explain how power is separated and shared in the United States at all levels of government ◊

C.12 define federalism and differentiate between states and federal governments ◊

C.13 explain the system of checks and balances provided by the Constitution ◊

C.14 explain how the rights of those accused of crime are protected in the 5th, 6th, and 14th amendments ◊

C.15 explain the values and interests protected by the right to counsel and due process ◊

C.16 identify and describe United States foreign policy, national security, and objectives ◊

C.17 describe the importance of foreign policy to individual citizens ◊

C.18 explain the process of becoming a citizen ◊

C.19 explain how United States citizenship differs from authoritarian and totalitarian regimes ◊

C.20 evaluate and defend positions facing on issues contemporary American society ◊

C.21 describe and evaluate the ways in which technology might affect civic life in the future ◊

Geography

Adolescent Science Education

The goal of adolescent science education prescribes that all students be scientifically literate. To accomplish scientific literacy, a curriculum based on an integration of science, mathematics, and technology with an emphasis on development of themes and concepts shall be utilized. The science program represents a core curriculum from which all students will successfully complete three science courses (Coordinated and Thematic Science Nine, Coordinated and Thematic Science Ten, and one approved science elective at a level higher than Thematic Science Ten) for science credit toward high school graduation.

The CATS Nine and CATS Ten courses continue the development of biology, chemistry, physics, and earth/space science concepts from the middle school curriculum. CATS Nine and CATS Ten are laboratory-based courses. Completion of CATS Nine and CATS Ten assures that students possess the foundational knowledge and preparation needed for advanced, in-depth study in all fields of science - biological sciences, chemistry, physics, and the environmental earth sciences.

Electives must address all seven overarching goals of the science curriculum. They are in-depth studies in laboratory-based natural sciences and science applications.

Required Courses

Coordinated and Thematic Science Nine
Coordinated and Thematic Science Ten

Elective Courses*

Biology Eleven/Twelve
Chemistry Eleven/Twelve
Chemistry - Technical/Conceptual
Environmental Earth Science Eleven/Twelve
Human Anatomy and Physiology
Physics - Eleven/Twelve
Physics - Technical/Conceptual
AP Courses
College Courses

* A minimum of one advanced course for each of the four fields of science (Biological Sciences, Chemistry, Environmental Earth Sciences, and Physics) must be offered.

County school systems or individual high schools may opt to offer additional approved science electives such as Astronomy, Biochemistry, Botany/Zoology, Coordinated and Thematic Science Eleven/Twelve, Ecology, Microbiology, Organic Chemistry, Physical Geology. The instructional goals and objectives for these science electives must be approved by the county board of education.

Grade Nine Science

The Coordinated and Thematic Science (CATS) Nine objectives continue the development of foundational knowledge in biology, chemistry, physics, and the earth sciences. Through a spiraling, inquiry-based program of study, all students will demonstrate scientific literacy across these major fields of science. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated in all activities. Building on the knowledge and skills acquired in CATS Eight, students in CATS Nine will expand and deepen their understanding of major concepts such as energy interactions, genetic probabilities, chemical changes and mineral composition of local rock layers.

Nature of Science

9.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

9.2 recognize general limitations of science

9.3_{11} explain that science is composed of observations set in a testable framework of ideas

9.4 conclude that science is a blend of creativity, logic and mathematics

Scientific Attitudes/Habits of Mind

$9.5_{4,5,6,7,8,10,11}$ **model and exhibit the skills, attitudes and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◊

9.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results and peer review)◊

9.7_{11} apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards and scientific and technological challenges) ◊

Scientific Processes/Thinking Skills

$9.8_{3,4,5,6,7,8,10,11}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring and applying)** ◊

$9.9_{3,4,5,6,7,8,10,11}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◊

$9.10_{3,4,5,6,7,8,10,11}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and effect graphical analysis including interpretation and extrapolation)** ◊

9.11 use SI (metric) measurements

9.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination and creativity while working individually and/or cooperatively ◊

9.13 use the tools of science safely, accurately and appropriately ◊

$9.14_{4,5,6,8}$ **identify independent and dependent variables in experimental investigations**

9.15 **manipulate variables to extend experimental activities**

9.16_{11} **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence,**

recognize alternative explanations, communicate and defend a scientific argument, understand about scientific inquiry) ◊

Laboratory Investigations/Hands-on Learning

9.17 engage in active inquiries, investigations and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

9.18 properly and safely manipulate equipment, materials, chemicals, organisms and models ◊

9.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

9.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Content and Themes

9.21 articulate connections among the major disciplines of science

9.22 utilize the thematic approach incorporating the following themes: systems, changes, and models

9.23_{11} **analyze and explain the principles of genetics (e.g., monohybrid and dihybrid crosses, mutations, genotypes, phenotypes, X and Y chromosomes, DNA, probability, diversity) - *models***

$9.24_{7,8,10,11}$ **identify and explain the structures and functions of tissues (e.g., striated, cardiac, smooth muscle) - *systems***

$9.25_{7,8,10,11}$ **explain how human body systems work together (e.g., excretory, digestive systems) - *systems***

$9.26_{7,11}$ **identify and describe microscopic organisms and foreign substances in the environment and their harmful effects (e.g., microorganisms, mutagens, carcinogens) - *systems***

9.27 **mathematically illustrate changes in populations of organisms - *changes***

9.28 **identify the organisms and the chemical processes involved in the decay of materials - *changes***

$9.29_{4,6,8,10,11}$ trace the transfer of matter and energy in the chemical/molecular processes of photosynthesis, respiration, and fermentation - *changes*

$9.30_{7,8,10,11}$ **compare the variations in cells, tissues, and organs of the excretory and digestive systems of different organisms - *changes***

$9.31_{3,4,5,7,8,10,11}$ **design an environment which demonstrates the interdependence of plants and animals (e.g., energy and chemical cycles, adaptations of structures and behaviors) - *models***

9.32 **illustrate meiosis and mitosis and relate to chromosome number and production of sperm, egg, and body cells - *models***

9.33 construct and manipulate models which show variations in living things (e.g., excretory, digestive systems) - *systems, models*

9.34 list the characteristics of radioactivity including alpha and beta particles and gamma rays - *systems*

9.35 associate proton number with type of element, electron distribution with reactivity, and number of neutrons with nuclear stability - *systems*

9.36_{11} review the relationship between elements and their location in the periodic table including families, metals, nonmetals and metalloids - *systems*

9.37_{11} determine the number of neutrons, protons and electrons given atomic number and average atomic mass number and relate to the periodic table position - *systems*

9.38_{11} identify and distinguish kinds of chemical bonds including ionic, nonpolar covalent and polar covalent - *systems*

9.39_{11} recognize that water has unusual properties due to its molecular shape, polarity, and hydrogen bonding - *systems*

$9.40_{6,7,8,10,11}$ **recognize that all chemical reactions involve energy changes**

(e.g. endothermic and exothermic reactions) - *systems*

9.41_{11} experimentally determine the products of chemical reactions then write and balance chemical equations - *changes, models*

$9.42_{6,7,11}$ **conduct, write equations and classify five types of chemical reactions including synthesis, decomposition, single displacement, double displacement and combustion - *changes, models***

$9.43_{6,7,8,10,11}$ **investigate the relationships among temperature, pressure and volume in gases with respect to Charles (V-T), Boyles (V-P) and Gay-Lussac's Laws (P-T) - *changes***

$9.44_{10,11}$ diagram the relationship between energy and phase changes (e.g. freezing, boiling, sublimation) - *models*

9.45_{10} trace the development of the model of the atom (e.g. Crookes, Thompson, Becquerel, Rutherford and Bohr) - *models*

9.46 write formulas and name compounds given oxidation numbers of monatomic and polyatomic ions - *models*

9.47 draw structures of simple organic compounds (e.g. alkanes, alcohols) - *models*

9.48_{11} **demonstrate water characteristics including capillary action, surface tension, adhesion and cohesion via a variety of methods (e.g. chromatography, meniscus readings) - *models***

$9.49_{8,10}$ **experiment with a pendulum to determine which variables (amplitude, mass, length) will affect the motion of the pendulum - *systems***

9.50 **relate the force between charged objects to the charge on the objects and the distance between them - *systems***

9.51 **examine the differences and similarities between transverse and longitudinal waves - *systems***

9.52 **relate absorption and dissipation of heat to the composition of a material - *systems***

9.53 **describe the behavior of atoms and molecules in terms of the Kinetic Molecular Theory (e.g., gases, solids, liquids) - *systems***

9.54 **relate wavelength to color and frequency - *systems***

9.55 **review of foundational concepts including refraction, speed, distance, time, Newton's Laws, simple machines, tables and graphs, heat absorption, energy transformations, and air pressure - *systems***

$9.56_{7,8}$ **differentiate energy transformations (e.g., heat, light, sound, mechanical, chemical, nuclear) - *changes***

9.57 define a chain reaction and show an example using a radioactive isotope (e.g., U-235) - *changes*

9.58 differentiate between fission and fusion - *changes*

$9.59_{6,7,8,10,11}$ **identify and describe various forms of energy (e.g., electromagnetic, electrical, chemical, mechanical, nuclear form) - *changes***

$9.60_{5,6,7,8,10,11}$ **solve for variables using the density equation, D = m/V and experimentally determine the density of an object making measurements of mass and volume - *models***

9.61 define and solve problems involving potential difference - *models*

9.62 **define types of waves and their properties (e.g., interference, diffraction, resonance) - *models***

9.63 use the wave equation to determine the relationships among speed, wavelength, and frequency - *models*

9.64 solve electrical problems (e.g., Ohm's Law $I = V/R$, Power $P = I^2R$) - *models*

9.65 **hypothesize and experiment when different components are substituted in an electrical circuit. Test the hypothesis - *models***

9.66 demonstrate and diagram a magnetic field using a bar magnet and iron filings - *models*

9.67 **list the characteristics of electromagnetic waves and identify uses - *models***

9.68 **define and describe half life of a radioactive isotope - *models***

9.69 **demonstrate light as a wave**

motion (e.g., ripple tank) - *models*

9.70 **review characteristics of light (e.g., reflect, refract, diffract) - *change***

9.71 **review fundamental earth science concepts including air has mass and exerts pressure, physical states of matter -*systems***

9.72 research uses and values of natural resources -*systems*

9.73 research space technology in everyday life -*systems*

9.74 **examine how scientists use seismographic evidence in determining structure and composition of the Earth's interior -*systems***

9.75 **explain and compare motions of the sun and moon -*systems***

9.76 **relate temperature, pressure, wind speed, wind direction, and humidity as elements of weather - *systems***

9.77 interpret why warm air can hold more water vapor than cold air -*systems*

9.78 **estimate the age of materials using existing radioactive data -*systems***

9.79 research current environmental issues (e.g., effects of pollution, solid waste management, local, national, and global issues) -*systems*

9.80 relate the structure of the ocean floor to the kind of organisms present - *systems*

9.81 explore the properties and motions of oceans -*systems*

9.82 **interpret how sound travels through different materials (e.g., transmitted, reflected, or absorbed) -*changes***

$9.83_{3,6}$ **examine and describe interactive cycles (e.g., water cycle, nitrogen cycle, and carbon cycle) -*changes***

9.84_{10} distinguish the movements of subsurface water -*changes*

9.85_{10} examine geologic time emphasizing isotopic ages and biostratigraphy - *changes*

9.86 investigate formation and destruction of mountains (e.g., weathering, earthquakes, volcanoes, plate tectonics) -*changes*

$9.87_{4,6,7,8,10,11}$ **construct and use weather maps and charts (e.g., temperature, pressure, wind speed, wind direction, humidity) -*models***

$9.88_{4,6,10,11}$ **analyze and describe a common rock sample (e.g., color, grain, and composition) -*models***

$9.89_{4,6,10,11}$ **employ tests to identify rocks and minerals (e.g., streak, color, hardness, cleavage) -*models***

$9.90_{8,10}$ **estimate linear distance on a map scale (e.g., topographic maps) - *models***

9.91 construct and explain models (e.g., solar systems, galaxies, constellations, stellar types, and stellar evolution) -*models*

9.92 **use a model to describe the functions of the water cycle (e.g., water entering and leaving the atmosphere, flow of water and precipitation) -*models***

Science History

9.93 identify contributors to the scientific body of knowledge including their diverse cultures

9.94 trace the historical development of key historical concepts and principles describing their impact on modern thought and life

9.95 describe the impact of cultural, technological, and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology, and Society

9.96 apply scientific skills and technological tools to address personal and societal needs ◊

9.97 engage in decision making activities and actions to resolve science-technology-society issues ◊

9.98 investigate and analyze the interdependence of science and technology ◊

9.99 describe the scientific concepts underlying technological innovations ◊

9.100 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer/Technology

9.101 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes

◊

9.102 collect, analyze, and display data using computers and other electronic technology ◊

9.103 access internet resources for a variety of purposes (e.g., research, exchange data, e-mail, real-time investigations) ◊

9.104 demonstrate skills in the use of word processing, data bases, spreadsheets, graphics and telecommunication ◊

9.105 identify and solve problems with the appropriate technology ◊

9.106 incorporate correct grammar, spelling, vocabulary, and graphical representation for both written and oral multimedia presentations ◊

Grade Ten Science

The Coordinated and Thematic Science (CATS) Ten objectives conclude the development of foundational knowledge of biology, chemistry, physics, and the earth sciences. Through the spiraling, inquiry-based program of study, all students will demonstrate scientific literacy across these major fields of science. The subject matter is delivered through a coordinated, integrated approach with an emphasis on the development of the major science themes of systems, changes, and models. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and research laboratory skills. Safety instruction is integrated in all activities. Building on the knowledge and skills acquired in CATS Nine, students in CATS Ten will expand their depth of understanding of major concepts such as energy transformation qualifications, molecular genetics, embryology, physical, chemical and nuclear changes, mineral extraction techniques, and environmental concerns.

Nature of Science

10.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

10.2 recognize general limitations of science knowledge

10.3_{11} explain that science is composed of observations set in a testable framework of ideas

10.4 conclude that science is a blend of creativity, logic and mathematics

Scientific Attitudes/Habits of Mind

$10.5_{4,5,6,7,8,9,11}$ **model and exhibit the skills, attitudes and values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)**

10.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results and peer review)◊

10.7_{11} apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards and scientific and technological challenges) ◊

Scientific Processes/Thinking Skills

$10.8_{3,4,5,6,7,8,9,11}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring and applying)** ◊

$10.9_{3,4,5,6,7,8,9,11}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◊

$10.10_{3,4,5,6,7,8,9,11}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and affect graphical analysis including interpretation and extrapolation)** ◊

10.11 use SI (metric) measurements

10.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination and creativity while working individually and/or cooperatively ◊

10.13 use the tools of science safely, accurately and appropriately ◊

$10.14_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

10.15 manipulate variables to extend experimental activities

10.16_{11} design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence, recognize alternative explanations, communicate and defend a scientific argument, understand about scientific inquiry) ◊

Laboratory Investigations/Hands-on Learning

10.17 engage in active inquiries, investigations and hands-on activities for a minimum of 50 percent of the instructional time ◊

10.18 properly and safely manipulate equipment, materials, chemicals, organisms and models ◊

10.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

10.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Themes and Content

10.21 articulate connections among major disciplines of science

10.22 utilize the thematic approach incorporating the following themes: systems, change, and models

$10.23_{4,5,6,8,11}$ review the needs of growing plants and the environments supplying those needs - *systems*

10.24_{8} identify and explain the structures and functions of cell organelles (e.g., Golgi bodies, endoplasmic reticulum, mitochondria, chloroplast, ribosomes, lysosomes, vacuoles) - *systems*

$10.25_{7,8,9,11}$ explain how human body systems work together (e.g., nervous, endocrine, immune)- *systems*

$10.26_{3,4,5,6,7,8,9}$ review factors that affect succession and populations and communities (e.g., use maps, graphs, charts, and tables) - *systems*

10.27 identify mechanisms for the movement of materials into and out of cells (e.g., active and passive transport, endo- and exocytosis) - *systems*

10.28_{11} explain the role of DNA in controlling cellular functions (e.g., protein synthesis, heredity, cell division) - *systems*

$10.29_{3,4,5,6,7,8,9,11}$ construct concept maps showing energy flow and cycles of matter between chemical and biological systems including photosynthesis, stored chemical energy, decomposition, carbon and nitrogen cycles) - *changes*

10.30_{8} trace matter and energy flow through the respiration processes of glycolysis, the Krebs cycle, and electron transport system (e.g., ATP, carbon, oxygen, water) - *changes*

$10.31_{7,8,9,11}$ compare the variations in cells, tissues, and organs of the nervous, endocrine and immune systems of different organisms - *changes*

10.32 compare the embryonic development of invertebrate and vertebrate animals (e.g., ontogeny and phylogeny, diversity, taxonomy) - *changes*

$10.33_{3,4,5,6,7,8,9}$ relate the role of natural selection to the development and/or extinction of a species - *changes*

$10.34_{7,8,9,11}$ illustrate the interdependence of cells, tissues, organs, and systems

to the life functions of the whole organism - *models*

10.35 construct and manipulate models which show variations in living things (e.g., nervous, endocrine, immune systems) - *models*

10.36$_{3,5,6,8,11}$ **investigate the properties of solutions including density, conductivity, solubility, concentration, pH, and colligative properties - *systems***

10.37$_{11}$ use polarity, molecular shape, and bonding to explain why water is considered the "universal solvent" - *systems*

10.38$_{6,7,8,9,11}$ **interpret graphs showing the relationships among temperature, pressure, and volume in gases with respect to Charles (V-T), Boyles (V-P), and Gay-Lussac's Law (P-T) - *systems***

10.39$_{4,5,6,7,8,9,11}$ **differentiate between physical, chemical, and nuclear changes - *changes***

10.40 measure the change in heat gained or lost during chemical reactions using the specific heat of water (e.g, heat released during burning of food materials, acid-base neutralization) - *changes*

10.41$_{11}$ **investigate the relationship between energy and phase change in order to demonstrate heat of fusion and/or heat of vaporization - *changes***

10.42 **recognize that the equation $E=mc^2$ can be used to illustrate the conversion of mass to energy during nuclear reactions - *changes***

10.43$_{11}$ validate the law of conservation of matter in chemical reactions - *changes*

10.44$_{6,7,9,11}$ use chemical equations to represent chemical and biochemical reactions (e.g., photosynthesis) - *models*

10.45$_{9}$ predict the isotope or radiation particle emitted during nuclear reactions given either isotope or radiation particles - *models*

10.46 complete simple nuclear equations given all but one of the materials involved in the reaction - *models*

10.47 illustrate how scientists used the electromagnetic spectrum to show the energy levels of electrons within atoms -*models*

10.48 relate characteristics and behavior of waves with earth and life processes (e.g., erosion, vision) -*systems*

10.49 calculate the relationship among rate, force, momentum and time - *systems*

10.50 **summarize the relationship between frequency and speed (e.g., Doppler effect) - *systems***

10.51$_{8,9}$ **determine the effect of different forces on vibrating systems (e.g., pendulums, springs) - *systems***

10.52$_{9}$ **qualitatively explain the relationship between electricity and magnetism (e.g., the electromagnetic field) - *systems***

10.53$_{4,5}$ **describe how components of an electric circuit function individually and as a component in an electric circuit - *systems***

10.54 review of fundamental concepts including air pressure, speed (distance and time), pendulums, vibrating objects - *systems*

10.55$_{3,9,11}$ demonstrate qualitative and quantitative understanding of pressure in various systems (e.g., water pipes, circuits, blood vessels) - *systems*

10.56$_{3,4,5,6,7,8,9,11}$ **qualitatively and quantitatively describe the conservation of energy (e.g., thermal, chemical, mechanical) - *changes***

10.57$_{5,6,7,8,9,11}$ **relate the physical change in substances to changes in temperature (e.g., thermal expansion/contraction, increases/decreases in density) - *changes***

10.58 explain the relationship between wind and waves - *models*

10.59 **differentiate between the movement of water particles in a wave and the movement of wave energy - *models***

10.60 explain the cause of tides - *models*

10.61$_{9}$ **compare and contrast the characteristics and uses of waves in various parts of the electromagnetic spectrum - *models***

10.62$_{9}$ **calculate the frequency of a particular wavelength - *models***

10.63$_{9}$ **measure the rate of absorption of**

infrared radiation in containers of various colors - *models*

10.64 **apply Newton's Laws of Motion to living systems (e.g., walking) - *models***

10.65 extrapolate and interpolate graphs of distance and time (e.g., migration) - *models*

$10.66_{8,9}$ describe and quantify how machines can provide mechanical advantages - *models*

$10.67_{5,6,7,8,11}$ identify and describe the effects of specific heat on heating and cooling objects - *models*

10.68 **review fundamental earth science concepts including tests to identify rocks and minerals, topographic maps - *systems***

10.69_{3} **investigate fossils (e.g., origins, use in establishing geological time, types of plants and animals included in fossil-fuel formation, compare fossils to present today organisms - *systems***

10.70_{11} **examine the effects of natural phenomena on the environment (e.g., oceanographic, meteorologic) - *systems***

10.71_{3} **probe characteristics of the atmosphere (e.g., relationship of air pressure to temperature and humidity, demonstrate that air has mass and exerts pressure - *systems***

10.72_{7} **compare and contrast the characteristics of Earth to the other planets - *systems***

$10.73_{8,9}$ **illustrate methods to recover subsurface water for human use - *systems***

10.74_{9} **relate electromagnetic fields to the earth's magnetosphere - *systems***

10.75_{7} **describe factors determining the height and frequency of tides - *systems***

10.76 **identify and describe the effects of ocean currents on climate - *change***

$10.77_{9,11}$ **interpret apparent motion of constellations and their relationship to the rotation of the earth - *change***

10.78_{4} **explore and explain the energy relationships in earth science (e.g., weather, plate tectonics, height and frequency of waves) - *change***

10.79 summarize technological advances in astronomy and meteorology - *change*

10.80 research current environmental issues (e.g., depletion of fossil fuels, global warming, destruction of rain forest pollution) - *change*

10.81_{8} **review physical changes in earth materials due to temperature variations and relate those changes to earth's natural processes - *change***

$10.82_{4,7}$ **utilize a stream table to observe the effects of water on the earth's surface (e.g., changes in particle size, slope, velocity) - *change***

10.83_{11} **construct and interpret maps (e.g., use maps of geographic features to predict flora and fauna, weather maps and charts to observe and predict weather, topographical maps to illustrate surface features) - *models***

Science History

10.84 identify contributors to the scientific body of knowledge including their diverse cultures

10.85 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

10.86 describe the impact of cultural, technological and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology and Society

10.87 apply scientific skills and technological tools to address personal and societal needs ◊

10.88 engage in decision making activities and actions to resolve science-technology-society issues ◊

10.89 investigate and analyze the interdependence of science and technology ◊

10.90 describe the scientific concepts underlying technological innovations ◊

10.91 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

10.92 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

10.93 collect, analyze and display data using computers and other electronic technology ◊

10.94 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, and real-time investigations) ◊

10.95 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

10.96 identify and solve problems with the appropriate technology ◊

10.97 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

Biology Eleven/Twelve

This is an advanced level course designed for students who have completed Coordinated and Thematic Science (CATS) 10 and desire a broader, in-depth study of the content found in many biological fields of endeavor. This course is designed to build upon and extend the Biology concepts, skills, and knowledge from the CATS 7-10 program. Students interested in health and scientific related careers will build and expand their laboratory skills and experiences. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills.

Nature of Science

B.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

B.2 recognize general limitations of science

B.3 **explain that science is composed of observations set in a testable framework of ideas**

B.4 conclude that science is a blend of creativity, logic, and mathematics

Scientific Attitudes/Habits of Mind

B.$5_{4,5,6,7,8,9,10}$ **model and exhibit the skills, attitudes and values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity** ◊

B.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results and peer review) ◊

B.7 **apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards and scientific and technological challenges)** ◊

Scientific Processes/Thinking Skills

B.$8_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring, and applying)** ◊

B.$9_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis** ◊

B.$10_{3,4,5,6,7,8,9,10}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and effect graphical analysis including interpretation and extrapolation)** ◊

B.11 use SI measurement (metric)

B.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination, and creativity while working individually and/or cooperatively ◊

B.13 use the tools of science safely,

accurately, and appropriately ◊

B.14$_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

B.15$_{9}$ manipulate variables to extend experimental activities

B.16$_{9}$ **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence, recognize alternative explanations, communicate and defend a scientific argument, understand about scientific inquiry)** ◊

Laboratory Investigations/Hand-On Learning

B.17 engage in active inquiries, investigations, and hands-on activities for a minimum of 50 percent of instructional time ◊

B.18 properly and safely manipulate equipment, materials, chemicals, organisms, and models ◊

B.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations) ◊

B.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze, and/or report data, interact with simulations, and research ◊

Science Themes and Subject Matter

B.21$_{9,10}$ **apply molecular genetic principles to explain energy patterns (e.g., DNA, RNA, recombinant DNA, role of enzymes, mutations, population dynamics)**

B.22$_{7,9}$ **illustrate the stages in the life cycle of pathogens and trace the causes of diseases**

B.23$_{7,8,9,10}$ **investigate the interrelationships between anatomy and physiology of organisms**

B.24$_{7,8}$ **discuss external and internal factors that could damage cells, tissues, organs, or systems (e.g., carcinogens, fractures, noise, temperature)**

B.25$_{6,8,10}$ **trace matter and energy transfer that occurs during cellular respiration and photosynthesis**

B.26 construct models of all cell types showing structure, function, and biochemical processes

B.27 classify organisms into proper taxonomic groups by embryology, morphology, biochemistry, and karyotyping

B.28 compare the diversity of living organisms by grouping organisms according to similar characteristics (e.g., Monerans, protists, fungi, plants, simple and complex animals)

B.29 trace the embryological development of organisms

B.30 investigate and analyze responses of the ecosystem to events that cause changes

B.31$_{8,9,10}$ **design and map a biome or ecosystem showing geographical features, climate, and organisms that will adapt to life conditions there**

B.32 construct maps of the relationships between past and present life forms

B.33 explore and identify the different areas of biology (e.g., entomology, ichthyology, ornithology, phycology, zoology)

Science History

B.34 identify contributors to the scientific body of knowledge including their diverse cultures

B.35 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

B.36 describe the impact of cultural, technological and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology and Society

B.37$_{9}$ apply scientific skills and technological tools to address

personal and societal needs ◊

B.38 engage in decision making activities and actions to resolve science-technology-society issues ◊

B.39 investigate and analyze the interdependence of science and technology ◊

B.40 describe the scientific concepts underlying technological innovations ◊

B.41 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

B.42 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

B.43 collect, analyze and display data using computers and other electronic technology ◊

B.44 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, and real-time investigations) ◊

B.45 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

B.46 identify and solve problems with the appropriate technology ◊

B.47 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

Chemistry Eleven/Twelve

Chemistry Eleven/Twelve is the advanced study of matter, its composition, and its changes. Chemistry Eleven/Twelve builds on the foundation of chemical concepts developed in CATS Seven through CATS Ten. This course is designed to prepare a student for college chemistry, requiring a strong mathematical base. The relationship between chemistry concepts and mathematics will be emphasized. Students will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities.

Nature of Science

C.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

C.2 recognize general limitations of science

C.3 **explain that science is composed of observations set in a testable framework of ideas**

C.4 conclude that science is a blend of creativity, logic, and mathematics

C.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results, and peer review)◊

C.7 **apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards and scientific and technological challenges)** ◊

Scientific Attitudes/Habits of Mind

$C.5_{4,5,6,7,8,9,10}$ **model and exhibit the skills, attitudes, and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◊

Scientific Processes/Thinking Skills

$C.8_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing,**

classifying, relating, hypothesizing, predicting, inferring, and applying) ◊

C.9$_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◊

C.10$_{3,4,5,6,7,8,9,10}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and affect, graphical analysis including interpretation and extrapolation)** ◊

C.11 use SI (metric) measurements

C.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination and creativity while working individually and/or cooperatively ◊

C.13 use the tools of science safely, accurately, and appropriately ◊

C.14$_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

C.15$_{9}$ manipulate variables to extend experimental activities

C.16$_{9}$ **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations; design and conduct scientific investigations; use technology and mathematics to improve investigations and communications; formulate and revise scientific explanations and models using logic and evidence; recognize alternative explanations; communicate and defend a scientific argument; understand scientific inquiry)** ◊

Laboratory Investigations/Hands-on Learning

C.17 engage in active inquiries, investigations, and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

C.18 properly and safely manipulate equipment, materials, chemicals, organisms, and models ◊

C.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

C.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Themes and Subject Matter

C.21$_{3,4,5,6,7,8,9,10}$ **review of foundational chemical concepts including chemical symbols representing elements, ions, and formulas; balanced-equations; atomic structure including subatomic particles and atomic models; use of periodic table to locate and classify elements; states of matter; colligative properties; kinetic molecular theory; chemical and physical properties; and chemical and physical changes**

C.22 write electron configurations and complete diagrams for electron position

C.23 relate the position and velocity of an electron to the Heisenberg Uncertainty Principle

C.24 identify four types of electron clouds (s, p, d, f)

C.25 evaluate the contributions of Planck, Einstein, and deBroglie to the wave-particle duality of light

C.26 research the contributions of Schrodinger's work to the development of a mathematical basis for the wave-mechanical view of hydrogen atom

C.27 describe the quantum number (n, l, m, s) for electrons

C.28 write electron dot structures for representative elements

C.29 associate electrons configuration of elements with element location on periodic table

C.30 **analyze the periodic table to predict trends in atomic size, ionic size, electronegativity, ionization energy, and electron affinity**

C.31_9 **using the periodic table, predict the type of bonding that occurs between atoms and differentiate among properties of ionic, covalent, and metallic bonds**

C.32_{10} **construct models to explain the structure and geometry of organic and inorganic molecules and the lattice structures of crystals**

C.33 use hybridization theory to explain bond angles in compounds

C.34 define and describe the types of van der Waals forces and list the three factors contributing to them

C.35 describe the formation of sigma and pi bonds

C.$36_{7,8,9,10}$ **predict the products and write balanced equations for the general types of chemical reactions**

C.37 use the Avogadro constant to define the mole and to calculate molecular and molar mass as well as a molar volume

C.38 use molar mass to calculate the molarity of solutions, percentage composition, and empirical formulas

C.39 experimentally determine the formulas of hydrates

C.40 do stoichiometric calculations including mass-mass, mass-volume, volume-volume to determine percent yield and heat of reaction

C.41 use the ideal gas equation to calculate the molar mass of a gas

C.42 identify the limiting reactant and predict the theoretical yield

C.43 distinguish between the thermodynamic and kinetic stability

C.44 experimentally determine the factors that influence the rate of reaction

C.45 calculate equilibrium constants and concentration of products and reactants

C.46 apply LeChatelier's principle to explain the effect of changes in concentration, pressure, volume, and temperature on an equilibrium system

C.47 draw and label an energy-time diagram for both an endothermic and an exothermic reaction

C.48 name and define acids and bases using Arrhenius, Bronsted-Lowery and Lewis definitions

C.49 predict the products upon adding water to both acidic and basic anhydrides

C.50 write and balance net ionic equations and calculate ionization constants for neutralization reactions

C.51 solve problems using the solubility product constants

C.52 calculate the pH and/or pOH for various solutions and relate to the pH scale

C.53 conduct titrations and perform calculations for both acid-base and oxidation-reduction reactions

C.54 define oxidation and reduction in terms of electron transfer within reactions

C.55 construct electrolytic and voltaic cells, write and balance the half-cell reactions and calculate the cell voltage

C.56 calculate the enthalpy change in reactions using the heat of formation

C.57 evaluate the factors driving chemical reactions including enthalpy and entropy and their interrelationship

C.58 calculate Gibb's Free Energy using enthalpy and entropy values

C.59 calculate the rate of radioactive decay and apply to radiometric dating

C.60 predict nuclear stability using proton-neutron diagrams

C.61 distinguish between the hazards of ionizing and penetrating radiation

C.62 research the application of nuclear technology (e.g., power plants, medicine, weaponry)

C.63 compare and contrast fusion and fission reactions

C.64 recognize simple organic functional groups and name simple organic compounds

Science History

C.65 identify contributors to the scientific body of knowledge including their diverse cultures

C.66 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

C.67 describe the impact of cultural, technological and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology, and Society

C.68$_9$ apply scientific skills and technological tools to address personal and societal needs ◊

C.69 engage in decision making activities and actions to resolve science-technology-society issues ◊

C.70 investigate and analyze the interdependence of science and technology ◊

C.71 describe the scientific concepts underlying technological innovations ◊

C.72 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

C.73 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

C.74 collect, analyze and display data using computers and other electronic technology ◊

C.75 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, on-line chat and real-time, investigations) ◊

C.76 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

C.77 identify and solve problems with the appropriate technology ◊

C.78 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

Chemistry-Technical/Conceptual

Chemistry -Technical/Conceptual is the study of matter, its compost, and its changes. This course is an alternative to a traditional college preparatory course. It emphasizes real life applications of chemical principles. Mathematical based problem solving is de-emphasized. Emphasis is placed on the important role chemistry plays in a student's personal life, career opportunities, environment, and society. Students will engage in active inquiries, investigations, and hand-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research laboratory skills. Safety instruction is integrated into all activities.

Nature of Science

CTC.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

CTC.2 recognize general limitations of science

CTC.3 **explain that science is composed of observations set in a testable framework of ideas**

CTC.4 conclude that science is a blend of creativity, logic and mathematics

Scientific Attitudes/Habits of Mind

CTC.5$_{4,5,6,7,8,9,10}$ **model and exhibit the skills, attitudes and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◊

CTC.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results and peer review)◊

CTC.7 **apply scientific approaches to**

seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards and scientific and technological challenges) ◊

Scientific Processes/Thinking Skills

CTC.$8_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring and applying)** ◊

CTC.$9_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◊

CTC.$10_{3,4,5,6,7,8,9,10}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and affect graphical analysis including interpretation and extrapolation)** ◊

CTC.11 use SI (metric) measurements

CTC.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination and creativity while working individually and/or cooperatively ◊

CTC.13 use the tools of science safely, accurately and appropriately ◊

CTC.$14_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

CTC.15_{9} manipulate variables to extend experimental activities

CTC.16_{9} **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence, recognize alternative explanations, communicate and defend a scientific argument, understand about scientific inquiry)** ◊

Laboratory Investigations/Hands-on Learning

CTC.17 engage in active inquiries, investigations and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

CTC.18 properly and safely manipulate equipment, materials, chemicals, organisms and models ◊

CTC.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

CTC.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Themes and Subject Matter

CTC.$21_{3,4,5,6,7,8,9,10}$ **review fundamental chemistry concepts including, parts of the atom, chemical and physical properties, chemical and physical changes, chemical formula, balancing equations, conservation of matter and energy, transfer or sharing of electors during chemical reactions, periodic table, metallic and nonmetallic properties, ionic and covalent bonds, solubility, concentration, colloids, suspensions, acids, bases, neutralization reactions, pH, colligative properties, temperature, pressure, and volume relationships, nuclear fission, nuclear fusion**

CTC.$22_{3,5,6,8}$ **discuss the impact of water's unusual physical properties**

CTC.23 illustrate the concept of limiting reagent

CTC.24$_{6,7,8,9,10}$ **identify the parts of the kinetic molecular theory and explain states of matter**

CTC.25 define the term mole, and calculate the molar mass of a compound when provided with its formula and the atomic masses of its elements

CTC.26 calculate the percent by mass of a specific element in a given compound

CTC.27 investigate the formation of elements from compounds using electrolysis to demonstrate an oxidation-reduction process as an example of metal purification from ores

CTC.28 predict reactivity of metals using the activity series of metals

CTC.29 describe the use of half-reactions to describe electrochemical cells

CTC.30 show how to apply resource conservation techniques to a limited nonrenewable resource (e.g., reduce, reuse, and recycle)

CTC.31 investigate the relationship of boiling point, density and viscosity to the number of carbon atoms and side chains in organic compounds

CTC.32 draw and build structural models of the first ten alkanes

CTC.33 collect data and calculate the heat of combustion for organic compounds (e.g., candle, food product)

CTC.34 identify the functional groups for common alcohols, ethers, carboxylic acids, and esters

CTC.35 model polymerization including addition and condensation reactions 9e.g., plastics, esters, polysaccharides, proteins, fats)

CTC.36 explain the benefits and consequences of energy conservation with respect to petroleum's ability to be use as a building material and/or fuel

CTC.37 examine examples of nuclear technology that affect daily life

CTC.38 balance nuclear equations and use them to describe natural radioactive decay

CTC.39 compare penetrating power of alpha, beta, and gamma radiation and discuss safety factors

CTC.40 **simulate and explain half-life decay**

CTC.41 **graph radiation vs. Time illustrating half-life of radioisotopes**

Science History

CTC.42 identify contributors to the scientific body of knowledge including their diverse cultures

CTC.43 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

CTC.44 describe the impact of cultural, technological and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology and Society

CTC.45$_{9}$ apply scientific skills and technological tools to address personal and societal needs ◊

CTC.46 engage in decision making activities and actions to resolve science-technology-society issues ◊

CTC.47 investigate and analyze the interdependence of science and technology ◊

CTC.48 describe the scientific concepts underlying technological innovations ◊

CTC.49 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

CTC.50 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

CTC.51 collect, analyze and display data using computers and other electronic technology ◊

CTC.52 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, on-line chat and real-time, investigations) ◊

CTC.53 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

CTC.54 identify and solve problems with the appropriate technology ◊

CTC.55 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

Environmental Earth Science Eleven/Twelve

As responsible citizens on this planet, students must be able to recognize their role as caretakers of the earth in order to protect its fragile environment. This is possible only if students have a deep understanding of the earth and its processes. Environmental Earth Science Eleven/Twelve builds on the fundamentals of geology, oceanography, meteorology and astronomy developed in CATS 7-10 in a rigorous and integrated manner with the traditional disciplines of biology, chemistry and physics where appropriate. As stewards of the earth, an emphasis on environment should be included within the traditional earth science disciplines. Ecology, economics, politics and social considerations all combine to help students develop an understanding of how humans effect and are effected by their environment. Students will engage in active inquiries, investigations, and hands-on activities fora minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities.

Nature of Science

ES.1 recognize the open-ended structure of science

ES.2 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

ES.3 recognize the limits of science

ES.4 recognize science as composed of observations set in a testable framework of ideas

ES.5 conclude that science is a blend of logic, mathematics, and imagination

Scientific Attitudes/Habits of Mind

ES.$6_{4,5,6,7,8,9,10}$ **model and exhibit the skills attitudes and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◊

ES.7 demonstrate ethical practices in science (e.g., established research protocol, accurate record keeping, replication of results, peer review)

ES.8 realize that science and technology affect the environment

ES.9 apply scientific information to personal and societal decision making

ES.10 **apply scientific approaches to seek solutions for everyday problems (e.g., personal community health, population growth, natural resources, environmental quality, natural and human induced hazards, and scientific and technological challenges)**◊

Scientific Processes/Thinking Skills

ES.$11_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, relating, inferring, and applying)**◊

ES.$12_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis** ◊

ES.$13_{3,4,5,6,7,8,9,10}$ **identify analyze and infer using patterns and relationships in data (e.g., cause and effect, graphical analysis including interpretation, interpolation and extrapolation)** ◊

ES.14 use SI (metric) measurements

ES.15 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination and creativity while working individually and/or cooperatively ◊

ES.16 use the tools of science safely, accurately, and appropriately ◊

ES.17$_{4,5,6,8,9}$ **identify independent and dependent variables in experimental investigations**

ES.18$_{9}$ manipulate variables to extend experimental activities

ES.19$_{9}$ **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence, recognize alternative explanations, communicate and defend a scientific argument, understand about scientific inquiry)**

Laboratory/Investigations/Hands-on Learning

ES.20 engage in active inquiries, investigations and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

ES.21 conduct explorations in a variety of traditional and nontraditional educational environments (e.g., laboratories, museums, libraries, parks and other outdoor locations) ◊

ES.22 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

ES.23 properly and safely manipulate equipment, materials, chemicals, organisms and models) ◊

Science Themes and Subject Matter

ES.24 **review the following foundational earth science concepts including rocks and minerals, properties of waves, constructing and interpreting weather maps, surface features found on maps, climatic relationships to biomes, use of data gathering instruments, temperature-phase change relationships**

ES.25 research theories concerning origins of the universe

ES.26 **investigate the solar system including origin theories, comparing and contrasting the planets, planetary motions, and other celestial bodies**

ES.27 explore the Earth-Sun-Moon relationships (e.g., moon phases, eclipses, relationship between tilt of the earth and seasonal changes as well as tides

ES.28 probe and explain stellar evolution, stellar types and distances

ES.29 compare and contrast the different kinds of galaxies

ES.30 develop a timeline outlining space exploration

ES.31 investigate celestial bodies (e.g., composition, motions, origins of celestial objects such as quasars, pulsars, and black holes

ES.32 explain the relationships between location, navigation and time

ES.33 summarize various methods used to study astronomy

ES.34 identify components of the solid earth (e.g., shape, dimensions, and structure)

ES.35 **identify the lithosphere, the hydrosphere, the atmosphere, and the biosphere**

ES.36 describe earth's origin as it relates to the lithosphere, hydrosphere, and atmosphere

ES.37 identify and describe the natural processes relating to the development of the solid earth from atomic structure through the rock cycle

ES.38 identify and describe agents and processes of degradation (e.g., weathering by gravity, wind, water, and ice)

ES.39 identify and describe tectonic forces

ES.40 **understand the cause and effect relationships of degradational and**

tectonic forces with respect to the dynamic earth and its surface

ES.41 **construct and/or interpret information on topographic maps**

ES.42 list, identify, and sequence eras, epochs, and periods in relation to earth history and geologic development

ES.43 **identify, describe, and understand properties of our oceans (e.g., water composition, physical features of the ocean floor, and life within the oceans)**

ES.44 compare and contrast ocean movements

ES.45 identify and describe the structure of the atmosphere

ES.46 **investigate and explain heat transfer in the atmosphere and its relationship to meteorological processes (e.g., pressure, winds, evaporation, condensation, and precipitation)**

ES.47 **compare and contrast meteorological processes related to air masses, weather systems, and forecasting**

ES.48 examine global change over time (e.g., climatic trends, fossil fuel depletion, global warming, ozone depletion)

ES.49 describe the relationship between earth processes and natural disasters and draw conclusions concerning their human impact

ES.50 explore the relationships between human consumption of natural resources and the stewardship responsibility for reclamations including disposal of hazardous and non-hazardous waste

ES.51 investigate and describe in detail the physical and chemical properties of water

ES.52 **explain common problems related to the conservation, use, supply and the quality of water**

ES.53 explore the relationships between the extraction and use of natural resources and the impact on the environment

ES.54 research alternative energy sources and possible impact

ES.55 understand the fragile nature of the earth's major spheres (e.g., lithosphere, hydrosphere, atmosphere, and biosphere)

ES.56 research and explain how the political system influences environmental decisions

ES.57 investigate which federal and state agencies have responsibility for environmental monitoring and actions

ES.58 develop decision-making skills with respect to addressing environmental problems

Science History

ES.59 identify contributors to the scientific body of knowledge including scientists both past and present as well as contributions from diverse cultures

ES.60 recognize the historical development of significant scientific events and their impact on modern thought and life

ES.61 be aware of the evolving nature of scientific thought and models by tracing the evolutionary development of several key scientific concepts and principles

ES.62 understand and appreciate the evolving nature of scientific thought and knowledge and the patterns by which major scientific ideas change

Science, Technology, and Society

ES.63 apply science and use technology to solve problems ◊

ES.64 describe the costs and benefits of scientific skills and new technologies needed to address personal and societal needs

ES.65 engage in decision making activities and actions to resolve science-technology- society issues ◊

ES.66 recognize the scientific principles in technological applications (the why as well as the how)

ES.67 explore the connections among science, technology, and career opportunities

Computer and Technology

ES.68 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

ES.69 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, and real-time investigations) ◊

ES.70 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

ES.71 identify and solve problems with the appropriate technology ◊

ES.72 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral communication ◊

Human Anatomy and Physiology

This course is designed for those students wanting a depth of understanding in the structure and function of the human body. Focus will be at both micro and macro levels reviewing cellular functions biochemical processes, tissue interactions, organ systems, and the interaction of those system as it relates to the human organism. This course will be appropriate for college bound students as well as those choosing a health services career cluster. Students will engage in active inquiries, investigations, and hands-on activities fora minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities.

Nature of Science

HAP.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

HAP.2 recognize general limitations of science

HAP.3_{11} **explain that science is composed of observations set in a testable framework of ideas**

HAP.4 conclude that science is a blend of creativity, logic and mathematics

Scientific Attitudes/Habits of Mind

HAP.$5_{4,5,6,7,8,9,10}$ **model and exhibit the skills, attitudes and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◊

HAP.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results and peer review)◊

HAP.7 **apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards and scientific and technological challenges)** ◊

Scientific Processes/Thinking Skills

HAP.$8_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring and applying)** ◊

HAP.$9_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◊

HAP.$10_{3,4,5,6,7,8,9,10}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and affect graphical analysis including interpretation and extrapolation)** ◊

HAP.11 use SI (metric) measurements

HAP.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination and creativity while working individually and/or cooperatively ◊

HAP.13 use the tools of science safely,

accurately and appropriately ◊

HAP.$14_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

HAP.15_{9} manipulate variables to extend experimental activities

HAP.16_{9} **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence, recognize alternative explanations, communicate and defend a scientific argument, understand about scientific inquiry)** ◊

LaboratoryInvestigations/Hands-on Learning

HAP.17 engage in active inquiries, investigations and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

HAP.18 properly and safely manipulate equipment, materials, chemicals, organisms and models ◊

HAP.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

HAP.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Themes and Subject Matter

HAP.$21_{7,8,9,10}$ describe the organizational levels, interdependency and the interaction of cells, tissues, organs, organ systems

HAP.22 **apply the importance of ionic and covalent bonding to the chemical processes in the human body**

HAP.23 summarize the structure and function of organelles within a typical human body cell

HAP.24 categorize, by structure and function, the various types of human tissue (e.g., cardiac, epithelial, connective, etc.)

HAP.25 relate how bone tissue is important to the development of the human skeleton

HAP.26 relate the various joints to their muscle movement

HAP.$27_{7,8,9,10}$ recognize the structure and relationship among skeletal, neural, and muscular systems

HAP.28 classify and describe the structure and function of various types of neurons

HAP.29 examine how the autonomic nervous system controls other organs and systems

HAP.30 examine how food provides nutrition to tissues through its breakdown by the digestive system, into carbohydrates, fats, proteins, vitamins, and minerals

HAP.31 discuss the specific role of enzymes and hormones to bodily functions

HAP.$32_{7,8,9,10}$ explain how the respiratory system is significant to communication, gas exchange, and cellular respiration

HAP.33 identify the cellular processes and the energy and nutritional requirements needed to maintain human metabolism

HAP.34 recognize the relationship of the excretory system to other organs and systems to rid the human body of its wastes

HAP.$35_{7,8,9,10}$ explain the structure and function of the male and female reproductive systems and how they relate to human growth and development

HAP.36 trace the transfer of matter and energy in chemical molecular processes in the human body

HAP.$37_{8,9,10}$ compare and contrast the purposes, processes and outcomes of cellular meiosis and mitosis

HAP.$38_{7,9}$ describe potential system failures

in the human body due to genetic, nutritional, operational, disease, or environmental influences

HAP.$39_{7,8,9,10}$ relate the structure of the integumentary system to its function as a sensory organ, environmental barrier, and temperature regulator

HAP.40_{10} **analyze the change in DNA activity and how it affects the control of protein synthesis and human inheritance**

HAP.41 demonstrate the directional terminology used to locate structures in the human body (e.g., dorsal, bilateral, sagittal, etc.)

HAP.42_{10} illustrate how transport mechanisms in cells, tissues, and/or organs depend on osmosis and mixture gradients

HAP.43 show the mechanism of muscle contraction on a micro and macro level

HAP.44 apply the knowledge of the structure of the ear and eye to their function/disfunction of environmental perception

HAP.$45_{7,8,9,10}$ illustrate the structure of the circulatory and lymph systems and the function of blood to the role of transportation, cellular support and defense

Science History

HAP.46 identify contributors to the scientific body of knowledge including their diverse cultures

HAP.47 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

HAP.48 describe the impact of cultural, technological and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology and Society

HAP.49_{9} apply scientific skills and technological tools to address personal and societal needs ◊

HAP.50 engage in decision making activities and actions to resolve science-technology-society issues ◊

HAP.51 investigate and analyze the interdependence of science and technology ◊

HAP.52 describe the scientific concepts underlying technological innovations ◊

HAP.53 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

HAP.54 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

HAP.55 collect, analyze and display data using computers and other electronic technology ◊

HAP.56 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, and real-time investigations) ◊

HAP.57 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

HAP.58 identify and solve problems with the appropriate technology ◊

HAP.59 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

Physics Eleven/Twelve

A college preparatory course, Physics Eleven/Twelve is a laboratory driven, advanced study of nature's universal laws with emphasis on process skills. Physics Eleven/Twelve builds on the foundation of physics concepts developed in CATS Seven through CATS Ten. The course is organized around the content areas of kinematics, dynamics, thermodynamics, light and optics, electricity and magnetism, and modern physics. SI (metric) units of measurement will be used. Students will engage in active inquiries, investigations, and hands-on activities fora minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities.

Nature of Science

P.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◇

P.2 recognize general limitations of science

P.3 **explain that science is composed of observations set in a testable framework of ideas**

P.4 conclude that science is a blend of creativity, logic, and mathematics

Scientific Attitudes/Habits of Mind

$P.5_{4,5,6,7,8,9,10}$ **model and exhibit the skills, attitudes, and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◇

P.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results, and peer review)◇

P.7 **apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards, and scientific and technological challenges)** ◇

Scientific Processes/Thinking Skills

$P.8_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring, and applying)** ◇

$P.9_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◇

$P.10_{3,4,5,6,7,8,9,10}$ **identify, analyze, and infer using patterns and relationships in data (e.g., cause and affect, graphical analysis including interpretation and extrapolation)** ◇

P.11 use SI (metric) measurements

P.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination, and creativity while working individually and/or cooperatively ◇

P.13 use the tools of science safely, accurately, and appropriately ◇

$P.14_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

$P.15_{9}$ manipulate variables to extend experimental activities

$P.16_{9}$ **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations; design and conduct scientific investigations; use technology and mathematics to improve investigations and communications; formulate and revise scientific explanations and models using logic and**

evidence; recognize alternative explanations; communicate and defend a scientific argument; understand scientific inquiry) ◊

Laboratory/Investigations/Hands-on Learning

P.17 engage in active inquiries, investigations, and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

P.18 properly and safely manipulate equipment, materials, chemicals, organisms, and models ◊

P.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

P.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Themes and Subject Matter

P.21 **investigate, analyze, synthesize, and evaluate the concepts of kinematics (e.g., distance, time, velocity, acceleration)**

P.22 **investigate, analyze, synthesize, and evaluate the concepts of dynamics (e.g., force, impulse, gravitation, conservation of energy, conservation of momentum, Newton's Laws)**

P.23 **investigate, analyze, synthesize and evaluate the concepts of thermodynamics (e.g., kinetic molecular theory, heat exchange, work)**

P.24 **investigate, analyze, synthesize, and evaluate the concepts of light and optics (e.g., waves, behavior of light, ray diagrams)**

P.25 **investigate, analyze, synthesize and evaluate the concepts of electricity and magnetism (e.g., electrostatics, circuits, magnetic effects, electronic devices)**

P.26 **investigate, analyze, synthesize, and evaluate the concepts of modern physics (e.g., atomic structure, nuclear changes, high energy physics)**

Science History

P.27 identify contributors to the scientific body of knowledge including their diverse cultures

P.28 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

P.29 describe the impact of cultural, technological, and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology, and Society

$P.30_9$ apply scientific skills and technological tools to address personal and societal needs ◊

P.31 engage in decision making activities and actions to resolve science-technology-society issues ◊

P.32 investigate and analyze the interdependence of science and technology ◊

P.33 describe the scientific concepts underlying technological innovations ◊

P.34 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

P.35 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

P.36 collect, analyze and display data using computers and other electronic technology ◊

P.37 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, and real-time investigations) ◊

P.38 demonstrate skills in use of word processing, data bases,

spreadsheets, graphics and telecommunications ◊

P.39 identify and solve problems with the appropriate technology ◊

P.40 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

Physics-Technical/Conceptual

Physics- Technical is a course designed to prepare students for technical careers. Basic physics principles are dealt with in a thematic approach. Principles are applied to four energy systems: mechanical, fluid, thermal, and electrical that make up both simple and complex technological devices and equipment. The course also emphasizes the analogies in mechanical, fluid, thermal, and electrical systems. Incorporated in the instruction is the mathematics needed to understand and apply the principles. Refer to objectives PT.21 - PT.24.

Physics- Conceptual is an alternative to the traditional mathematical approach to physics. Emphasis will be on the concepts which underlie the natural laws of the universe. Mathematics will be de-emphasized. Laboratory work will require traditional physics measurements to be made. SI (metric) units of measurement will be used. Refer to objectives PC.25 - PC.30.

Students in Physics-Technical or Physics- Conceptual will engage in active inquiries, investigations, and hands-on activities for a minimum of 50% of the instructional time to develop conceptual understanding and research/laboratory skills. Safety instruction is integrated into all activities.

Nature of Science

PTC.1 participate in activities that consider alternate, changing points of view to stimulate the development of a sense of inquiry ◊

PTC.2 recognize general limitations of science

PTC.3 **explain that science is composed of observations set in a testable framework of ideas**

PTC.4 conclude that science is a blend of creativity, logic, and mathematics

Scientific Attitudes/Habits of Mind

PTC.$5_{4,5,6,7,8,9,10}$ **model and exhibit the skills, attitudes, and/or values of scientific inquiry (e.g., curiosity, logic, objectivity, openness, skepticism, appreciation, diligence, integrity, fairness, creativity)** ◊

PTC.6 demonstrate ethical practices for science (e.g., established research protocol, accurate record keeping, replication of results, and peer review)◊

PTC.7 **apply scientific approaches to seek solutions for everyday problems (e.g., personal, community health, population growth, natural resources, environmental quality, natural and human induced hazards, and scientific and technological challenges)** ◊

Scientific Processes/Thinking Skills

PTC.$8_{3,4,5,6,7,8,9,10}$ **demonstrate science processes within a problem solving setting (e.g., observing, measuring, communicating, comparing, ordering, categorizing, classifying, relating, hypothesizing, predicting, inferring, and applying)** ◊

PTC.$9_{3,4,5,6,7,8,9,10}$ **organize qualitative and quantitative data into tables, diagrams, and/or graphs for analysis**◊

PTC.$10_{3,4,5,6,7,8,9,10}$ **identify, analyze, and**

infer using patterns and relationships in data (e.g., cause and affect, graphical analysis including interpretation and extrapolation) ◊

PTC.11 use SI (metric) measurements

PTC.12 apply rational thinking processes that underlie scientific approaches to problem solving by employing critical thinking skills, imagination, and creativity while working individually and/or cooperatively ◊

PTC.13 use the tools of science safely, accurately and appropriately ◊

PTC.$14_{4,5,6,8,9}$ identify independent and dependent variables in experimental investigations

PTC.15_{9} manipulate variables to extend experimental activities

PTC.16_{9} **design, conduct, evaluate and revise experiments (e.g., identify questions and concepts that guide scientific investigations; design and conduct scientific investigations; use technology and mathematics to improve investigations and communications; formulate and revise scientific explanations and models using logic and evidence; recognize alternative explanations; communicate and defend a scientific argument; understand scientific inquiry)** ◊

Laboratory/Investigations/Hands-on Learning

PTC.17 engage in active inquiries, investigations, and hands-on activities for a minimum of 50 percent of the instructional time to develop conceptual understanding and laboratory skills ◊

PTC.18 properly and safely manipulate equipment, materials, chemicals, organisms, and models ◊

PTC.19 conduct explorations in a variety of environments (e.g., laboratories, museums, libraries, parks and other outdoors locations)◊

PTC.20 use computers and other electronic technologies (e.g., computer, CBL, probe interfaces, laser discs) to collect, analyze and/or report data, interact with simulations, and research ◊

Science Themes and Subject Matter

PT.21 **qualitative and quantitative analysis of mechanical systems (e.g., force, work, rate, resistance, energy, power, force transformations)**

PT.22 **qualitative and quantitative analysis of fluid systems (e.g., pressure, work, rate, resistance, energy, power, force transformations)**

PT.23 **qualitative and quantitative analysis of electrical systems (e.g., voltage, work, rate, resistance, energy, power, force transformations)**

PT.24 **qualitative and quantitative analysis of thermal systems (e.g., temperature, rate, resistance, energy)**

PC.25 **investigate and analyze the concepts of kinematics (e.g., distance, time, velocity, acceleration)**

PC.26 **investigate and analyze the concepts of dynamics (e.g., force, impulse, gravitation, conservation of energy, conservation of momentum, Newton's Laws)**

PC.27 **investigate and analyze the concepts of thermodynamics (e.g., kinetic molecular theory, heat exchange, work)**

PC.28 **investigate and analyze concepts of light and optics (e.g., waves, behavior of light, ray diagrams)**

PC.29 **investigate and analyze concepts of electricity and magnetism (e.g., electrostatics, circuits, magnetic effects, electronic devices)**

PC.30 **investigate and analyze concepts of modern physics (e.g., atomic structure, nuclear changes, high energy physics)**

Science History

PTC.31 identify contributors to the scientific body of knowledge

including their diverse cultures

PTC.32 trace the historical development of key scientific concepts and principles describing their impact on modern thought and life

PTC.33 describe the impact of cultural, technological, and economic influences on the evolving nature of scientific thought and knowledge ◊

Science, Technology, and Society

PTC.34$_9$ apply scientific skills and technological tools to address personal and societal needs ◊

PTC.35 engage in decision making activities and actions to resolve science-technology-society issues ◊

PTC.36 investigate and analyze the interdependence of science and technology ◊

PTC.37 describe the scientific concepts underlying technological innovations ◊

PTC.38 explore occupational opportunities in science and technology including the academic preparation necessary ◊

Computer and Technology

PTC.39 access, gather, store, retrieve, and organize data using hardware and software designed for these purposes ◊

PTC.40 collect, analyze and display data using computers and other electronic technology ◊

PTC.41 access Internet resources for a variety of purposes (e.g., research, exchange data, E-mail, and real-time investigations) ◊

PTC.42 demonstrate skills in use of word processing, data bases, spreadsheets, graphics and telecommunications ◊

PTC.43 identify and solve problems with the appropriate technology ◊

PTC.44 incorporate correct grammar, spelling, vocabulary and graphical representation for both written and oral multimedia presentations ◊

THE ARTS

programs of study for

Dance
Music
Theatre
Visual Art

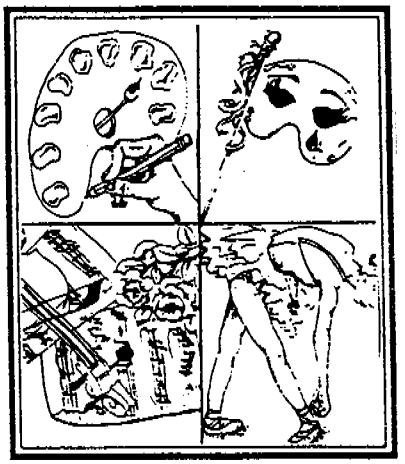


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Dance Instructional Goals

Dance is a means of communication and self-expression different from the written or spoken word, or from visual and auditory symbol systems. As they learn and share dances from their own communities and other cultures, young people gain skills and knowledge that will prepare them to participate in an increasingly diverse society. Grades K-8 offer opportunities to correlate dance activities with other subjects thereby enriching learning. At the high school level, formal electives are provided for students to develop advanced skills in dance, choreography, critical and creative thinking.

Identifying and demonstrating movement elements and skills in performing dance.
Young children learn basic nonlocomotor/ axial and locomotor movements. In grades 5-8 emphasis is upon more advanced movement skills and basic dance steps. High school electives offer opportunities to refine technique and perform with artistic expression.

Understanding choreographic principles, processes, and structures.
Copying, leading, following, mirroring are basic dance skills used by K-4 students in improvising and creating dances. Students in grades 5-8 learn formal structures and demonstrate contrast, transition, reordering, and chance. High school students refine skills to create a group dance.

Understanding dance as a way to create and communicate meaning.
Students in elementary schools learn how dance communicates meaning through observation, discussion and creation of dances. At the high school level more sophisticated analysis is possible.

Applying and demonstrating critical and creative thinking skills in dance.
At all levels students make choices of their favorite dances. This leads to the development and refinement of criteria whereby dances may be analyzed.

Demonstrating and understanding dance in various cultures and historical periods.
West Virginia offers a rich heritage of folk and ethnic dances which can form the basis for study of dance in other cultures and other times.

Making connections between dance and healthful living.
Good health and safe practices are necessary so that dancers of all ages may avoid injuries.

Making connections between dance and other disciplines.
Dances often use ideas from other disciplines. Students learn to describe and explain a dance and another art, then to create projects that reveal similarities and differences between the arts. High school students learn to analyze the use of the arts in various cultures and time periods.

Music
Instructional Goals

Performing, creating, and responding to music are fundamental processes in which human beings engage. Singing, playing instruments, moving to music, and creating music enable students to acquire musical skills and knowledge that can be developed in no other way. Learning to read and notate music gives them skill to explore music independently. Listening to, analyzing, and evaluating music are important building blocks of musical learning. To participate fully in a diverse, global society, students must understand their own historical and cultural heritage and those of others within their communities and beyond. Because music is a basic expression of human culture, every student should have access to a balanced, comprehensive, and sequential program of study in music.

Singing alone and with others, a varied repertoire of music.
From the simple melodies of children's songs to the multiple movements of large choral works, singing is a fundamental process of musical expression. Basic singing skills are developed in the K-8 General Music Area of Study. Students who elect to participate in the 6-12 Choral Music Area of Study will develop advanced singing skills and technical accuracy for a varied repertoire of choral literature.

Performing on instruments, alone and with others, a varied repertoire of music.
Students learn to play a variety of pitched, e.g., bells, autoharp, and non-pitched, e.g., drum, triangle, instruments in the K-8 General Music Area of Study. Other areas of study provide concentrated study of standard orchestral and band instruments:

- Instrumental Music -- Strings,
- Instrumental Music -- Winds and Percussion,

Piano and Folk Music Areas of Study may also be offered at the high school level.

Improvising melodies, variations, and accompaniments.
Skill in improvisation is encouraged and developed through experiences in General Music. Students at the high school level may further develop improvisation skill through participation in small vocal and instrumental ensembles and through the election of classes in music theory or composition.

Composing and arranging music within specified guidelines.
One of the most exciting experiences of childhood is composing one's own song. These experiences are featured in General Music. Later, at the high school level, the Music Literature Area of Study provides more formal courses in composition and arranging.

Reading and notating music.
The ability to read and notate music is the foundation for independent study and performance. It is the key to lifelong learning and participation in music. Reading experiences begin in kindergarten with the use of pictorial notation and are stressed throughout all levels and all Areas of Study.

Listening to, analyzing, and describing music.
Skills in the analysis and description of music enable students to listen to a wide variety of music with discernment and enjoyment. These skills are featured at all levels and in all Areas of Study.

Evaluating music and music performances.
Broad experience with a variety of music assists students to make informed judgments about musical works and performances.

Understanding relationships between music, the other arts, and disciplines outside the arts.
A study of authentic connections and relationships between music and other disciplines contributes to understanding of our culture and history.

Understanding music in relation to history and culture.
Every musical work is a product of its time, place, and culture although some works transcend their original settings and continue to appeal to listeners through their timeless and universal attraction.

Theatre Instructional Goals

In theatre, an imagined world is created and enacted. Young children participate in pretend play. They came to school with rudimentary skills as playwrights, actors, designers, directors, and audience members. Grades K-8 offer opportunities to correlate theatre activities with other subjects, thereby enhancing learning. At the high school level, formal electives are provided for students to develop advanced skills through the active creation of theatre.

Script Writing

In grades K-4, students plan and record improvisations based on personal experience, heritage, imagination, literature, and history. Students in grades 5-8 participate in creation of both improvised and scripted scenes. Electives in grades 9-12 offer more formal opportunities for improvising, writing, and refining scripts.

Acting

Young children participate in dramatic play by assuming roles and interacting in improvisations. In upper grades they begin to develop basic acting skills to portray characters who interact in improvised or scripted scenes. At the high school level students develop skill in communicating and sustaining characters in informal and formal productions.

Designing

Students progress from visualizing and arranging environments for dramatic play to developing environments for improvised and scripted scenes. High school students learn to design and produce visual elements, e.g., costumes and settings, for informal and formal programs.

Directing

Students in early grades participate in planning classroom dramatizations. In grades 5-8 they learn to organize rehearsals for improvised and scripted scenes. At the high school level they learn to interpret dramatic texts and to organize and conduct rehearsals for informal or formal productions.

Researching

In grades K-4, students relate their observations and other information about people, events, times, and places to classroom dramatizations. Later they use cultural and historical information to support improvised and scripted scenes. High school drama students learn to evaluate and synthesize cultural and historical information to support artistic choices.

Comparing Art Forms

Theatre and dramatic media (such as film, television, and electronic media) make use of other art forms for expressive purposes. Students learn first to describe and compare the arts, then to incorporate them into scenes to express ideas and emotions. High school students learn to analyze the use of the arts in various types of theatre and media productions.

Analyzing and Evaluating

Learning to evaluate and analyze a work of art begins with an expression of personal preference and description of the pleasing features of the work. From such simple beginnings students learn to construct meanings and analyze theatre productions.

Understanding Context

Beginning with recognition of the role of theatre in daily life, students learn to analyze the influences of past and present cultures on theatre and related art forms.

Visual Art Instructional Goals

The Visual Art Program of study provides opportunities for students to create two- and three-dimensional works, study the art of various cultures and periods of history, and develop evaluation criteria by which to judge their own work and the work of others. The problem-solving activities inherent in making art help students develop cognitive, affective, and psychomotor skills. Because art plays such an important role in the world today, it is necessary that students are given a balanced and sequential education in visual art.

Understanding and applying media, techniques and processes.
A wide variety of art media, techniques, and processes are used in the creation of art. Crayons, colored pencils, tempera, water colors, clay, wood, and silk screens are only a few that students may learn to use.

Using the art elements and principles of design.
Students learn to use lines, shapes, forms, colors, space, textures, and values in their artworks. They combine these elements in artworks showing balance, rhythm, emphasis, or other principles of design.

Choosing and evaluating a range of subject matter, symbols, and ideas.
Students learn to evaluate and select subjects, symbols, and ideas for use in their own works by observing and analyzing the visual environment and the works of others.

Understanding the visual arts in relation to history and cultures.
Students acquire an understanding of the function and value of art in other cultures and times through exhibits, field trips, and other activities.

Reflecting upon and assessing the characteristics and merits of their work and the work of others.
The act of selecting a favorite picture is the first step toward developing criteria for judging art. As they mature, students expand their criteria for evaluating many types of art and they develop skill in applying the critical process (description, analysis, interpretation, evaluation).

Making connections between visual art and other disciplines.
A study of authentic connections and relationships between visual art and the other arts disciplines, as well as other subjects in the curriculum, contributes to understanding our culture and heritage.

DOCUMENT GUIDE

- Subscripted notes below an objective indicate the Language Arts (LA), Mathematics (Ma), Social Studies (SS), West Virginia Studies (WV), United States History (US), and Science (Sc) objectives with which the arts objective is correlated.

  Example:

  K.17 distinguishes between same and different musical phrases and/or sections.
  LA K.3, K.18
  Sc K.3, K.16

- ◊ indicates the objective is a workplace readiness skill.

Kindergarten General Music

Kindergarten students explore the world of music through singing, playing instruments, movement and listening. They develop a beginning recognition of simple musical notation and an awareness of the singing voice (their own and others'). Opportunities are provided to sing patriotic songs, folk songs and to practice proper audience skills.

Singing alone and with others, a varied repertoire of music.

K.1 sing high and low pitches.
LA K.7, K.11

K.2 sing melodies with a steady tempo, e.g., speed.
LA K.2

K.3 demonstrate correct singing posture while standing or seated and appropriate diction of vowels and consonants.
LA K.2, K.12, K.21

K.4 sing dynamics, *p* and *f*, i.e., soft and loud.
LA K.2, K.11

K.5 sing songs from memory.
LA K.2

Performing on instruments, alone and with others, a varied repertoire of music.

K.6 perform a steady beat on rhythm instruments.
LA K.2, K.16
Ma K.13

K.7 perform stepwise and skipwise patterns on melodic instruments.
LA K.16
Ma K.13

K.8 imitate an easy rhythmic pattern.
LA K.2, K.16
Ma K.13

Improvising melodies, variations, and accompaniments.

K.9 improvise an "answer" to a "question" sung by the teacher.
LA K.7, K.10, K.15
Ma K.13

K.10 improvise a tune, e.g., for a two-line poem, or engage in a tuneful conversation.
LA K.2, K.10

Composing and arranging music within specified guidelines.

K.11 create sounds to accompany readings.
LA K.2, K.14
Ma K.13

K.12 use percussion and vocal sounds in original compositions.
Sc K.22

Reading and notating music.

K.13 read pictorial notation for quarter notes, quarter rests, and beamed eighth notes.
LA K.3, K.17, K.18, K.42, K.62
Sc K.5

K.14 read pictorial representations for high and low pitches and for *sol* and *mi*.
LA K.3, K.17, K.18, K.42, K.62
Sc K.5

K.15 recognize treble clef, staff, and the symbols for loud and soft (*f* and *p*).
LA K.3, K.18

Listening to, analyzing, and describing music.

K.16 identify call and response
LA K.3
Sc K.16

K.17 distinguish between same and different musical phrases and/or sections.
LA K.3, K.18
Sc K.3, K.16

K.18 move expressively to demonstrate the character of a musical selection.
LA K.5

K.19 demonstrate the contour of a melody.
LA K.5
Sc K.16

K.20 identify fast and slow, high and low pitches in music aurally presented.
LA K.3, K.11
Sc K.3, K.16

K.21 distinguish between pitched and non-pitched instruments, e.g., classroom rhythm and melodic instruments.
LA K.20
Ma K.12
Sc K.16, K.18, K.30

K.22 distinguish between child, adult male, and female voices.
LA K.3
Sc K.16

K.23 demonstrate through movement fast and slow tempos, loud and soft dynamics.
LA K.11
Sc K.3, K.16

Evaluating music and music performances.

K.24 identify four uses of the voice (singing, speaking, shouting, and whispering).
LA K.3, K.7, K.11
SS K.8

Understanding relationships between music, the other arts, and disciplines outside the arts.

K.25 move to music.
LA K.5
Sc K.3

K.26 sing songs with patriotic texts.
LA K.1
SS K.2, K.3, K.18

Understanding music in relation to history and culture.

K.27 identify familiar folk songs.
LA K.1, K.2, K.3, K.14
SS K.18, K.21

K.28 discuss music heard in the home setting.
LA K.3

K.29 describe what a musician does.
LA K.3
SS K.6, K.10
Sc K.65

K.30 discuss and demonstrate proper manners and etiquette in the classroom during listening, singing, and playing.
LA K.3, K.4, K.5, K.6, K.13
SS K.7, K.8, K.9

Kindergarten General Art

Kindergarten children explore art. Students learn to use tools properly for drawing, painting, printing and sculpture. Children explore colors and the use of lines and shapes and textures in artworks.

The subject matter of art will center around the children's own environment, allowing expression of feelings and talk about their own creations. Creative work is preferred over prepared models.

Understanding and applying media, techniques, and processes.

K.1 identify tools, techniques, and processes in two-dimensional media, such as drawing, painting, or printmaking, and discuss their differences, e.g., crayons, tempera, vegetable prints; explore differences in types of paper.
LA K.3, K.4, K.6, K.8, K.18, K.20
Sc K.3, K.11, K.16, K.19

K.2 identify tools, techniques, and processes in three-dimensional media and discuss the differences, e.g., modeling, assembling.
LA K.3, K.6, K.8, K.18, K.20
Sc K.3, K.16

K.3 describe how different techniques and processes of two-dimensional media cause different appearances and responses, e.g., paint versus cut paper shapes.
LA K.3, K.4, K.6, K.8, K.18, K.20
Sc K.3, K.11, K.13, K.16, K.19, K.21

K.4 explore how the different techniques and processes of three-dimensional media cause different appearances and responses.
LA K.16, K.18
Sc K.3, K.5, K.11, K.13, K.16, K.19, K.21, K.42, K.58

K.5 make artworks using at least three different two-dimensional media, including collage techniques, to communicate ideas, experiences, and stories.
LA K.16, K.18, K.20, K.30, K.36, K.37, K.38, K.39, K.69
SS K.17, K.18, K.19, K.22, K.26
Sc K.5, K.17, K.58, K.59, K.74

K.6 model objects using three-dimensional materials to communicate ideas.
LA K.16, K.20, K.38, K.39
SS K.17, K.18, K.19, K.22
Sc K.5, K.57, K.58

K.7 use two-dimensional and three-dimensional media and collage materials safely and responsibly.
LA K.16, K.60
SS K.1, K.5, K.7, K.8, K.9
Sc K.25

Using the art elements and principles of design.

K.8 explore the primary, secondary, and neutral colors, e.g., red, yellow, blue, green, orange, violet, black, white, and brown; color wheel; common line types, e.g., straight, diagonal, curved, zigzag, and broken.
LA K.5, K.16, K.20, K.28, K.29, K.41, K.42, K.56, K.62
Ma K.12, K.13
Sc K.1, K.5, K.10, K.11, K.16, K.18, K.19, K.24, K.29, K.44, K.45, K.53

K.9 explore at least five geometric drawing shapes, e.g., circle, square, oval, rectangle, triangle; explore three-dimensional forms as distinguished from two-dimensional shapes.
LA K.5, K.16, K.19, K.20, K.56
Ma K.12, K.14, K.15, K.16, K.17, K.18
Sc K.1, K.10, K.16, K.18, K.24, K.29, K.45, K.59

K.10 explore a variety of man-made and natural textures.
LA K.18, K.19, K.20, K.31
Ma K.14
Sc K.1, K.3, K.10, K.16, K.18, K.27, K.29, K.53, K.58

K.11 explore how colors cause different emotions (feelings), e.g., warm/cool, calm/ excitement.
LA K.15, K.18, K.28, K.37
Sc K.10, K.19

K.12 explore line types, textures, and sizes of objects in artworks.
LA K.18, K.19, K.20, K.31, K.42
Ma K.12, K.13, K.14, K.18, K.19, K.20
Sc K.1, K.3, K.10, K.16, K.18, K.29, K.40, K.53, K.58, K.59

K.13 discover different shapes (two-dimensional) and forms (three-dimensional) in art.
LA K.18, K.20, K.56
Ma K.12, K.15, K.16, K.17, K.18, K.20
Sc K.16

K.14 select and use colors to communicate emotions (feelings).
LA K.28, K.37
Sc K.10, K.16

K.15 use a variety of line types, geometric shapes, and textures in artworks.
LA K.16, K.18, K.19, K.26
Ma K.12, K.13, K.15, K.16, K.17, K.20
Sc K.1, K.3, K.16, K.24, K.58

K.16 create a sculpture.
LA K.16
Ma K.15, K.20
Sc K.1, K.16

Choosing and evaluating a range of subject matter, symbols, and ideas.

K.17 explore and use their immediate environment as the idea or subject matter for an art project.
LA K.14, K.38
SS K.10, K.17
Sc K.1, K.3, K.4, K.8, K.16, K.18, K.19, K.27, K.29, K.33, K.34, K.47, K.48, K.58, K.59

K.18 select and use symbols found in their environment, e.g., stop signs, sports, and seasonal symbols.
LA K.5, K.15, K.16, K.28
Ma K.15, K.16, K.17
SS K.3, K.15, K.29

Understanding the visual arts in relation to history and cultures.

K.19 discuss how art has existed through time.
LA K.3, K.4, K.6, K.30, K.35, K.62
SS K.18, K.19, K.20, K.21

K.20 discuss how art can represent a group of people; e.g., prehistoric man, cave paintings.
LA K.3, K.4, K.6, K.18, K.20, K.33, K.35
SS K.10, K.18, K.19, K.20, K.21
Sc K.4, K.12

K.21 view art from several cultures.
LA K.18, K.20
SS K.18, K.19, K.20, K.21
Sc K.4, K.12, K.16

K.22 create art to reflect a style of a group in the past, e.g., cave paintings on crumpled paper.
LA K.16, K.18, K.20, K.35
SS K.18, K.19, K.20, K.21
Sc K.4

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

K.23 discuss the work that artists do by viewing or visiting displayed artwork, e.g., slides, museums, videos, **West Virginia Resources for Teaching Art**.
LA K.3, K.4, K.6, K.8, K.18, K.29
SS K.2, K.6, K.10, K.20
Sc K.65

K.24 explore art that reflects an experience at home.
SS K.2, K.18, K.19

K.25 discuss how an artwork makes them feel.
LA K.3, K.6, K.36

K.26 select a favorite artwork and explain the choice.
LA K.3, K.6, K.8
Sc K.12

Making connections between visual art and other disciplines.

K.27 explore how ideas and emotions are expressed through dance, music, theatre, and visual art.
LA K.2, K.33, K.36
SS K.2, K.17
Sc K.10

K.28 recognize visual and kinetic elements in dance, music, theatre, and visual art.
LA K.2, K.18
Ma K.14
Sc K.10, K.16

K.29 discuss relationships between stories and pictures.
LA K.1, K.3, K.6, K.14, K.30, K.33, K.37, K.38, K.39
SS K.2, K.18

Grade One General Music

Level I students explore the voice through matching pitch, singing melodic patterns and folk songs. The students use classroom instruments to perform simple rhythms and create their own music to dramatize characters in a story or a student-written poem. Music reading skills are developed through the manipulation and performance of notation and the recognition of musical terms. Students discuss music as it occurs in familiar areas of their lives such as in and outside the home, on radio, and television.

Singing alone and with others, a varied repertoire of music.

1.1 match pitch using good tone quality (echo singing).
Sc 1.3

1.2 sing varied melodic patterns.
Sc 1.3

1.3 demonstrate the phrase structure of a song through movement, e.g., aba, aaba.
Sc 1.3

1.4 sing folk songs from memory.
LA 1.1, 1.21
SS 1.12, 1.23
Sc 1.3

1.5 sing in groups matching dynamics of *p* and *f*, i.e., soft and loud.
Sc 1.3

Performing on instruments, alone and with others, a varied repertoire of music.

1.6 perform rhythm patterns with varying dynamics and timbres, e.g., loudness and tone qualities.
Ma 1.20
Sc 1.3

1.7 perform easy rhythms and melodies on pitched and non-pitched instruments, e.g., song bells and drums.
Ma 1.20
Sc 1.3, 1.46

1.8 echo a short melodic pattern.
Sc 1.3

1.9 play with appropriately matched dynamic levels, i.e., loud vs. soft.
Sc 1.3

Improvising melodies, variations, and accompaniments.

1.10 improvise a phrase to answer a "question" sung by the teacher.
Sc 1.3

1.11 improvise a rhythm pattern for a character in a story.
LA 1.42
Sc 1.3

Composing and arranging music within specified guidelines.

1.12 use instruments to dramatize a story or poem.
LA 1.1, 1.14, 1.21, 1.42
Sc 1.3, 1.46

1.13 create a song for an original (student created) poem.
Sc 1.3, 1.23

Reading and notating music.

1.14 read beamed eighth notes, quarter and half notes, rests and tied notes.
LA 1.3, 1.108
Sc 1.3, 1.6

1.15 read step and skip patterns on a treble clef staff.
LA 1.3, 1.108
Sc 1.3, 1.6

1.16 manipulate notation for patterns containing the tones *sol-mi-la*, *sol-mi-do*, and *mi-re-do*, e.g., flannel board.
LA 1.3, 1.108
Sc 1.3, 1.6

1.17 relate the term *tempo* to the speed at which a piece is performed.
LA 1.2, 1.108
Sc 1.3

1.18 manipulate beamed eighth notes, quarter and half notes, and rests on a staff, e.g., flannel board.
LA 1.3, 1.108
Sc 1.3, 1.6

Listening to, analyzing, and describing music.

1.19 identify repetition and contrast.
LA 1.3
Sc 1.3, 1.17

1.20 identify repeating rhythm patterns in music of various cultures.
LA 1.3
Ma 1.21
SS 1.12, 1.23
Sc 1.3, 1.17

1.21 identify *crescendos* and *decrescendos* in aural presentations of music.
LA 1.2, 1.3
Sc 1.3, 1.17

1.22 identify soprano and bass voices.
LA 1.2, 1.3
Sc 1.3, 1.17

1.23 demonstrate through movement accents of strong and weak beats and tempo changes within a piece.
LA 1.3
Sc 1.3, 1.17

1.24 demonstrate dynamic changes.
LA 1.3
Sc 1.3, 1.17, 1.41

Evaluating music and music performances.

1.25 demonstrate proper use of "head" voice, e.g., imitate sound modeled by music teacher.
LA 1.3
Sc 1.3, 1.17

Understanding relationships between music, the other arts, and disciplines outside the arts.

1.26 demonstrate dynamics and accents in reading.
Sc 1.3, 1.17

Understanding music in relation to history and culture.

1.27 sing at least three patriotic songs.
LA 1.1, 1.21
SS 1.4, 1.23

1.28 discuss music heard outside the home setting.
LA 1.1
Ma 1.21
SS 1.23
Sc 1.69, 1.76

1.29 discuss musicians' roles in radio, television, and other settings in home, school, and family.
SS 1.5, 1.9
Sc 1.2, 1.66, 1.67, 1.68, 1.76

Grade One General Art

At this level children make paintings, collages, and three-dimensional art works. Color, line, form, shape and texture are explored.

Children use art to communicate their ideas and feelings. The subject matter continues to be their own environment and nature as well as the art of some other cultures. The correct and safe use of materials is stressed. Children begin to see connections between visual art and dance, theatre, music, and other subjects.

Understanding and applying media, techniques, and processes.

1.1 identify the media, tools, techniques, and processes used in painting, e.g., tempera, and its character on paper; identify how the different techniques and processes of painting cause different appearances and responses, e.g., wet on wet and dry brush.
LA 1.70
Ma 1.19
Sc 1.1, 1.14, 1.17

1.2 compare the media, tools, techniques, and processes used in sculpting, e.g., clay, paper; identify how the different techniques and processes of sculpture cause different appearances and responses, e.g., additive, subtractive, pinch.
LA 1.70
Ma 1.19, 1.43
Sc 1.1, 1.14, 1.17

1.3 identify and describe differences in paper; explore the use of different types of paper in a collage format.
LA 1.70
Ma 1.19
Sc 1.13, 1.17

1.4 make art using two different media to communicate ideas, experiences, and stories, e.g., tempera, fingerpaint, crayon.
LA 1.7, 1.8, 1.13, 1.14, 1.16, 1.44, 1.45
Ma 1.20, 1.23, 1.30

1.5 make 3-dimensional objects using two different media to communicate ideas, experiences, and stories, e.g., sticks, fabric, chenille stems.
LA 1.7, 1.16, 1.44
Ma 1.28, 1.30
Sc 1.60

1.6 use painting, collage, and sculpting materials safely and responsibly.
LA 1.106
Ma 1.30, 1.32

Using the art elements and principles of design.

1.7 explore primary, secondary, neutral, warm, and cool colors; discover how colors evoke responses.
LA 1.108
Ma 1.19, 1.25
Sc 1.3, 1.5, 1.11, 1.12, 1.17, 1.19, 1.25

1.8 explore line quality, e.g., thick, thin, smooth, rough, light, dark; explore how line types cause responses.
LA 1.108
Ma 1.19, 1.21, 1.25, 1.31
Sc 1.3, 1.11, 1.17, 1.19, 1.25

1.9 explore the use of shapes and overlapping shapes in their own artworks.
LA 1.108
Ma 1.10, 1.11, 1.20, 1.27, 1.30, 1.32
Sc 1.17

1.10 explore shapes and forms, e.g., circle/sphere, square/cube, triangle/pyramid.
Ma 1.27, 1.29, 1.30, 1.32
Sc 1.11, 1.17, 1.19, 1.25

1.11 explore texture as surface feeling.
Ma 1.19, 1.21
Sc 1.3, 1.4, 1.5, 1.11, 1.59

1.12 explore and compare the sizes of objects, e.g., big, small, short, tall, wide, thin.
LA 1.76, 1.108
Ma 1.10, 1.11, 1.19, 1.20, 1.25, 1.32, 1.43
Sc 1.11, 1.19, 1.44

1.13 use colors to communicate different ideas, e.g., calm, stormy, warm, cool.
LA 1.13, 1.20
Ma 1.25
Sc 1.3, 1.12, 1.43, 1.47

1.14 create art using line quality with a variety of materials and tools.
LA 1.13
Ma 1.31

1.15 create art using overlapping shapes.
LA 1.76
Ma 1.10, 1.27, 1.32
Sc 1.44

1.16 use geometric forms in an artwork, e.g., Egyptian pyramid.
Ma 1.10, 1.11, 1.27, 1.28
Sc 1.43

1.17 create art using textures, e.g., yarn, sand, noodles.

1.18 use different sizes within an art project.
LA 1.76
MA 1.10, 1.11, 1.20, 1.32

Choosing and evaluating a range of subject matter, symbols, and ideas.

1.19 find and examine subject matter and ideas for art through observation of nature and its symbols, e.g., nest, shells, stones, wood; use nature as subject matter in an art project.
LA 1.20
Ma 1.19, 1.20, 1.21, 1.28, 1.29
Sc 1.3, 1.4, 1.5, 1.6, 1.9, 1.10, 1.11, 1.12, 1.14, 1.17, 1.19, 1.22, 1.47

1.20 discuss and use line and color in symbols in their environment.
LA 1.6, 1.13, 1.14, 1.20, 1.51, 1.70, 1.76, 1.108
Ma 1.19, 1.20, 1.21, 1.23
SS 1.13, 1.18
Sc 1.3, 1.9, 1.10, 1.11, 1.12, 1.14, 1.17, 1.18, 1.30

Understanding the visual arts in relation to history and cultures.

1.21 discuss how art of the past can tell about its creators.
LA 1.6, 1.7, 1.8, 1.9, 1.13, 1.14, 1.16, 1.20, 1.21, 1.45, 1.70, 1.99, 1.102, 1.108
Ma 1.20, 1.21, 1.23, 1.28, 1.29
SS 1.12, 1.13, 1.15, 1.19, 1.20, 1.21, 1.22, 1.23
Sc 1.3, 1.13, 1.17, 1.21

1.22 discuss how art can represent a culture or group, e.g., Appalachian, Mexican; distinguish art from several cultures or groups.
LA 1.6, 1.7, 1.8, 1.9, 1.13, 1.14, 1.16, 1.20, 1.21, 1.45, 1.70, 1.99, 1.102
Ma 1.20, 1.21, 1.23, 1.28, 1.29
SS 1.9, 1.12, 1.15, 1.19, 1.20, 1.21, 1.22, 1.23, 1.25, 1.27
Sc 1.3, 1.13, 1.17

1.23 create art that reflects a style of a group from history.
LA 1.8, 1.13, 1.14, 1.16, 1.21, 1.45, 1.51
Ma 1.20, 1.21, 1.23, 1.28, 1.29
SS 1.12, 1.15, 1.19, 1.20, 1.21, 1.22, 1.23
Sc 1.3, 1.6, 1.13, 1.17

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

1.24 recognize several reasons for creating art, e.g., aesthetic, functional, commercial.
LA 1.7, 1.8, 1.16, 1.20, 1.110, 1.117
Ma 1.10, 1.11, 1.21, 1.23, 1.27, 1.28, 1.29, 1.30, 1.31, 1.32, 1.49
SS 1.9, 1.12, 1.13, 1.18, 1.19, 1.20, 1.21, 1.22, 1.23, 1.33
Sc 1.36, 1.76

1.25 discuss art that reflects an experience in daily life.
LA 1.6, 1.7, 1.8, 1.9, 1.14, 1.20, 1.70, 1.99, 1.102
SS 1.12, 1.19, 1.20, 1.21, 1.22, 1.23
Sc 1.3, 1.6

1.26 recognize how an artwork can evoke feelings; compare artworks that evoke different feelings.
LA 1.6, 1.8, 1.14, 1.21

1.27 choose favorite part of an artwork and discuss choice.
LA 1.14, 1.70, 1.99, 1.102

Making connections between visual art and other disciplines.

1.28 recognize how a story is told through dance, music, theatre, and visual art.
LA 1.1, 1.7, 1.13, 1.14, 1.16, 1.21, 1.45
SS 1.12
Sc 1.6, 1.13

1.29 explore visual and kinetic elements in dance, music, theatre, and visual art.
LA 1.16, 1.20
Sc 1.3

1.30 explore shape and form in both art and mathematics, e.g., geometric shapes.
Ma 1.10, 1.11, 1.12, 1.19, 1.20, 1.21, 1.23, 1.27, 1.28, 1.29, 1.30, 1.31, 1.32
Sc 1.17

Grade Two General Music

Level 2 students continue to develop the singing voice using songs and lullabies from many cultures. The students use instruments to improvise and create a variety of sounds to accompany class activities. The manipulation, identification, and performance of musical notation on the staff enhances reading skills. Terms are added to the basic music vocabulary. Students aurally and visually identify traditional instrument families and well as instruments from other cultures. The music of special events (parades etc.) and the role of musicians throughout U.S. history are examined.

Singing alone and with others, a varied repertoire of music.

2.1 sing independently maintaining a steady tempo (speed) and with proper breath control based upon melodic phrasing.

2.2 sing lullabies and songs from many cultures from memory.
LA 2.19
SS 2.24

2.3 blend vocal timbres (qualities) when singing.

Performing on instruments, alone and with others, a varied repertoire of music.

2.4 perform an instrumental *ostinato*, i.e., repeated pattern, to accompany class singing.
Sc 2.5

2.5 perform a harmonic accompaniment, using tonic and dominant chords, to accompany singing (bells or autoharp).

2.6 play with appropriately blending timbres (qualities).

Improvising melodies, variations, and accompaniments.

2.7 improvise an "answer" to a pentatonic phrase sung or played by the teacher, i.e., using *do, re, mi, sol,* and *la*.
Sc 2.15

2.8 improvise a rhythmic introduction and two to four measure rhythmic *ostinato* (repeated pattern) to accompany a melody.
Sc 2.15

Composing and arranging music within specified guidelines.

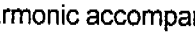
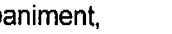
2.9 create a sound piece and sounds to accompany choral readings.
LA 2.8, 2.10
Sc 2.15

2.10 create a song in binary form, i.e., ab form.
LA 2.10
Ma 2.23
Sc 2.15

Reading and notating music.

2.11 read quarter, half, and whole notes and rests in 2 and 4 meters and $\frac{2}{4}$ $\frac{4}{4}$ manipulate them on a staff, e.g., flannel board
LA 2.11b
Sc 2.6

2.12 using *solfeggio* syllables, numbers, or letter names, read notation for the tones *mi, sol, la, do,* and *re;* manipulate notation for the pentatonic scale, e.g., flannel board.
LA 2.11b
Sc 2.6, 2.37

2.13 recognize and perform *crescendo* and *decrescendo* markings, i.e.,  and  , and observe repeat signs.
LA 2.11b
Sc 2.6, 2.37

Listening to, analyzing, and describing music.

2.14 identify an introduction and a coda, i.e., superfluous ending.

2.15 identify melodies with and without accompaniment in aural presentations of music.

2.16 identify the tonal center (*do*) in a melody presented aurally.

2.17 identify repeating melodic phrases within folk songs.
Ma 2.23

2.18 use music terminology in explaining music presented aurally.
LA 2.11

2.19 identify instrumental families by hearing and seeing a representative instrument from each family, i.e., strings, brass, woodwind, percussion.
Sc 2.3, 2.26, 2.35

2.20 identify instruments unique to various cultures, e.g., mbira to African music, dulcimer to folk music.
SS 2.22
Sc 2.3, 2.28, 2.35

2.21 demonstrate rhythmic accents of meters in two and three.

Evaluating music and music performances.

2.22 identify "head" and "chest" voice in music presented aurally.

Understanding relationships between music, the other arts, and disciplines outside the arts.

2.23 discuss special events and music appropriate for them, e.g., parades, birthdays.
LA 2.19
SS 2.3

Understanding music in relation to history and culture.

2.24 identify and describe aurally presented examples of music appropriate for special events.
Ma 2.43
SS 2.20, 2.21, 2.23

2.25 identify instruments used in aurally presented examples of music from various cultures.
SS 2.22, 2.23

2.26 discuss music heard in specific settings, e.g., movies, television.
LA 2.11
SS 2.11, 2.21
Sc 2.63, 2.71, 2.73

2.27 describe and discuss the role of musicians in various periods of U.S. history.
LA 2.116
Ma 2.43
SS 2.9, 2.13, 2.22, 2.23, 2.29
Sc 2.60, 2.61, 2.62

Grade Two General Art

At this level, children learn about printmaking and papermaking as well as additive sculpture. Color, line, shape, form and texture are used to express feelings as the children become aware of their own community culture. They develop skills in creative thinking, art appreciation and decision making as they see images in art as real or imaginary. They learn that stories can be told through multiple arts disciplines and relate to other subject areas.

Understanding and applying media, techniques, and processes.

2.1 discuss and compare the media, tools, techniques, and processes of printmaking and discuss their differences, e.g., relief, monoprint; make prints with at least two different techniques.
LA 2.14, 2.21, 2.58, 2.78, 2.107, 2.112
Ma 2.23, 2.30, 2.31, 2.33
Sc 2.6, 2.10, 2.13, 2.14, 2.15, 2.28

2.2 discuss and compare the media, tools, techniques, and processes of papermaking, e.g., examine various papers; make paper, e.g., recycling grass, fibers, or rags.
LA 2.14, 2.21, 2.78, 2.112
SS 2.14
Sc 2.8, 2.10, 2.14, 2.15, 2.16, 2.21, 2.28, 2.38

2.3 explore techniques of additive sculpture; discuss ways to make an additive sculpture with paper; create a paper sculpture.
LA 2.5, 2.14, 2.112
Sc 2.6, 2.15, 2.32, 2.52

2.4 use printmaking and papermaking materials safely and responsibly.
SS 2.2, 2.6, 2.8
Sc 2.24

Using the art elements and principles of design.

2.5 make intermediate colors; use them to evoke responses.
LA 2.58, 2.107
Ma 2.24
Sc 2.15

2.6 use variations in line(s); create art using line as a means of expression.
LA 2.8, 2.78
Ma 2.23, 2.30, 2.32
SS 2.27
Sc 2.6, 2.15, 2.39

2.7 identify, compare, and use organic shapes and forms.
Ma 2.23, 2.28, 2.29, 2.31, 2.35
SS 2.19, 2.27
Sc 2.3, 2.5, 2.10, 2.11, 2.14, 2.17, 2.18, 2.26, 2.52

2.8 find examples of simulated texture in artwork; use real and simulated textures in artwork.
LA 2.20, 2.59
Ma 2.23, 2.33
SS 2.19, 2.27
Sc 2.10, 2.17, 2.39, 2.51, 2.52, 2.56

2.9 explore foreground and background space used to imply distances in artworks; create art using foreground and background to communicate spatial ideas.
LA 2.8, 2.39, 2.78, 2.107
Ma 2.30, 2.34, 2.37, 2.43
SS 2.19
Sc 2.15, 2.19, 2.39, 2.42, 2.51, 2.54

2.10 discover how intermediate colors and color intensity can communicate ideas.
LA 2.8, 2.107
SS 2.21
Sc 2.6, 2.15

2.11 create art using organic shapes and forms.
Ma 2.23, 2.35
SS 2.27
Sc 2.15

2.12 use geometric and organic forms to create a sculpture, e.g., found objects.
Ma 2.33, 2.35, 2.38, 2.39
Sc 2.15, 2.32, 2.52

Choosing and evaluating a range of subject matter, symbols, and ideas.

2.13 explore subject matter or ideas for art found in nature, e.g., people, animals, plants.
LA 2.19, 2.20, 2.21, 2.44
Ma 2.30
Sc 2.4, 2.5, 2.9, 2.10, 2.11, 2.12, 2.15, 2.17, 2.18, 2.20, 2.21, 2.30, 2.31, 2.56

2.14 explore different ways artists use nature as subject matter, e.g., Ansel Adams, Monet, Rousseau.
LA 2.12, 2.20, 2.21, 2.44
Sc 2.3, 2.4, 2.5, 2.9, 2.10, 2.13, 2.15, 2.17, 2.46

2.15 create a self-portrait.
LA 2.14
Sc 2.15

2.16 explore and use symbols in art based on nature, e.g., people, animals, plants.
LA 2.21, 2.44, 2.48, 2.57, 2.107
Ma 2.23, 2.30, 2.32, 2.33, 2.34, 2.36
SS 2.27
Sc 2.4, 2.5, 2.6, 2.9, 2.11, 2.12, 2.15, 2.17, 2.21, 2.32, 2.56

Understanding the visual arts in relation to history and cultures.

2.17 discuss how subject matter describes a given place or time.
LA 2.3, 2.10, 2.12, 2.19, 2.20, 2.21, 2.39, 2.44, 2.48, 2.57, 2.60, 2.77, 2.78, 2.107, 2.116
Ma 2.31, 2.33, 2.34, 2.35, 2.36, 2.43, 2.44
SS 2.20, 2.21, 2.22, 2.23, 2.24, 2.25, 2.26, 2.29
Sc 2.3, 2.9, 2.10, 2.11, 2.13, 2.15, 2.42, 2.46, 2.54

2.18 discuss how art can represent a culture, e.g., Japanese calligraphic prints; describe art from several cultures throughout history.
LA 2.3, 2.10, 2.12, 2.19, 2.20, 2.21, 2.39, 2.44, 2.48, 2.57, 2.60, 2.64, 2.77, 2.78, 2.107
Ma 2.23, 2.31, 2.33, 2.34, 2.35, 2.36
SS 2.20, 2.21, 2.22, 2.23, 2.24, 2.25
Sc 2.3, 2.9, 2.13, 2.15, 2.21, 2.26

2.19 create art that reflects a style of a group from history, e.g., Japanese carp kites.
LA 2.3, 2.10, 2.12, 2.14, 2.19, 2.20, 2.21, 2.39, 2.44, 2.48, 2.57, 2.60, 2.107
Ma 2.23, 2.31, 2.32, 2.38
SS 2.20, 2.21, 2.22, 2.23, 2.24, 2.25
Sc 2.3, 2.6, 2.13, 2.15

2.20 create art that reflects their own community culture.
LA 2.3, 2.10, 2.12, 2.14, 2.19, 2.20, 2.21, 2.39, 2.44, 2.48, 2.57, 2.60, 2.107
Ma 2.32, 2.38
SS 2.9, 2.20, 2.21, 2.22, 2.23, 2.24, 2.25
Sc 2.3, 2.6, 2.11, 2.13, 2.15, 2.51

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

2.21 examine different reasons for creating artwork, e.g., aesthetic, functional, nonfunctional, crafts, commercial.
LA 2.10, 2.19, 2.20, 2.39, 2.64, 2.78, 2.111, 2.124
Ma 2.38, 2.54
SS 2.9, 2.13, 2.21, 2.22, 2.23, 2.24, 2.25, 2.35
Sc 2.2, 2.6, 2.51, 2.60, 2.61, 2.71

2.22 examine and discuss art that demonstrates personal experiences.
LA 2.2, 2.3, 2.39, 2.58
SS 2.22, 2.23, 2.24, 2.25
Sc 2.3

2.23 share and discuss artworks that reflect different feelings.
LA 2.12, 2.23, 2.39, 2.48, 2.58, 2.107
SS 2.22, 2.23, 2.24, 2.25
Sc 2.3

2.24 compare feelings evoked by different artworks using similar subjects.
LA 2.23, 2.39, 2.48, 2.57, 2.58, 2.107
SS 2.22, 2.23, 2.24, 2.25
Sc 2.3

2.25 catagorize images in an artwork as real or imaginary.
LA 2.19, 2.22, 2.39, 2.59, 2.107
SS 2.22, 2.23, 2.24, 2.25

Making connections between visual art and other disciplines.

2.26 discuss how a story is told through multiple arts disciplines, e.g., Sendak - book and opera.
LA 2.2, 2.3, 2.10, 2.12, 2.39, 2.49, 2.58, 2.77, 2.107
Ma 2.43
SS 2.22, 2.23, 2.24, 2.25
Sc 2.3, 2.15, 2.54

2.27 identify the sensory perceptions used in different arts disciplines.
Sc 2.3

2.28 recognize color, texture, shape and form in art and natural science.
Ma 2.23, 2.28, 2.29, 2.30, 2.31, 2.33, 2.34, 2.35, 2.36
Sc 2.4, 2.11, 2.28

Grade Three General Music

Level 3 students develop further independence in the use of the singing voice. They sing from memory and demonstrate the ability to follow a conductor. Through use of classroom instruments, students improvise accompaniments to melodies and create original compositions for a variety of settings. Students explore the function of music and musicians in the community, music of the United States, and other cultures. Students also study and demonstrate appropriate audience skills.

Singing alone and with others, a varied repertoire of music.

3.1 sing independently, on pitch and in rhythm, maintaining a steady tempo (speed) and with expressive variations, i.e., *accelerando, ritardando, fermata, crescendo,* and *decrescendo.*
LA 3.14

3.2 sing from memory musical theatre selections.
LA 3.15

3.3 sing ostinatos and rounds.

3.4 sing responsively following the cues of a conductor.
Sc 3.6

Performing on instruments, alone and with others, a varied repertoire of music.

3.5 perform with appropriate technique on melodic instruments, e.g., bells, Orff.
LA 3.78

3.6 play an easy rhythmic and melodic pattern from notation.

3.7 play a varied repertoire of folk, patriotic, and seasonal pieces on classroom instruments.
LA 3.30
SS 3.5

3.8 play responsively, following the cues of a conductor.
Sc 3.6

3.9 play one part in a round while the class sings the other part(s).

Improvising melodies, variations, and accompaniments.

3.10 improvise a minor phrase to answer a minor "question" sung or played by the teacher.

3.11 improvise a two to four measure melodic *ostinato* to accompany a melody.
Sc 3.19

3.12 improvise a rhythmic accompaniment for a song.

Composing and arranging music within specified guidelines.

3.13 create melodies to accompany plays and/or stories.
LA 3.8, 3.17, 3.20, 3.41, 3.43

3.14 create a song in ternary form, e.g., aba, and use a variety of melodic sounds in original compositions, e.g., Orff instruments.
LA 3.41, 3.43
Ma 3.25
Sc 3.19

Reading and notating music.

3.15 read eighth notes and rests in 2, 3, $\frac{4}{4}$ and $\frac{4}{4}$ meters.
LA 3.16, 3.38
Ma 3.6, 3.8

3.16 identify notes on treble clef staff by letter names and read notation for songs based upon the pentatonic scale.
LA 3.16, 3.38
Sc 3.6

3.17 recognize the symbols of *mp* and *mf*, perform a *ritard*, an *accelerando*, *a tempo*; and interpret *D.C. al Fine.*
LA 3.16, 3.38

3.18 notate simple melodic and rhythmic patterns on a staff.
LA 3.16, 3.38, 3.41
Sc 3.6

3.19 use sharps and flats and identify their functions.
LA 3.16, 3.38
Sc 3.6

Listening to, analyzing, and describing music.

3.20 aurally identify binary, ternary, and strophic form, e.g., ab, aba, and stanzas sung to same melody; demonstrate these forms through contrasting physical movements.
LA 3.17
Sc 3.19

3.21 use music terminology in explaining notation of songs.
LA 3.13, 3.16, 3.38, 3.75

3.22 distinguish between a vocal or instrumental solo and an ensemble performance.
LA 3.22, 3.38, 3.76

3.23 identify selected individual instruments visually and aurally; e.g., violin, trumpet, 'cello, tuba, clarinet, bassoon, timpani.
LA 3.13, 3.22, 3.38, 3.76
Sc 3.3, 3.17, 3.18, 3.30

3.24 distinguish between orchestra and band in music presented aurally.
LA 3.22, 3.38, 3.76
Sc 3.30

Evaluating music and music performances.

3.25 list ways to improve a classroom vocal performance.
LA 3.13, 3.53

Understanding relationships between music, the other arts, and disciplines outside the arts.

3.26 discuss holidays and cultural traditions and their relationships with music.
LA 3.13, 3.71
SS 3.5, 3.40, 3.42

Understanding music in relation to history and culture.

3.27 identify the use of music in U.S. history.
LA 3.13, 3.21, 3.29, 3.30, 3.77
Ma 3.30, 3.46
SS 3.5, 3.37, 3.38, 3.39, 3.40, 3.43, 3.44, 3.47, 3.50

3.28 identify forms used in aurally presented examples of music from various cultures.
LA 3.15, 3.29, 3.71
SS 3.40, 3.42

3.29 discuss musical events, opportunities, and the role of musicians in the community.
LA 3.13, 3.21, 3.28, 3.29, 3.30, 3.45, 3.71, 3.87
Ma 3.6, 3.15, 3.52
SS 3.6, 3.11, 3.20, 3.41, 3.56, 3.57
Sc 3.22, 3.78, 3.80, 3.88, 3.89

3.30 discuss and demonstrate appropriate behaviors during concerts and programs.
LA 3.11, 3.73
SS 3.3, 3.6, 3.41

Grade Three General Art

Children learn to identify and use complementary colors, organic forms, foreground, middle ground and background, repetition and overlapping lines. Children create portraits and illustrate stories. They explore how art reflects emotion. Children continue to develop creative problem solving skills as they see connections between the visual arts and other disciplines, including science and math.

Understanding and applying media, techniques, and processes.

3.1 discuss and compare how different techniques and processes in at least three or more various pencil media, e.g., graphite, colored pencils, cause artwork to have different appearances; use various pencil media to create a work of art.
LA 3.42, 3.45, 3.76
SS 3.25
Sc 3.3

3.2 identify and discuss various building materials, e.g., log, sod, stone, and their differing appearances; identify forms and shapes used in architecture; create a three-dimensional model of an architectural structure.
LA 3.16, 3.34, 3.42, 3.45, 3.76, 3.79
Ma 3.25, 3.37, 3.38
SS 3.3, 3.8, 3.11, 3.25, 3.37, 3.38, 3.39, 3.40, 3.42, 3.50
Sc 3.3, 3.19

3.3 use drawing and sculpting materials safely and responsibly.
LA 3.78
SS 3.10
Sc 3.29

Using the art elements and principles of design.

3.4 explore and describe the complementary and neutral colors; discover how mixing complementary colors creates neutrals.
LA 3.9, 3.34
Ma 3.26
Sc 3.3, 3.5

3.5 describe and use repetition and overlapping lines; create art using repetition and overlapping lines.
Ma 3.25, 3.33, 3.37
Sc 3.10, 3.11, 3.19, 3.58, 3.69

3.6 use and compare geometric and organic shapes and forms; create art using both geometric and organic shapes and forms.
Ma 3.25, 3.34, 3.38
Sc 3.3, 3.4, 3.10, 3.31, 3.40, 3.50, 3.59, 3.69

3.7 experiment with figure and facial proportions in works of art; create three-dimensional portraits, e.g., masks.
Ma 3.43

3.8 use contrasting textures and describe the effect created; create art using two or more textures.
Ma 3.25
Sc 3.3, 3.9, 3.10, 3.40, 3.50, 3.69

3.9 explore the concept of composition as it relates to foreground, middleground, and background space in a picture, e.g., position of horizon line.
Ma 3.33, 3.39
Sc 3.9, 3.69

3.10 describe symmetrical and asymmetrical balance.
Ma 3.37, 3.38
Sc 3.5, 3.11, 3.58

3.11 explore and use overlapping objects to create the illusion of depth.
Ma 3.26, 3.38
Sc 3.9, 3.19, 3.57, 3.66

3.12 create patterns, e.g., printmaking, weaving.
Ma 3.25
Sc 3.10, 3.19, 3.68

Choosing and evaluating a range of subject matter, symbols, and ideas.

3.13 explore portrait, illustration, and architecture as subject matter for art.
LA 3.21
Ma 3.25, 3.33, 3.34, 3.37
SS 3.11, 3.22, 3.23, 3.30, 3.37, 3.38, 3.39, 3.40
Sc 3.3

3.14 use architecture in their local environment as subject matter.
LA 3.79
Ma 3.25, 3.34, 3.37, 3.39
SS 3.11, 3.37, 3.38, 3.39, 3.40
Sc 3.3

3.15 create a portrait.
LA 3.79
Ma 3.37, 3.39
SS 3.30, 3.37, 3.40
Sc 3.3

3.16 explore examples of symbols in portraits, illustrations, and architecture.
LA 3.21
SS 3.7, 3.30, 3.37, 3.39, 3.40, 3.45
Sc 3.3

3.17 create illustrations for a story.
LA 3.2, 3.3, 3.5, 3.6, 3.8, 3.9, 3.12, 3.13, 3.15, 3.17, 3.22, 3.23, 3.24, 3.27, 3.28, 3.31, 3.32, 3.33, 3.34, 3.43, 3.44, 3.45
Ma 3.8
SS 3.9, 3.37, 3.40, 3.41
Sc 3.3

Understanding the visual arts in relation to history and cultures.

3.18 discuss how art relates to history and can represent a culture, e.g., Mayan civilization styles of art.
LA 3.2, 3.3, 3.5, 3.8, 3.9, 3.12, 3.13, 3.15, 3.17, 3.22, 3.24, 3.27, 3.28, 3.29, 3.33, 3.34, 3.43, 3.44, 3.45, 3.71, 3.74, 3.76, 3.77
Ma 3.8, 3.17, 3.25, 3.30, 3.34, 3.38
SS 3.5, 3.23, 3.37, 3.38, 3.39, 3.40, 3.42, 3.46, 3.47, 3.50
Sc 3.3

3.19 identify art and artists in various cultures throughout history.
LA 3.2, 3.3, 3.5, 3.8, 3.9, 3.12, 3.13, 3.15, 3.17, 3.22, 3.24, 3.27, 3.28, 3.34, 3.43, 3.44, 3.45, 3.71, 3.74
Ma 3.8, 3.17, 3.25, 3.30
SS 3.37, 3.38, 3.39, 3.40, 3.42, 3.46, 3.47
Sc 3.3

3.20 discuss and demonstrate the differences in art from varying cultures, e.g., categorizing art examples.
LA 3.2, 3.3, 3.5, 3.8, 3.9, 3.12, 3.13, 3.15, 3.17, 3.22, 3.24, 3.27, 3.28, 3.29, 3.34, 3.43, 3.44, 3.45, 3.71, 3.74, 3.76
Ma 3.8, 3.25, 3.33, 3.34, 3.38
SS 3.23, 3.37, 3.38, 3.39, 3.40, 3.42, 3.45, 3.46
Sc 3.3

3.21 create art that reflects present-day culture, e.g., media arts, video, computers, television.
LA 3.2, 3.3, 3.5, 3.8, 3.9, 3.12, 3.13, 3.15, 3.17, 3.22, 3.24, 3.27, 3.28, 3.29, 3.31, 3.32, 3.33, 3.34, 3.43, 3.44, 3.45, 3.71, 3.74, 3.79, 3.86
Ma 3.8, 3.17, 3.25, 3.30, 3.33, 3.34, 3.38, 3.51
SS 3.9, 3.11, 3.37, 3.38, 3.39, 3.40, 3.41, 3.42, 3.45, 3.46, 3.54, 3.56
Sc 3.3, 3.6, 3.15, 3.60, 3.84

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

3.22 identify different reasons for creating art, e.g., aesthetic, recording history, functional, nonfunctional crafts.
Ma 3.25, 3.34, 3.37, 3.52
SS 3.5, 3.11, 3.22, 3.37, 3.38, 3.39, 3.40, 3.42, 3.56
Sc 3.2, 3.78, 3.80, 3.88

3.23 explore art that reflects emotion.
LA 3.20, 3.21, 3.30

3.24 create art to evoke specific feelings.
LA 3.20

3.25 compare two- and three-dimensional art that evokes specific feelings.
LA 3.13, 3.20
SS 3.37, 3.42

3.26 select a favorite artwork to display and discuss reasons for the choice.
LA 3.12, 3.13, 3.43, 3.44, 3.45

Making connections between visual art and other disciplines.

3.27 recognize and understand how some presentations can contain several arts disciplines.
LA 3.10, 3.87
Ma 3.52
SS 3.37, 3.42

3.28 discuss how one or more of the senses can be used through all four arts disciplines.
LA 3.13, 3.44, 3.45

3.29 identify the use of color in art and its connections to physical science, e.g., rainbow, seasons.
Sc 3.3, 3.11, 3.63

Grade Four General Music

Level 4 students continue to build their singing skills, demonstrating appropriate pitch, rhythm, diction and posture. They sing independently and in groups patriotic songs and songs from our West Virginia heritage. Students experiment with instruments to create special effects to enhance classroom activities. The use of electronic media (tape recorder, computer) to compose music is explored. Students further music reading skills through the introduction and use of additional notes, meter signatures, and terms. Students identify instruments and discuss sound production. Students discuss, listen to, and identify music from various cultures and the role of music and musicians in these cultures.

Singing alone and with others, a varied repertoire of music.

4.1 sing independently, on pitch and in rhythm, with appropriate timbre (quality), diction, and posture, maintaining a steady tempo, and with appropriate interpretation of *allegro, adagio.*
LA 4.17

4.2 sing patriotic songs and West Virginia heritage songs from memory.
LA 4.19
SS 4.4
WV.3, WV.16

4.3 sing partner songs, descants, and counter melodies.

4.4 sing in groups, blending vocal timbres, matching dynamic levels, and responding to the cues of a conductor.

Performing on instruments, alone and with others, a varied repertoire of music.

4.5 perform an instrumental part with correct pitch and rhythm, appropriate dynamics, and maintain a steady tempo.

4.6 perform rhythmic and melodic patterns to add special effects to songs, e.g., wood block for horse hooves, sleigh bells for holiday songs.
Ma 4.24

4.7 perform on one or more instruments a repertoire of music representing diverse genres and styles.

4.8 play an autoharp or dulcimer part to accompany class singing.
WV.16

Improvising melodies, variations, and accompaniments.

4.9 improvise rhythmic "answers" in a variety of styles, e.g., syncopated Latin style.

4.10 improvise rhythmic and melodic variations of a familiar melody.

4.11 improvise a rhythmic accompaniment using a non-traditional sound source.

4.12 improvise short songs and instrumental pieces using electronic media, e.g., tape recorder, computer.

Composing and arranging music within specified guidelines.

4.13 create a song or instrumental piece in rondo (abaca) form.
LA 4.49
Ma 4.24

4.14 create a piece having mixed meters, e.g., 3 and 4.
$\frac{4}{4}$ $\frac{4}{4}$
LA 4.49

Reading and notating music.

4.15 read dotted quarter and half notes and rests in meters of 2, 3, and 4.
$\frac{4}{4}$ $\frac{4}{4}$ $\frac{4}{4}$
LA 4.41
Ma 4.6
Sc 4.6

4.16 read notation for melodies based upon major scales; notate short melodic patterns presented aurally.
LA 4.41
Sc 4.6

4.17 demonstrate *andante*, *allegro*, *adagio*, and *Dal Segno*.
Sc 4.6

Listening to, analyzing, and describing music.

4.18 aurally identify rondo form, i.e., abaca.
Ma 4.24

4.19 identify syncopation in a variety of genres, e.g., blues, spirituals.

4.20 describe stories and emotions conveyed through ballads aurally presented.
LA 4.20, 4.21

4.21 distinguish between soprano, alto, tenor, and bass voices.
LA 4.46, 4.91

4.22 aurally and visually identify instruments of the string family, i.e., violin, viola, 'cello, bass, and harp; the woodwind family, i.e., flute, clarinet, saxophone, oboe, and bassoon; the percussion family, i.e., bass drum, snare drum, timpani, xylophone, cymbals, and tambourine; the brass family, i.e., trumpet, trombone, French horn, and tuba.
LA 4.36, 4.46, 4.91
Sc 4.18

Evaluating music and music performances.

4.23 select valid criteria for evaluating a musical performance, e.g., posture, diction, ensemble, correct rhythms, and pitches; use appropriate music terminology in evaluating a performance, comparing it to similar or exemplary models.
LA 4.15, 4.46

Understanding relationships between music, the other arts, and disciplines outside the arts.

4.24 discuss terms that are common to both visual art and music and their different meanings in each art.
LA 4.46
(see LA 5.42, LA 5.43, LA 5.45)

4.25 discuss sound production of instruments.
LA 4.51
Sc 4.50, 4.51, 4.53

4.26 discuss music studied that represents different world regions.
LA 4.19, 4.51
SS 4.39, 4.41

Understanding music in relation to history and culture.

4.27 identify aurally presented examples of music from selected world cultures; discuss textural and harmonic elements in those pieces.
LA 4.51
SS 4.32

4.28 discuss music's role in society.
LA 4.51
Ma 4.27
SS 4.5, 4.6, 4.15, 4.32, 4.33
Sc 4.74, 4.75

4.29 describe and discuss the role of music and musicians in world cultures.
LA 4.19, 4.51, 4.80, 4.97
Ma 4.55
SS 4.12, 4.14, 4.32, 4.33, 4.35, 4.40, 4.41, 4.55
WV.2, WV.7, WV.13, WV.16
Sc 4.69, 4.73, 4.82

4.30 discuss and demonstrate appropriate audience behaviors for non-traditional musical performances, e.g., jazz performances.
LA 4.18

Grade Four General Art

At this level, children learn to identify and use tints and shades with paints or pastels. They create additive and subtractive sculpture. They develop creativity in the use of symbols--real, abstract or non-objective. The human figure is studied in animation or through history; students learn about the past and the reasons art is created. They identify the work of artists and characteristics that make it unique.

Understanding and applying media, techniques, and processes.

4.1 compare the media, tools, techniques, and processes of at least two sculpture media, e.g., papier-maché, found objects, clay; discuss how the different media techniques and processes cause artworks to have different appearances; use additive, subtractive, or an assemblage process to create an art project.
LA 4.13, 4.14, 4.15, 4.36, 4.50, 4.87
Ma 4.37
WV.16
Sc 4.3, 4.12, 4.17, 4.26

4.2 discuss how different techniques and processes cause pottery to have different appearances and compare the media, tools, techniques, and processes used in hand building with modeling materials.
LA 4.13, 4.14, 4.15, 4.36, 4.50
Ma 4.37
SS 4.32
WV.16, WV.17
Sc 4.13, 4.17, 4.26, 4.54

4.3 compare and discuss the media, tools, techniques and processes of pastels and chalk and how such techniques as blending and layering are used to create different appearances; use these techniques in an artwork.
LA 4.13, 4.14, 4.15, 4.36, 4.50, 4.87
Sc 4.13, 4.17, 4.26

4.4 use sculpture, modeling materials, and drawing tools safely and responsibly.
LA 4.86
Sc 4.29

Using the art elements and principles of design.

4.5 explore tints and shades and demonstrate how they cause different responses; create art using a monochromatic color scheme.
LA 4.36, 4.87
Ma 4.37, 4.39
SS 4.36
Sc 4.5, 4.17, 4.28

4.6 use different line types and qualities to evoke responses; create art using contour line, continuous line drawing, and/or line quality.
LA 4.14, 4.87, 4.91
Ma 4.35
SS 4.15, 4.43, 4.44
Sc 4.3, 4.11, 4.18

4.7 explore expressive qualities of nonobjective and abstract art; and create art using nonobjective and abstract shapes, e.g., Indian symbols.
LA 4.35, 4.36, 4.38, 4.41
SS 4.15
Sc 4.3, 4.6, 4.18, 4.45

4.8 create architectural forms that demonstrate that form follows function.
LA 4.87
Ma 4.32, 4.34, 4.37, 4.42
SS 4.43, 4.44, 4.46
Sc 4.3, 4.15, 4.18, 4.45

4.9 use different textural qualities in paintings to evoke responses, e.g., sand painting.
LA 4.14, 4.36, 4.91
SS 4.36, 4.43, 4.44
Sc 4.3, 4.11, 4.18, 4.35, 4.45

4.10 create art using different types of balance, i.e., symmetrical, asymmetrical, radial, to evoke responses.
LA 4.14, 4.87
Ma 4.31, 4.39, 4.40
SS 4.15, 4.43, 4.44
Sc 4.3, 4.45, 4.51

4.11 create art using rhythm and movement to evoke responses.
LA 4.14
Ma 4.24
SS 4.15, 4.36
Sc 4.3, 4.51

4.12 create art that carries a theme throughout causing a sense of unity, e.g., color, subject matter, ideas.
LA 4.21, 4.38, 4.87
SS 4.15, 4.36
WV.1, WV.2, WV.12, WV.16
Sc 4.6, 4.45

4.13 create contrast in art by using one or more elements of design.
LA 4.87
SS 4.15

4.14 show dominance in art by emphasizing one or more elements of art.
LA 4.87
Ma 4.31
SS 4.15

Choosing and evaluating a range of subject matter, symbols, and ideas.

4.15 explore architecture, animation, and figures as subject matter.
LA 4.16, 4.36, 4.38, 4.92
Ma 4.32, 4.33, 4.34, 4.35, 4.37, 4.39, 4.42
SS 4.26
Sc 4.9, 4.17, 4.31, 4.51

4.16 use examples of symbols in portraits, illustrations, and architecture.
LA 4.7, 4.16, 4.31, 4.36, 4.38, 4.39, 4.41, 4.92
Ma 4.37
SS 4.4, 4.15, 4.44, 4.46

4.17 create three-dimensional art representing local architecture.
LA 4.31, 4.38, 4.87, 4.92
Ma 4.19, 4.24, 4.32, 4.33, 4.34, 4.35, 4.37, 4.39, 4.42
Sc 4.3

4.18 create art using human figures as subject matter.
LA 4.3, 4.7, 4.9, 4.38, 4.87, 4.92
Ma 4.37, 4.40
SS 4.4
Sc 4.3

4.19 create art using animation techniques, e.g., storyboard, flip book, comic strip.
LA 4.3, 4.7, 4.9, 4.20, 4.21, 4.27, 4.31, 4.35, 4.38, 4.50, 4.51, 4.81, 4.87, 4.92
Ma 4.6, 4.24
SS 4.15
Sc 4.3, 4.6, 4.51

Understanding the visual arts in relation to history and cultures.

4.20 discuss how art relates to and represents a culture, e.g., Native American Indians.
LA 4.13, 4.14, 4.15, 4.16, 4.19, 4.20, 4.36, 4.38, 4.39, 4.49, 4.50, 4.51, 4.81, 4.83, 4.92, 4.98
Ma 4.37
SS 4.4, 4.24, 4.26, 4.31, 4.32, 4.39, 4.41, 4.46, 4.47
WV.16, WV.17, WV.20
Sc 4.9, 4.13

4.21 describe art and artists of various cultures throughout history.
LA 4.9, 4.13, 4.16, 4.19, 4.20, 4.21, 4.36, 4.38, 4.39, 4.49, 4.50, 4.51, 4.81, 4.83, 4.85, 4.92, 4.98
Ma 4.40, 4.55
SS 4.4, 4.26, 4.31, 4.32, 4.41, 4.46, 4.47
WV.16, WV.17, WV.20
Sc 4.9, 4.13, 4.18, 4.73

4.22 create art that reflects a style of a culture from history, e.g., Egyptian masks.
LA 4.16, 4.19, 4.20, 4.36, 4.38, 4.39, 4.81, 4.83, 4.87, 4.92, 4.98
Ma 4.24, 4.40
SS 4.4, 4.31, 4.32, 4.46, 4.47
WV.16, WV.17, WV.20
Sc 4.3, 4.9, 4.13

4.23 create art depicting a current event.
LA 4.16, 4.19, 4.20, 4.36, 4.38, 4.39, 4.81, 4.83, 4.87, 4.92, 4.98
SS 4.4, 4.31, 4.32, 4.39, 4.46, 4.47
WV.16, WV.17, WV.20
Sc 4.3, 4.6, 4.9, 4.13

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

4.24 describe different reasons for creating art, e.g., commercial, economic, cultural.
LA 4.13, 4.16
Ma 4.52
SS 4.13, 4.14, 4.15, 4.26, 4.31, 4.32, 4.33, 4.39, 4.40
WV.2, WV.7, WV.8, WV.16
Sc 4.73

4.25 describe art that reflects reaction to an event.
LA 4.13, 4.16, 4.21, 4.35, 4.83
SS 4.40, 4.41, 4.46
Sc 4.13

4.26 explain how an artwork evokes feelings; compare feelings evoked by several different works of one artist.
LA 4.13, 4.15, 4.21, 4.81, 4.101
Sc 4.13

4.27 choose an artwork and discuss characteristics that make it unique.
LA 4.16
WV.16

Making connections between visual art and other disciplines.

4.28 identify and understand similarities and differences between characteristics of visual art and other arts disciplines.
LA 4.13
SS 4.33
WV.16, WV.17

4.29 compare visual, aural, oral, and kinetic elements in dance, music, theatre, and visual art.
LA 4.11, 4.15, 4.16
Ma. 4.55
WV.16, WV.17

4.30 explore the influences of literature or current events on art.
LA 4.13, 4.16, 4.35, 4.83, 4.92, 4.101
WV.16, WV.17

Grade Five General Music

Level 5 students further develop their singing skills, demonstrating proper technique and expression, and singing music written in two parts. Students play chords and melodies on instruments using written notation, playing by ear, and improvising. Students demonstrate their music reading abilities through performing and interpreting written notation and terms. Students evaluate performances, compare works of art and music, and explore the correlation of music and mathematics. Music of the United States is emphasized through the study of exemplary musical works, composers, musical careers, and the use of music in our society.

Singing, alone and with others, a varied repertoire of music.

5.1 demonstrate pitch accuracy within their vocal ranges and good breath control when singing alone and in small or large ensembles; demonstrate staggered breathing techniques when singing in ensembles.

5.2 sing easy literature having modest ranges that includes changes of tempo, keys, and meter.

5.3 sing gospel songs and spirituals with appropriate expression.
LA 5.21, 5.22, 5.23
SS 5.21, 5.45

5.4 sing songs written in two parts.

Performing on instruments, alone and with others, a varied repertoire of music.

5.5 perform chords on a keyboard-type instrument.

5.6 play easy instrumental literature using classroom instruments demonstrating changes of tempo, keys, and meters.

5.7 perform the melodies or chords of gospel songs and spirituals on keyboard-type instruments.

5.8 play by ear a phrase of a familiar song on a keyboard-type instrument, e.g., piano, bells.

Improvising melodies, variations, and accompaniments.

5.9 improvise simple chordal accompaniments on classroom instruments, e.g., autoharp, dulcimer.

5.10 improvise melodic variations on a pentatonic melody, e.g., *do, re, mi, sol, la.*

5.11 improvise a short melody in the meter of 2, 3, or 4.
4 4 4

Composing and arranging music within specified guidelines.

5.12 compose a two-phrase melody using a two-chord harmonic structure.

5.13 notate familiar simple melodies for classroom melodic instruments, e.g., bells, recorder, Orff.
LA 5.187

5.14 use found sounds in original compositions, e.g., clap, chair squeak.

Reading and notating music.

5.15 sightread melodies and rhythms including sixteenth notes and rests in treble clef.
Ma 5.3

5.16 identify bass clef, *staccato* and *legato* marks.

5.17 create and notate a minor melody.

Listening to, analyzing, and describing music.

5.18 describe simple variations on a theme.

5.19 identify distinguishing elements of varied styles of U.S. music.
LA 5.5
SS 5.35, 5.36, 5.42, 5.45, 5.51, 5.52, 5.53, 5.54, 5.55, 5.58

5.20 identify expressive qualities of staccato and legato in aurally presented music.

5.21 identify theme and variations in discussion of aurally presented music.
Sc 5.15

Evaluating music and music performances.

5.22 develop a list of criteria for evaluating performances, e.g., accurate note/rhythm reading, intonation.

Understanding relationships between music, the other arts, and disciplines outside the arts.

5.23 compare a work of art and a musical work which are based upon the same event, subject, or mood, e.g., *Starry Night* by Van Gogh and "Sunrise" from *Grand Canyon Suite* by Grofé.
LA 5.58

5.24 discuss correlation of math and music.
Ma 5.3, 5.17, 5.20

Understanding music in relation to history and culture.

5.25 describe characteristics of U.S. musical styles and genres.
LA 5.5, 5.54, 5.58, 5.60, 5.61, 5.185
SS 5.21, 5.26, 5.27, 5.51, 5.52, 5.53, 5.54, 5.55, 5.58

5.26 classify exemplary works by U.S. composers by genre and style and explain characteristics which cause them to be considered exemplary.
LA 5.12
SS 5.33

5.27 describe the social use of music in the United States.
LA 5.5, 5.54, 5.58, 5.60, 5.61, 5.184
SS 5.18, 5.20, 5.31, 5.36, 5.42, 5.45, 5.51, 5.52, 5.53, 5.54, 5.55, 5.58
Sc 5.64

5.28 discuss musical careers in the United States and give examples of people in each career.
LA 5.5, 5.54, 5.58, 5.60, 5.61
SS 5.10, 5.58, 5.65
Sc 5.76

Grade Five General Art

The fifth grade general art objectives reinforce and extend the instructional objectives of grades K-4. Students select and examine the use of art media, techniques, and processes. The elements and principles of art are used to create works and communicate ideas while the student must now recognize the characteristics of each. Themes in art are related to personal subjects. Strong reference is made to art history: artists, periods, styles, and cultures. Reasons for creating works are discussed and compared.

Understanding and applying media, techniques, and processes.

5.1 select media, techniques, and processes to communicate a personal experience or an idea, e.g., oil pastel, tempera, relief print editions, beads (paper, clay), dye, yarn.
LA 5.8, 5.32, 5.35
Ma 5.20
US 5.58
Sc 5.5, 5.8, 5.11, 5.20, 5.25, 5.59, 5.63

5.2 examine the effectiveness of their choices of media, techniques, and processes to communicate ideas.
LA 5.12, 5.56, 5.62
Sc 5.8, 5.11, 5.14, 5.17, 5.19, 5.25, 5.26, 5.59, 5.78

5.3 use selected media to produce artwork, e.g., painting, printmaking, jewelry, fiber arts.
LA 5.32, 5.35
Ma 5.5, 5.8, 5.14, 5.20, 5.23
Sc 5.8, 5.11, 5.25, 5.59, 5.63

Using the elements of art and principles of design.

5.4 identify and recognize the characteristics of line, shape, form, color, space, texture, value, rhythm/movement, repetition/pattern, dominance/emphasis, contrast/variety, proportion/scale, unity/harmony, and balance.
LA 5.46, 5.82, 5.88, 5.90, 5.172, 5.177
Ma 5.17, 5.31, 5.33, 5.34, 5.35, 5.40, 5.43, 5.46, 5.54
US 5.29, 5.33, 5.58
Sc 5.5, 5.7, 5.8, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.22, 5.24, 5.25, 5.27, 5.30, 5.31, 5.32, 5.42, 5.48, 5.55, 5.59, 5.65

5.5 create a drawing(s) using contour, continuous, and/or gesture lines.
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

5.6 manipulate three-dimensional media to create a non-objective or representational form.
LA 5.35
Ma 5.5, 5.8, 5.14, 5.20, 5.46
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.31, 5.65

5.7 demonstrate knowledge of color theory by using primary, secondary, intermediate, and neutral colors, tints, and shades of warm or cool colors, and a monochromatic color scheme.
LA 5.14, 5.32, 5.35
Ma 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.16, 5.19, 5.25, 5.65

5.8 apply shading techniques to geometric shapes to create the illusion of form.
LA 5.14, 5.32
Ma 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

5.9 create a drawing in one-point perspective.
LA 5.32
Ma 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

5.10 create art using negative and positive space, e.g., paper cutting.
LA 5.32
Ma 5.17, 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

5.11 use gradations of value in a work of art.
LA 5.35
Ma 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.16, 5.19, 5.25, 5.65

5.12 use simulated texture in a work of art.
LA 5.35
Ma 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.16, 5.19, 5.25, 5.65

5.13 create art using visual rhythm and repetitions of patterns, e.g., patterns in nature.
LA 5.35
Ma 5.5, 5.8, 5.14, 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.13, 5.14, 5.19, 5.25, 5.65

5.14 show emphasis, variety, or contrast in a work of art.
LA 5.35
Ma 5.20
US 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

5.15 create a portrait and/or self-portrait using the rules of proportion.
LA 5.8, 5.32, 5.35
Ma 5.20, 5.34, 5.35, 5.46
US 5.54, 5.58
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

5.16 create a symmetrically balanced design that has unity.
LA 5.8, 5.32
Ma 5.5, 5.8, 5.14, 5.17, 5.20, 5.26, 5.30, 5.34, 5.35
Sc 5.5, 5.7, 5.8, 5.14, 5.19, 5.25, 5.65

Choosing and evaluating a range of subject matter, symbols, and ideas.

5.17 choose a personal subject or topic to communicate a meaning in art (visual, spatial, and temporal concepts).
LA 5.6, 5.14
Ma 5.20
Sc 5.7, 5.14, 5.19, 5.25

5.18 illustrate knowledge of context by using subjects, themes, or symbols to produce meaning in artwork.
LA 5.6, 5.14
Ma 5.20
Sc 5.7, 5.14, 5.19, 5.25

Understanding the visual arts in relation to history and cultures.

5.19 identify the characteristics of artworks and artists from different periods of time, styles, and cultures.
LA 5.15, 5.16, 5.21, 5.22, 5.23, 5.27, 5.31, 5.34, 5.164, 5.184
US 5.24, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

5.20 describe and place art objects, artworks, and artists on an art historical and cultural timeline.
LA 5.5, 5.15, 5.16, 5.20, 5.22, 5.23, 5.27, 5.31, 5.34, 5.62, 5.164, 5.176, 5.184
US 5.24, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

5.21 describe how time and place influence meaning and value in a work of art.
LA 5.5, 5.15, 5.16, 5.22, 5.23, 5.27, 5.31, 5.34, 5.54, 5.55, 5.56, 5.58, 5.60, 5.61, 5.62, 5.164, 5.184
US 5.24, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

5.22 compare the purposes of functional and non-functional crafts and works of art, e.g., fiber arts and jewelry to wear and/or for decoration and display.
LA 5.5, 5.16, 5.21, 5.22, 5.23, 5.27, 5.31, 5.34, 5.60, 5.61, 5.164, 5.184
US 5.27, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

5.23 identify and categorize art on an historical time line, e.g., Paleolithic crafts to modern crafts.
LA 5.5, 5.15, 5.16, 5.20, 5.22, 5.23, 5.27, 5.31, 5.34, 5.164, 5.176, 5.184
US 5.27, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

5.24 compare purposes of crafts from two or more periods or eras, e.g., use of the craft piece, similarities and differences in media, importance to the culture.
LA 5.5, 5.13, 5.16, 5.22, 5.23, 5.27, 5.31, 5.34, 5.60, 5.61, 5.164, 5.184
US 5.27, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

5.25 evaluate works of art from various eras and cultures and determine the merit, e.g., how the artwork reflects the craftsperson or culture.
LA 5.12, 5.13, 5.16, 5.21, 5.22, 5.23, 5.27, 5.31, 5.34, 5.54, 5.55, 5.56, 5.58, 5.61, 5.184, 5.184
US 5.27, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

5.26 select, identify and display his/her work.
LA 5.12, 5.14

5.27 discuss and evaluate artworks, e.g., individual and group responses based on research, information, and learning.
LA 5.5, 5.12, 5.13, 5.14, 5.15, 5.16, 5.22, 5.23, 5.27, 5.31, 5.34, 5.54, 5.55, 5.56, 5.58, 5.61, 5.164, 5.184
US 5.27, 5.31, 5.33, 5.36, 5.44, 5.46, 5.48, 5.52, 5.54, 5.58

Making connections between visual art and other disciplines.

5.28 recognize how a specific subject could be expressed through two or more arts disciplines.

5.29 explore and discuss color theory as it relates to art and science.
LA 5.60, 5.61
Sc 5.8, 5.14, 5.20, 5.25, 5.28, 5.59

Grade Six General Music

Level 6 students continue to build proper singing technique while expanding their vocal ranges. Students demonstrate their increasing ability to interpret, improvise, and compose music on the keyboard and other classroom instruments. Students are able to notate melodies and their own original compositions. More highly developed listening skills allow students to describe musical details in compositions and refine criteria for evaluating musical performances. Students discuss the scientific principles of sound production, compare the work of a playwright and a composer in creating an idea or mood, and explore the music of Mexico and South America.

Singing, alone and with others, a varied repertoire of music.

6.1 sing accurately and with good breath control in class performance of songs.

6.2 sing moderately easy literature that contains moderate technical demands, expanded vocal ranges, and varied interpretive requirements.

6.3 sing Mexican and South American songs with expression appropriate for the song being performed.
LA 6.16
SS 6.32

Performing on instruments, alone and with others, a varied repertoire of music.

6.4 perform, alone or with others, chords with melodies on keyboard-type instruments, e.g., piano, bells.

6.5 play moderately easy literature using classroom instruments demonstrating moderate technical demands and varied interpretive requirements.

6.6 perform on folk instruments music of the western hemisphere with appropriate stylistic interpretation.

6.7 play by ear a familiar melody (at least four phrases) on an instrument.

Improvising melodies, variations, and accompaniments.

6.8 participate in the improvisation of tone clusters to accompany songs, e.g., piano, bells.

6.9 improvise an accompaniment using the tones of a triad.

6.10 improvise rhythmic variations on pentatonic and major melodies.

6.11 improvise a melody in the style of a march.

Composing and arranging music within specified guidelines.

6.12 compose a four-phrase melody using a three-chord harmonic structure demonstrating unity and variety.
LA 6.53

6.13 write an accompaniment for a song using 3 or more Orff instruments (or bells, or keyboards).
LA 6.53

6.14 collect sounds on tape and use them in original compositions.
LA 6.53, 6.151

Reading and notating music.

6.15 read music in meters 3 and 6.
8 8

6.16 read notes in bass clef.

6.17 read and interpret *ritardando. (rit.)*

6.18 create and notate an ostinato (repeated pattern) accompaniment.
LA 6.53

Listening to, analyzing, and describing music.

6.19 describe events as they occur in various musical forms; e.g., fugue, rondo.

6.20 describe characteristics of music genres and styles from countries and cultures of the western hemisphere.
LA 6.16, 6.27, 6.151
SS 6.32, 6.42

6.21 identify minor/major tonality, tempo changes, and musical forms in discussion of aurally presented music.

Evaluating music and music performances.

6.22 refine criteria for evaluating performances; discuss a class performance and offer constructive suggestions for improvement.
LA 6.2

Understanding relationships between music, the other arts, and disciplines outside the arts.

6.23 compare the work of a playwright and a composer in creating an idea or mood.
LA 6.54

6.24 discuss the scientific principles of sound production.
Sc 6.3, 6.55, 6.73, 6.76

Understanding music in relation to history and culture.

6.25 classify exemplary works by North and South American composers by genre and style and explain characteristics that cause them to be considered exemplary.
LA 6.151

6.26 describe the functions music serves in Mexico and South America.
LA 6.3, 6.4, 6.5, 6.7, 6.16, 6.151
SS 6.60
Sc 6.98

6.27 discuss musical careers in Mexico and South America and give examples of prominent people and groups in these careers.
LA 6.3, 6.4, 6.5, 6.7, 6.151
SS 6.12, 6.60

Grade Six General Art

At the sixth grade level, students examine the use of media, techniques, and processes. Art elements and principles relate specifically to concepts in art production. The student's artwork should communicate an intended meaning. Art history topics are compared, characterized, and placed on a timeline. Reasons for creating works are identified with specific examples. Cultural/historical and aesthetic meanings and purposes of artworks are clarified. Art history is explored through other arts disciplines.

Understanding and applying media, techniques, and processes.

6.1 use selected media, techniques, and processes to communicate a personal experience or an idea, e.g., watercolor, tempera, ink, fabric, collected materials, montage, weaving, mosaic.
LA 6.15, 6.19
Ma 6.19
Sc 6.8, 6.25, 6.72

6.2 examine and discuss the effectiveness of their choices of media, techniques, and processes to communicate ideas.
LA 6.56, 6.64, 6.112, 6.126
Sc 6.11, 6.14, 6.19, 6.76

Using the elements of art and principles of design.

6.3 discuss the characteristics of elements of art and principles of design.
LA 6.7, 6.23, 6.28, 6.34, 6.67, 6.86, 6.148, 6.151
Ma 6.15, 6.24, 6.30, 6.31, 6.32, 6.37
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.15, 6.19, 6.22, 6.25, 6.35, 6.36, 6.56, 6.58, 6.76, 6.82

6.4 create a contour line drawing.
LA 6.86
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.5 create three-dimensional artwork.
LA 6.86
Ma 6.33, 6.42
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.56, 6.82

6.6 identify analogous color schemes and use one within an artwork.
LA 6.6, 6.86
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.7 use organic shapes in artwork.
LA 6.86
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.8 create art using two-point perspective.
LA 6.6, 6.86
Ma 6.47
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.58, 6.82

6.9 create art using negative and positive space, e.g., stenciling, weaving.
LA 6.6, 6.86
Ma 6.15
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.10 create value in a drawing by use of hatching, crosshatching, stippling, or pointillism.
LA 6.86
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.11 use simulated textures to create an artwork or collage, e.g., textural rubbings, blending, and other techniques.
LA 6.86
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.12 create art using visual rhythm and repetition of pattern(s).
LA 6.86
Ma 6.15, 6.36
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.13 show dominance/emphasis by use of color, shape, or size.
LA 6.86
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.14 create art using standard figure proportions.
LA 6.6, 6.86
Ma 6.15, 6.36, 6.42, 6.47
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

6.15 create symmetrically, asymmetrically, or radially balanced design that has unity.
LA 6.6, 6.86
Ma 6.15, 6.36, 6.42
SS 6.60
Sc 6.5, 6.7, 6.8, 6.13, 6.14, 6.19, 6.25, 6.82

Choosing and evaluating a range of subject matter, symbols, and ideas.

6.16 analyze how style affects the meaning of artwork using two or more styles based on the same subject matter.
LA 6.3, 6.7, 6.11, 6.22, 6.23, 6.28, 6.29, 6.33, 6.53, 6.54, 6.63, 6.128, 6.136, 6.143, 6.144
SS 6.27, 6.41, 6.42, 6.43, 6.44, 6.45, 6.57
Sc 6.15, 6.25

6.17 use the visual, spatial, and intellectual concepts relating to a chosen style of art to communicate an intended meaning in an artwork.
LA 6.3, 6.8, 6.14, 6.15, 6.19, 6.26, 6.27
Ma 6.19, 6.33, 6.36, 6.37
SS 6.57
Sc 6.7, 6.8, 6.11, 6.19, 6.25, 6.26, 6.56, 6.58, 6.62, 6.66, 6.71, 6.73

Understanding the visual arts in relation to history and cultures.

6.18 list characteristics of and compare artworks and artists from different periods of time, styles, and cultures.
LA 6.3, 6.7, 6.11, 6.16, 6.22, 6.28, 6.29, 6.33, 6.53, 6.54, 6.57, 6.91, 6.104, 6.128, 6.136, 6.143, 6.144, 6.151, 6.158
SS 6.12, 6.13, 6.14, 6.27, 6.31, 6.41, 6.42, 6.43, 6.44, 6.45, 6.52, 6.53
Sc 6.15

6.19 compare art objects, artworks, and artists with cultural events on a historical timeline.
LA 6.7, 6.11, 6.16, 6.22, 6.29, 6.33, 6.34, 6.53, 6.91, 6.128, 6.136, 6.143, 6.144, 6.148, 6.151, 6.158, 6.162
Ma 6.55
SS 6.12, 6.13, 6.14, 6.27, 6.37, 6.39, 6.41, 6.53, 6.58
Sc 6.15, 6.16, 6.87, 6.89, 6.94

6.20 create artwork that reflects the influence of time and place.
LA 6.8, 6.14, 6.15, 6.19, 6.26, 6.27
MA 6.19, 6.33, 6.36, 6.37
SS 6.57
Sc 6.7, 6.8, 6.19, 6.25, 6.26, 6.56, 6.58, 6.62, 6.66, 6.71

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

6.21 discuss and compare several reasons for creating works of art, e.g., function, aesthetics, personal meanings, tradition.
LA 6.3, 6.14, 6.58, 6.64, 6.112
SS 6.41, 6.42, 6.43, 6.44, 6.45
Sc 6.8

6.22 identify and recognize weaving, stained glass, and mosaic as art forms, e.g., functional and non-functional objects.

6.23 compare the purposes of creating two-dimensional and three-dimensional works of art, e.g., watercolor painting, montage and assemblage, for personal expression or to evoke feelings.
LA 6.3, 6.58
Sc 6.11

6.24 compare the meaning and purpose of exemplary artworks based on information about closely related cultural/historical contexts and aesthetic qualities, e.g., Native American woven baskets and clothing, Navajo design, Mexican culture; mosaic materials, functions, and design.
LA 6.3, 6.14, 6.29, 6.54, 6.143, 6.144, 6.151
SS 6.12, 6.13, 6.14, 6.27, 6.36, 6.41, 6.42, 6.43, 6.44, 6.45, 6.52, 6.53
Sc 6.73, 6.94

6.25 compare the meaning and purpose of exemplary artworks based on information about cross-cultural/historical context and aesthetic quality, e.g., Chinese landscape paintings, Larry Rivers' photo-montages, Marisol's wooden figure sculptures.
LA 6.3, 6.14, 6.29, 6.54, 6.143, 6.144, 6.151
SS 6.12, 6.13, 6.36, 6.41, 6.42, 6.43, 6.44, 6.45, 6.48, 6.52, 6.53,
SC 6.73, 6.94

6.26 evaluate exemplary artworks, i.e., determine the meaning, merit, and success of works from various eras and cultures.
LA 6.3, 6.14, 6.26, 6.28, 6.57, 6.158

6.27 select, identify, and display his/her work.

6.28 discuss and evaluate an art exhibit, e.g., notice subject, composition, and meaning.
LA 6.14, 6.26, 6.28, 6.31, 6.57, 6.64, 6.112
SS 6.66, 6.67

Making connections between visual art and other disciplines.

6.29 explore historical periods through the arts disciplines.
LA 6.3, 6.7, 6.8, 6.14, 6.22, 6.28, 6.29, 6.56, 6.57, 6.64, 6.112, 6.136, 6.143, 6.144, 6.145, 6.151, 6.159
SS 6.12, 6.13, 6.31, 6.36, 6.41, 6.42, 6.43, 6.44, 6.48, 6.52, 6.58, 6.60

6.30 examine and identify motifs prevalent in crafts from different geographical regions.
LA 6.3, 6.7, 6.8, 6.14, 6.22, 6.23, 6.28, 6.29, 6.54, 6.56, 6.57, 6.64, 6.112, 6.136, 6.143, 6.144, 6.145, 6.151
SS 6.12, 6.13, 6.15, 6.31, 6.41, 6.42, 6.43, 6.44, 6.48, 6.58, 6.60

Grade Seven General Music

Level 7 students demonstrate proper singing technique while performing music of increasing difficulty written in three parts. Students perform two-chord songs and other moderately easy literature on guitars, ukeleles, autoharps, or dulcimers. They continue to improvise and compose music and demonstrate the ability to read and perform from more advanced musical notation and symbols. Listening skills include the identification of rhythms, meters, tempos, unity, and variety in musical examples. Students compare the work of a dancer and a musician, describe historical and cultural influences on music, and focus on music and musical careers in Europe and the eastern hemisphere.

Singing, alone and with others, a varied repertoire of music.

7.1 sing accurately and with good breath control in a small group unison performance.

7.2 sing moderately difficult literature using appropriate diction, intonation, tone quality, and with pitch and rhythmic accuracy.

7.3 sing selections from operas and operettas (Broadway musicals) with appropriate expression.

7.4 sing three-part songs.

Performing on instruments, alone and with others, a varied repertoire of music.

7.5 perform two-chord songs and other moderately easy literature on guitars, ukeleles, dulcimers, or autoharps demonstrating moderate technical demands.

7.6 use a variety of musical instruments to accompany pieces from operas and operettas (Broadway musicals).

7.7 play by ear a two-chord accompaniment to a melody.

Improvising melodies, variations, and accompaniments.

7.8 improvise a simple harmonic accompaniment using two chords.

7.9 improvise melodic variations on a major melody.

7.10 improvise a melody in the style of a waltz.

Composing and arranging music within specified guidelines.

7.11 compose a melody demonstrating tension and release and using compositional techniques selected by the student, e.g., twelve-tone row, retrograde.◊

7.12 arrange harmonic accompaniments for selected melodies from operas and operettas (Broadway musicals).◊

7.13 use traditional instruments in nontraditional ways in arranging familiar songs.◊

Reading and notating music.

7.14 read music with dotted eighth and sixteenth notes and rests.

7.15 read melodies and rhythms at sight in bass clef.

7.16 interpret tempo and expressive markings, e.g., *maestoso, misterioso, dolce, largo, presto.*

7.17 accurately notate original melodies and rhythms on the staff.

Listening to, analyzing, and describing music.

7.18 discuss how unity and variety are achieved in pieces heard.

7.19 describe characteristics of a variety of music from countries and cultures of the eastern hemisphere.◊

7.20 identify rhythms, meters, tempo markings, unity, and variety in discussion of music aurally presented.

7.21 identify progressions of I, IV, V chords in aurally presented music.

Evaluating music and music performances.

7.22 expand criteria for evaluating performances and compositions; apply selected criteria to evaluations of exemplary musical performances and compositions, and when evaluating personal performances.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

7.23 compare the work of a dancer and of a musician in preparing for a performance of a work which describes an event.

7.24 describe historical and cultural influences on musical works.◊

Understanding music in relation to history and culture.

7.25 describe characteristics of musical genres and styles from countries and cultures of the eastern hemisphere.◊

7.26 classify by genre and style exemplary works by European and eastern hemisphere composers and explain characteristics that cause them to be considered exemplary.◊

7.27 compare the functions music serves in Europe with various parts of the eastern hemisphere.◊

7.28 discuss musical careers in Europe and various parts of the eastern hemisphere and give examples of prominent people and groups in these careers.◊

Grade Seven General Art

General art objectives for seventh grade outline art production media, techniques, and processes and note specific usage of the art elements and principles. Aesthetic qualities and personal values in an artwork's subject matter, symbols, and ideas are experienced. Knowledge of art history is shown through demonstration. Reasons for creating works are identified; purposes are compared. The steps of art criticism are used in art appreciation activities.

Understanding and applying media, techniques, and processes.

7.1 use selected media, techniques, and processes to communicate a personal experience or an idea, e.g., acrylic, watercolor, tempera, pen and ink, charcoal, graphite, clay, plaster, wood, Styrofoam, wire, glass; analyze the effectiveness of their choices.

Using the elements of art and principles of design.

7.2 compare and contrast the characteristics of elements of art and principles of design.

7.3 create a drawing using line as an expressive element.

7.4 create a non-objective artwork using geometric and/or biomorphic (organic) shapes or forms.

7.5 create a color intensity chart and a monochromatic color scheme.

7.6 create three-dimensional forms using symmetrical or asymmetrical balance.

7.7 create art using linear perspective.

7.8 create art using positive and negative space, e.g., architectural forms, printmaking, sculpture, ceramics.

7.9 produce value scales using various media.

7.10 create textured art using visual and tactile repetition, variety, and rhythm/movement.

7.11 create art using visual rhythm and repetition of patterns, e.g., mathematical-like, Escher.

7.12 create a two-dimensional design incorporating overlapping and visual direction to show unity.

7.13 create a two- or three-dimensional human figure using standard proportions.

Choosing and evaluating a range of subject matter, symbols, and ideas.

7.14 choose a specific feeling to evoke through integration of visual, spatial, and temporal concepts.

7.15 use subject, values, theme, and/or symbols to communicate desired aesthetic results or personal values in an artwork.◊

Understanding the visual arts in relation to history and cultures.

7.16 compare and analyze the characteristics of artworks and artists from different periods of time, styles, and cultures.◊

7.17 make comparisons between different cultures in a selected time frame.◊

7.18 demonstrate how time and place influence meaning and value in a work of art.

7.19 create two-dimensional art based on a specific historical period.◊

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

7.20 compare reasons for creating works of art and cite examples, e.g., aesthetic, tradition, preservation, self-expression.

7.21 identify calligraphy as an art form, e.g., use of traditional or contemporary tool(s), lettering and/or ink drawing, calligraphic line quality.

7.22 identify and compare purposes in creating two-dimensional paintings and/or stained glass works, e.g., graphite, pen and ink works, paintings done in watercolor, acrylic, or oil, stained glass designs.

7.23 recognize and compare reasons for creating three-dimensional sculptures, e.g., subtractive/additive sculpture in clay, wood, plaster, marble; religious, commissioned pieces, public display, personal expression.◊

7.24 identify past and contemporary uses of art forms, e.g., calligraphy.◊

7.25 examine and compare the meaning and purpose between two- and three-dimensional works, e.g., paintings, drawings and sculpture. (What ideas and values are being represented by the artist or a culture?)

7.26 use the critical process (description, analysis, interpretation, aesthetic judgment) to evaluate two- and three-dimensional artworks from various eras and cultures; determine the meaning, merit, and success of works.◊

7.27 select, identify, and display his/her work.

Making connections between visual art and other disciplines.

7.28 explain and compare two or more arts disciplines in a cultural context.

7.29 explore American architecture through historical and/or mathematical concepts.

Grade Eight General Music

Level 8 students demonstrate proper singing techniques while participating in small ensemble performances. Songs are studied from a variety of world cultures and periods of music history, include three or more parts, and are performed with appropriate expression. Students use classroom instruments and electronic media to play three-chord accompaniments and to improvise, compose, and notate short musical pieces. Students use musical vocabulary to identify and describe events in musical compositions. Students explore how events and ideas become works of art by musicians, visual artists, dancers, playwrights, and actors. Students study the influence of literature on music and focus on the music and musicians of West Virginia.

Singing, alone and with others, a varied repertoire of music.

8.1 sing a vocal part in a two- or three-part song accurately and with good breath control as part of a small ensemble performance.◊

8.2 sing with expression and technical accuracy a repertoire of vocal literature with a level of difficulty of 2, on a scale of 1 to 6, including some songs performed from memory.

8.3 sing songs from a variety of world cultures and periods of music history with appropriate expression.

8.4 sing songs written in three or more parts.

Performing on instruments, alone and with others, a varied repertoire of music.

8.5 perform an instrumental accompaniment for class singing.

8.6 use classroom instruments, while playing moderately difficult literature, demonstrating various meters and rhythms in a variety of keys with attention to phrasing and interpretive elements.

8.7 use various instruments to play music from a variety of world cultures and periods of music history.

8.8 play by ear a three-chord accompaniment to a melody.

Improvising melodies, variations, and accompaniments.

8.9 improvise a simple harmonic accompaniment using three chords.◊

8.10 improvise melodic embellishments of a minor melody.

8.11 improvise a short melody in compound meters.

8.12 improvise a melody in a style selected by the student.

Composing and arranging music within specified guidelines.

8.13 compose short pieces within specified guidelines, demonstrating how the elements of music are used to achieve unity and variety, tension and release, and balance.◊

8.14 arrange an accompaniment for a West Virginia folk song.

8.15 use electronic media in composing and arranging.

Reading and notating music.

8.16 read music in alla breve meter.

8.17 interpret the symbols *pp, ff, sfz, fp, a tempo, subito p, subito f, and rubato.*

8.18 create and notate a rhythmic composition using standard notation.

Listening to, analyzing, and describing music.

8.19 identify exposition, development, and recapitulation in sonata-allegro form.

8.20 identify the coda in visual and aural examples of music.

8.21 describe characteristics of West Virginia's instrumental and vocal folk music.

8.22 discuss meter, rhythm, tonality, intervals, chords, and harmonic progressions in music studied.

Evaluating music and music performances.

8.23 discuss evaluation criteria in terms of different styles of music and evaluate performances of music of different styles.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

8.24 discuss how events, scenes, and ideas can be transformed into works of art by musicians, visual artists, dancers, playwrights, and actors.◊

8.25 describe literary influences on musical works.◊

Understanding music in relation to history and culture.

8.26 describe characteristics of West Virginia folk and composed music.

8.27 classify by genre and style exemplary works of West Virginia composed and folk music and explain characteristics that cause them to be considered exemplary.◊

8.28 describe the functions music serves in West Virginia and the conditions under which it is performed.◊

8.29 discuss musical careers in West Virginia and give examples of prominent people and groups in these careers.◊

Grade Eight General Art

Eighth grade students recall and refine use of art production media, techniques, and processes combining the art elements and principles in creating two- and three-dimensional works. Students choose content related to their own lives. Art history is analyzed. Specific careers are identified and purposes are compared (graphic/commercial and fine art). Students compare and evaluate artworks based on period and culture. Application of art criticism processes are used in viewing and writing about their own works and art exhibits. Emphasis is given to West Virginia artists and their contributions to our history and culture.

Understanding and applying media, techniques, and processes.

8.1 recall, refine, select, and compare the effectiveness of various media, techniques, and processes used to express experiences and/or ideas.

8.2 explain and analyze the effectiveness of their choices.

8.3 use selected media to produce artwork, e.g., photography, computer imagery, communicating experiences and/or ideas.◊

Using the elements of art and principles of design.

8.4 evaluate the effectiveness and use of elements of art and principles of design.◊

8.5 create two-dimensional artworks emphasizing at least four elements of art and three principles of design.◊

8.6 create a three-dimensional artwork using a variety of art elements and principles of design.◊

8.7 create artworks using color schemes chosen from the following: complementary, analogous, monochromatic, triadic, split-complementary, warm, cool.

Choosing and evaluating a range of subject matter, symbols, and ideas.

8.8 choose realistic or non-objective content to communicate specific meaning.

8.9 create realistic or non-objective symbols that communicate either aesthetics or values in the context of their own lives.

Understanding the visual arts in relation to history and cultures.

8.10 analyze and interpret the characteristics of artworks and artists from different periods of time, styles, and cultures.◊

8.11 analyze and evaluate art movements with concurring world events.◊

8.12 demonstrate and analyze how time and place influence meaning and value in a work of art.◊

8.13 create three-dimensional art based on a specific historical period.◊

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

8.14 identify various careers in art, e.g., architecture: city planning, landscape, buildings; art education; entertainment: animation, special effects design, art direction for performing arts; exhibit and display design, fashion design, fine arts and crafts; graphic design: layout, illustration, computer graphics, publishing, film and video; industrial design: furniture, tools, toys, automobiles; interior design, photography, photojournalism.◊

8.15 identify and compare the purposes of graphic design/commercial art and fine art, e.g., advertising media, poster art, layout, computer generated works, photography, fine arts, and crafts.◊

8.16 compare the contemporary and/or historical meaning and purposes of exemplary artworks based on information about their period and culture, e.g., Toulouse-Lautrec to modern graphic designers, costume design of the twentieth century, cartoonist's animation to computer generated animation, video as an expressive tool.

8.17 discuss and evaluate art, e.g., architectural structures, public sculptures, a photography exhibit, contemporary graphics, fashion designs.◊

8.18 select, identify, and display their work(s).

8.19 apply the knowledge of art criticism while viewing an art exhibit by preparing individual written responses to artworks within a display or comparing responses as a group critique.◊

Making connections between visual art and other disciplines.

8.20 employ two or more arts disciplines to recreate or illustrate a selected historical or cultural context, e.g., Renaissance Fair.

8.21 examine the relationships of local history and culture to West Virginia artists. (See **West Virginia Museum Resources for Teaching Art**.)

Middle Childhood Music Education - Electives

Choral and instrumental music electives must be offered no later than grade six. Instrumental electives may be offered from one or both of two areas of study: Instrumental Music - Winds and Percussion and/or Instrumental Music - Strings. These electives may begin earlier, but once begun, sequential, continuous, and consistent instruction must be provided.

The Music Educators National Conference (MENC) recommends that instruction on string instruments should begin in grade four, and instruction on wind and percussion instruments should begin in grade five. MENC also recommends that for the first year of study, students should be taught in homogeneous groups (such as all trumpets or all flutes) at least twice a week for a total of at least 90 minutes.[1]

However, such scheduling is not always efficient, especially if many small schools located at long distances are to be served. Counties having 6-8 middle schools may more efficiently begin instrumental instruction in grade six with classes meeting daily throughout the year. If this is the schedule selected by the county, the first two levels of instrumental objectives should be covered in grade six.

Music Electives

Instrumental Music - Winds and Percussion (4 levels)
and/or
Instrumental Music - Strings (5 levels)

Choral Music (3 levels)

All Middle Childhood Education choral and instrumental elective classes should meet throughout the school year. Every performing group should present two or three performances or open rehearsals for their peers, parents, and community.

For seventh and eighth grade students enrolled in instrumental or choral music electives, counties may waive the general music requirement. Such a waiver is not given for earlier grades because attrition is sometimes high at the two beginning levels of instrumental music.

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[1]**Opportunity-To-Learn Standards For Arts Education** (Reston, VA: Consortium of National Arts Education Associations, 1995), p. 15.

Level I (Grades 4/5) Instrumental Music - Strings

This level of study provides for development of basic playing skills including matching pitch, performing simple rhythmic patterns and meter, appropriate playing posture, first position fingerings, *arco* and *pizzicato*, and reading musical notation.

Performing on instruments, alone and with others, a varied repertoire of music.

SI.1 match pitches.
SI.2 keep a steady beat and perform given rhythms accurately.
SI.3 play a piece utilizing *piano* and *forte*.
SI.4 play with resonant tone.
SI.5 play with correct standing/sitting position; left hand, wrist, and arm positions; and correct bow hold.
SI.6 play from memory the major scales of G and D.
SI.7 identify octaves played in tune.
SI.8 play octaves.
SI.9 play notated melodies in the styles of rounds and folk songs.
SI.10 sightread melodies observing appropriate dynamics.
SI.11 accurately echo play rhythmic and melodic patterns played by the teacher.
SI.12 use *detaché* bowing to play legato melodies.
SI.13 distinguish between acceptable/ unacceptable *pizzicato* and *arco* tone quality.
SI.14 differentiate *pizzicato* and *arco* playing.
SI.15 play *pizzicato* and *arco* with good tone quality.
SI.16 perform duets and two- and three-part rounds.

Reading and notating music.

SI.17 play melodies in the meters of 2, 3, and 4.
SI.18 play melodies containing whole, half, quarter, and eighth notes and rests.
SI.19 read aloud a familiar melody from the staff using the correct note names.
SI.20 play melodies utilizing *piano* and *forte*.
SI.21 play a melody in tempo *andante* and in tempo *moderato*.
SI.22 interpret a repeat sign.
SI.23 notate a simple step-wise melody played by the teacher when given a starting note.
SI.24 add barlines to an example containing none.
SI.25 identify the rhythm pattern used in a tune played by the teacher.
SI.26 write *forte* when the teacher plays loudly and *piano* when the teacher plays softly.

Listening to, analyzing and describing music.

SI.27 identify the B section of a binary or ternary piece and the return of the A section in a ternary piece.
SI.28 respond verbally, using correct names of notes, the staff, rhythms, clefs, and meter signatures when questioned about a line of music.
SI.29 describe orally, using correct terminology, a performance played by the teacher.
SI.30 describe the tone quality of a violin, viola, 'cello or bass.
SI.31 identify aurally which instrument is being played by the teacher or another student.

Evaluating music and music performances.

SI.32 listen to exemplary models of instrumental performances.

SI.33 distinguish between acceptable/ unacceptable *pizzicato* and *arco* tone quality.
SI.34 classify a piece as played in tune or out of tune after listening to a performance.
SI.35 identify, aurally, the rhythms incorrectly played.

Understanding relationships between music, the other arts, and disciplines outside the arts.

SI.36 discuss the similarities and differences in visual art and music correctly using the terms color, harmony, form, mood, and repetition.

Understanding music in relation to history and culture.

SI.37 listen to a performance of a folk song and discuss its historical and cultural background.
SI.38 listen to two performances in contrasting styles, then select an event for which each may be used. Discuss characteristics of each piece and tell why the music would fit the event.
SI.39 discuss and demonstrate concert etiquette.

Level II (Grades 5/6) Instrumental Music - Strings

This level provides for the further development of playing skills and includes playing in the keys of D, G, and C major; *legato* and *non-legato* melodies; two- and three-note slurs; slurred *staccato* and *louré* bowings; rhythms in meters of 2, 3, 4 and *alla breve*. Students will participate in the performance of folk songs and simple marches, interpret and define dynamics and symbols such as *D.C. al Fine*, and develop criteria for performance evaluation.

Performing on instruments, alone and with others, a varied repertoire of music.

SII.1 play *legato* melodies marked with two- and three-note slurs.
SII.2 play slurred melodies incorporating string crossings.
SII.3 play with slurred *staccato* bow strokes.
SII.4 play with louré bow strokes.
SII.5 play *non-legato* melodies (detached slur, up to 4 notes in a bow).
SII.6 play melodies using a resonant tone.
SII.7 demonstrate good posture, playing position, and bow control.
SII.8 play at sight melodies in D, G, and C major.
SII.9 play from memory the major scales of D, G, and C major.
SII.10 participate in the performance of folk tunes from various cultures as well as the performance of simple marches.
SII.11 play a simple, familiar melody by ear.

Reading and notating music.

SII.12 perform pieces containing whole, half, quarter, eighth, and dotted quarter notes and rests in meters of 2, 3, 4, and *alla breve*.
SII.13 play at sight melodies in D, G, and C major.
SII.14 label a piece of music with the following: name of clef, names of lines and spaces, note names, and note values.
SII.15 interpret and define *crescendo*, *decrescendo*, *diminuendo*, *ritardando*.
SII.16 perform at sight unisons and octaves.
SII.17 demonstrate the following bowings: *staccato*, slurred *staccato*, *louré*, and two- and three-note slurs.
SII.18 interpret the following: *D.C. al Fine*, *D.S. al Fine*, multiple endings.

Listening to, analyzing and describing music.

SII.19 add the meter signature to a written example without one.
SII.20 differentiate between octaves, unisons, and fifths presented aurally.

Evaluating music and music performances.

SII.21 make a checklist to evaluate a recorded performance.
SII.22 make a checklist to evaluate their own performance of a melody.
SII.23 play melodies using a resonant tone.
SII.24 distinguish between appropriate and inappropriate tone quality.

Understanding music in relation to history and culture.

SII.25 report on stringed instruments of various regions of the world.

Level III (Grades 6/7) Instrumental Music - Strings

This level of study provides for further development of playing skills. Students will play using extended finger positions in first position; play scales and melodies in major keys up to and including three sharps and one flat; play chromatic tones; play in the keys of e, b, and a natural minor; perform using subdivided meters and the chromatic scale; play rhythms in meters including 6; and interpret various symbols and dynamics. Students develop aural skills through identifying meter changes, studying like and unlike phrases, and through the evaluation of aurally presented performances. Periods and genres explored include the Baroque and Contemporary periods, the Baroque suite and jazz.

Performing on instruments, alone and with others, a varied repertoire of music.

SIII.1 play with extended finger positions in the first position.

SIII.2 perform melodies using chromatic tones.

SIII.3 play melodies and scales in major keys up to and including three sharps and one flat.

SIII.4 perform e, b, and a natural minor scales.

SIII.5 play melodies marked with 4-note slurs.

SIII.6 perform at sight seconds, thirds, fourths, sixths, and sevenths formed with one fingered and one open string. (Omit double bass.)

SIII.7 participate in the performance of pieces in the following genres: a Baroque Suite, a tango, and a jazz piece.

SIII.8 play by ear to echo a simple melody played by the teacher.

SIII.9 perform melodies utilizing subdivided meter and the chromatic scale.

Reading and notating music.

SIII.10 perform at sight music containing sixteenth notes, dotted rhythms, eighth note triplets, and meter in 6.

SIII.11 sightread pieces in the keys of C, G, D, A, and F.

SIII.12 identify the following in a given piece of music: 4-note slur markings; key signatures for C, G, D, A, and F major, e, b, and a minor; sixteenth notes, dotted notes, and eighth note triplets; *a tempo* marking; trills and grace notes.

SIII.13 interpret the following: D.C. *al Fine,* D.S. *al Fine*, multiple endings.

SIII.14 write major scales through 3 sharps and 1 flat.

SIII.15 write the intervals of a second, third, fourth, sixth, and seventh above a given note.

SIII.16 interpret *a tempo* in musical performance.

SIII.17 demonstrate contrasting dynamics in a piece of music including *p*, *mp*, *mf*, and *f*.

Listening to, analyzing and describing music.

SIII.18 identify aurally presented meter changes.

SIII.19 identify like and unlike phrases and sections presented aurally.

SIII.20 identify characteristics unique to each genre from two contrasting recorded examples.

SIII.21 identify a played major triad.

SIII.22 tune his/her instrument.

Evaluating music and music performances.

SIII.23 play melodies utilizing both resonant and intense tone qualities.

SIII.24 distinguish between good and poor intonation, correct and incorrect rhythms, good and poor tone quality in their own performance and a performance by a peer.

SIII.25 write three constructive suggestions to improve a classmate's performance of a solo.

Understanding relationships between music, the other arts, and disciplines outside the arts.

SIII.26 describe how sound is produced on a string instrument (including how the pitch is changed), and relate this to the science of acoustics.

Understanding music in relation to history and culture.

SIII.27 participate in the performance of a jazz piece and a Baroque suite and discuss the differences in rhythms, harmonies, styles, and time periods.

SIII.28 list exemplary works in the Baroque and Contemporary time periods and justify their selections.

SIII.29 compile a list of how music is used each day, e.g., commercials, movie/TV themes, church music, and answer questions as to why music is used in everyday life.

Level IV (Grade 7) Instrumental Music - Strings

This level of study provides for the further development of playing skills. Students at this level will study spiccato and martelé bowings; major scales and melodies through three sharps and three flats as well as harmonic minor keys through two sharps and two flats. Meters of 5 and 9 will be added as well as syncopated rhythms. Study of the following positions are specified for level IV:

violin - 3rd position
viola - 3rd position
'cello - ½, 2nd, 3rd, 4th positions and extensions
bass - ½, 2nd, 4th positions and extensions.

Focus is placed on developing ensemble skills as well as individual skills. A wider range of dynamics and tempi are presented. The use of vibrato is introduced. Rondo form is presented and students continue to evaluate performances.

Performing on instruments, alone and with others, a varied repertoire of music.

SIV.1 perform using *spiccato* and *martelé* bowing.

SIV.2 play harmonic minor scales through 2 sharps and 2 flats.

SIV.3 play melodies which, because of extended range or convenience of finger patterns, require the use of positions other than first. These positions are different for the various stringed instruments. Thus, they are specified for Level IV as follows:
violin - 3rd position,
viola - 3rd position,
'cello - ½, 2nd, 3rd, and 4th positions and extensions,
bass - ½, 2nd, and 4th positions and extensions.

SIV.4 play melodies in major and minor keys up to and including 3 sharps and 3 flats.

SIV.5 play major scales through 3 sharps and 3 flats.

SIV.6 perform meters in 5 and 9 and syncopated rhythms.

SIV.7 perform a piece in a minor key and identify a country from which the melody may have come.

SIV.8 perform in a group a simple movement from a concerto.◊

SIV.9 demonstrate characteristics of good ensemble playing.◊

SIV.10 play melodies with *vibrato.*

SIV.11 play a melody *con sordino.*

SIV.12 play sixths in first position (omit double bass).

SIV.13 play unisons and octaves formed with one open string and one string fingered in third position ('cellos and basses in fourth position).

Reading and notating music.

SIV.14 play syncopated rhythm patterns in meters of 2, 3, and 4.

SIV.15 perform melodies in meters of 6, 5, and 9 with whole, half, quarter, eighth, sixteenth, dotted notes, and eighth-note triplets.

SIV.16 play at sight melodies which, because of extended range or convenience of finger patterns, require the use of positions other than first. These positions are different for the various stringed instruments. Thus, they are specified for Level IV as follows:
violin - 3rd position,
viola - 3rd position,
'cello - ½, 2nd, 3rd, and 4th positions and extensions,
bass - ½, 2nd, 3rd, and 4th positions and extensions.

SIV.17 identify key signatures for the major and minor keys through 3 sharps and 3 flats.
SIV.18 play at sight pieces marked *largo*.
SIV.19 interpret music using contrasting dynamics: *pp, p, mp, mf, f, ff*.
SIV.20 identify the *spiccato* and *martelé* bowing markings in a given piece of music.
SIV.21 compose, play, and notate a 4 measure musical example in a given meter and key, using correct pitch and rhythmic notation, clef, and key signatures.◊
SIV.22 play at sight pieces containing the following: contrasting dynamics, various bowings and articulations, melodies in major keys through 3 sharps and 3 flats, and minor keys through 2 sharps and 2 flats.

Listening to, analyzing and describing music.

SIV.23 identify meter changes and the entries of various string instruments from a recording of a string orchestra performance.
SIV.24 identify aurally the A section of a rondo each time it occurs.
SIV.25 identify harmonic minor melodies presented aurally.
SIV.26 distinguish between resonant and intense tone.
SIV.27 identify contrasting dynamics in a played example.

Evaluating music and music performances.

SIV.28 create a list of characteristics of good solo playing and good ensemble playing, e.g., type of tone quality, intonation, rhythmic precision.
SIV.29 compare their own performance of a given piece with a recorded performance of the same piece.
SIV.30 create a list of pieces that would be appropriate to arrange for string orchestra and identify musical elements that make each appropriate.
SIV.31 use established criteria to compare two different arrangements of the same piece.

Understanding relationships between music, the other arts, and disciplines outside the arts.

SIV.32 discuss the art, music, and dance of the Romantic period and the relationships among these art forms.
SIV.33 compare phrases to sentences in language arts (antecedent and consequent phrases), relate the existence of music in time and space to time and space in science, and the physical aspects of playing to physical education.

Understanding music in relation to history and culture.

SIV.34 identify and recognize the use of minor keys in non-Western music.
SIV.35 list exemplary works of the Classical period and justify their selections.
SIV.36 demonstrate simple Appalachian fiddle techniques.
SIV.37 discuss the history of Appalachian fiddle music.

Level V (Grade 8)
Instrumental Music - Strings

Students demonstrate characteristics of good ensemble playing while continuing to develop their own individual playing skills. Scales and melodies up to and including 4 sharps and 4 flats will be played as well as melodic minor keys up to and including 2 sharps and 2 flats. Positions to be studied at this level are:

violin - 2nd position
viola - 2nd position
'cello and bass - continuation of ½, 2nd, 3rd, and 4th positions and extensions.

Dynamics and tempi are expanded along with rhythmic and meter study. The Impressionist and Renaissance periods are introduced. The classical symphony and the waltz are studied. Students continue to evaluate performances.

Performing on instruments, alone and with others, a varied repertoire of music.

SV.1 participate in the performance of a duet. (First and third positions; 'cello and basses use 4th position.)◊

SV.2 demonstrate characteristics of good ensemble playing.◊

SV.3 play melodies and major scales in major keys up to and including 4 sharps and 4 flats.

SV.4 play melodies and melodic minor scales in minor keys up to and including 4 sharps and 4 flats.

SV.5 participate in the performance of a waltz and a movement from a classical symphony.

SV.6 play by ear to echo a melody played by a fellow student.

SV.7 perform melodies utilizing subdivided meter and the chromatic scale.

SV.8 play melodies which, because of extended range or convenience, require the use of additional positions. These positions are different for the various stringed instruments. Thus, they are specified for Level V as follows:

violin - 2nd position
viola - 2nd position
'cello and bass - continuation of ½, 2nd, 3rd, and 4th positions and extensions.

Reading and notating music.

SV.9 read the names of the lines and spaces in treble, alto, and bass clefs from a quartet score.

SV.10 participate in the performance of pieces using slurred *staccato*, the keys of Bb and Eb major, g and e minor, *ritardando*, and contrasting dynamics.

SV.11 notate a four measure melody played by the teacher.

SV.12 interpret the rhythmic subdivisions of music script, e.g.,  .

SV.13 play at sight pieces marked *allegretto*.

Listening to, analyzing and describing music.

SV.14 identify *sforzando* when heard in aurally presented music.

SV.15 describe the following: coda, introduction, tonal center, mode, *allegretto*, subdivisions.

Evaluating music and music performances.

SV.16 listen to two performances of a symphony played by two different orchestras and list the similarities and differences between the two performances.◊

SV.17 critique a performance by a classmate and offer suggestions for improvement from a list of established criteria.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

SV.18 compare art and music of the Impressionist period and the relationship between the two art forms.

SV.19 discuss how music has reflected historical events throughout time.◊

Understanding music in relation to history and culture.

SV.20 describe the distinguishing characteristics of a waltz and of a classical symphony.

SV.21 listen to recordings of music from the Renaissance period, look at pictures of Renaissance art, and study the dances of the Renaissance and compare characteristics of each art form of the period.

SV.22 list various roles that musicians perform. Give the name of at least one in each category and describe their activities and achievements.◊

Level I (Grade 5/6) Instrumental Music - Winds and Percussion

This level provides the introduction of basic playing skills, e.g., good embouchure, tone quality, fingerings, interpretation of basic musical notation.

Performing on instruments, alone and with others, a varied repertoire of music.

WI.1 play an instrumental solo.
WI.2 match pitches with good intonation (brass and woodwinds only).
WI.3 demonstrate a steady beat.
WI.4 participate in the performance of level 1 music, e.g., marches and folk tunes.
WI.5 interpret the dynamic markings *p* and *f*.

Reading and notating music.

WI.6 read quarter, half, whole, and eighth notes and rests in meter in 2, 3, 4, and *alla breve*.
WI.7 play multiple bounce exercises including single strokes, five stroke roll, nine stroke roll, long roll, and flams (percussion only).
WI.8 play notated melodies based on the concert major scales of F, Bb, and Eb.
WI.9 notate and play a major scale.
WI.10 play *legato* melodies marked with two and three note slurs.
WI.11 interpret the meaning of the repeat sign, *D. C. al Fine*, a measure repeat sign, a *fermata*, and multiple endings.
WI.12 play meter in 2, 3, and 4.
WI.13 play tied notes.

Listening to, analyzing, and describing music.

WI.14 use music terminology to describe what is heard in a simple melody.
WI.15 identify by sound musical instruments used in beginning band.
WI.16 describe the method of tone production for brass, woodwind, and percussion instruments.
WI.17 identify like and unlike musical phrases and/or sections.
WI.18 match pitches for tuning.

Evaluating music and music performances.

WI.19 list criteria for evaluating music and performances.
WI.20 differentiate between good and poor tone quality.

Level II (Grade 6/7) Instrumental Music - Winds and Percussion

This level provides for the further development of basic playing skills. Additional notes, fingerings, more rhythmic variations in notation are introduced.

Performing on instruments, alone and with others, a varied repertoire of music.

WII.1 participate in the performance of a duet or a three-part round.
WII.2 participate in the performance of a theme and variations, chorale, and round.
WII.3 echo simple melodies.
WII.4 play simple melodies by ear.
WII.5 demonstrate *p*, *mp*, *mf*, and *f*.
WII.6 define *crescendo* and *decrescendo*.
WII.7 perform a counter melody.
WII.8 develop range through performance of a varied repertoire.

Reading and notating music.

WII.9 perform music containing sixteenth notes.
WII.10 play meter in 6.
WII.11 play ruffs, seventeen stroke roll, and single paradiddle (percussion only).
WII.12 demonstrate proper techniques of playing the bass drum, cymbals and triangle (percussion only).
WII.13 perform at sight a short melody.
WII.14 play *legato* melodies marked with four note slurs.
WII.15 play triplets.
WII.16 interpret accents.
WII.17 play chromatic passages.
WII.18 play staccato passages.
WII.19 interpret the markings for *Ritardando*, and *a tempo*.

Listening to, analyzing, and describing music.

WII.20 use music terminology to describe what is heard in an aural example.
WII.21 identify binary (AB) and ternary (ABA) forms.
WII.22 identify and classify wind and percussion instruments presented aurally.
WII.23 play melodies using acceptable tone (brass and woodwind only).
WII.24 play from memory major scales in the concert keys of F, B^{b}, and E^{b}.
WII.25 identify major and minor melodies.

Evaluating music and music performances.

WII.26 expand criteria for evaluating music and performances.
WII.27 listen critically and discuss recordings of themselves and others.

Understanding relationships between music, the other arts, and disciplines outside the arts.

WII.28 relate note subdivision to simple mathematics.

Level III (Grade 7) Instrumental Music - Winds and Percussion

This level provides for a finer development of playing skills. The opportunity is provided to notate music, as well as sightread. The use of mechanical tuning devices and basic ensemble techniques are introduced.

Performing on instruments, alone and with others, a varied repertoire of music.

WIII.1 perform as part of a large ensemble at a level of difficulty of 2 on a scale of 1 to 6.
WIII.2 participate in the performance of level 2 music with appropriate expression and articulation.◊
WIII.3 echo rhythmic patterns.
WIII.4 demonstrate *crescendo* and *decrescendo*.
WIII.5 play arpeggios.
WIII.6 play trills.
WIII.7 demonstrate characteristics of good ensemble playing.◊

Reading and notating music.

WIII.8 perform at sight music containing sixteenth notes.
WIII.9 read dotted rhythms, e.g., ♩. ♪, ♪. 𝅘𝅥𝅯.
WIII.10 play a seven stroke roll, flam accents numbers 1 and 2, thirteen stroke roll, flam tap, flamacue, double paradiddles, flam paradiddle (flamadiddle), single drag, double drag, and lesson "25" (percussion only).
WIII.11 perform simple melodies on mallet instruments.
WIII.12 read at sight a major melody.
WIII.13 play in tempo *adagio* and tempo *moderato*.
WIII.14 play a chromatic scale.
WIII.15 interpret the dynamic markings *pianissimo, piano, mezzo forte, forte,* and *fortissimo* in a musical performance.
WIII.16 identify a coda.
WIII.17 notate and play the concert C, F, B^b, E^b, and A^b major scales.
WIII.18 notate and play minor scales.
WIII.19 play at sight melodies in the concert keys of C, F, B^b, E^b, and A^b.
WIII.20 perform at sight a harmonic minor melody.
WIII.21 perform at sight music containing syncopation.
WIII.22 perform a modulation at sight.

Listening to, analyzing, and describing music.

WIII.23 describe, using music terminology, what is heard in an ensemble rehearsal.◊
WIII.24 identify characteristics of music of diverse genres, e.g., waltzes, marches.◊
WIII.25 identify major and minor chords.
WIII.26 play from memory major scales in the concert keys of C, F, B^b, E^b, and A^b.

Evaluating music and music performances.

WIII.27 apply evaluation criteria to personal performance.◊
WIII.28 listen critically and discuss live performances by others.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

WIII.29 tune using a strobic tuner.

Understanding music in relation to history and culture.

WIII.30 describe the style and characteristics of music studied.◊

Level IV (Grade 8) Instrumental Music - Winds and Percussion

This level provides for the application of basic skills within a large ensemble. Additional studies focus on articulation, rhythmic interpretation, and self-evaluation.

Performing on instruments, alone and with others, a varied repertoire of music.

WIV.1 perform as part of a large ensemble at a level of difficulty of 3 on a scale of 1 to 6.◊

WIV.2 perform as part of a small instrumental ensemble, e.g., woodwind choir, brass choir.◊

WIV.3 perform a canon.

WIV.4 play grace notes.

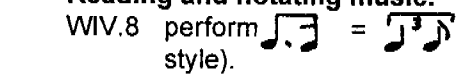
WIV.5 perform a level 3 solo with expression and technical accuracy.◊

WIV.6 perform with expression and technical accuracy a varied repertoire of level 3 music as a member of a large ensemble.◊

Improvising melodies, variations, and accompaniments.

WIV.7 improvise a simple counter melody.◊

Reading and notating music.

WIV.8 perform  (swing style).

WIV.9 play a triple paradiddle, single, double, and triple ratamacue, fifteen stroke roll, and demonstrate an anticipated seven stroke roll (percussion only).

WIV.10 perform using two-hand technique on mallet percussion.

WIV.11 read at sight a minor melody.

WIV.12 interpret *sfz* and *sfp*.

WIV.13 notate and play a chromatic scale from memory.

WIV.14 play at sight melodies in the concert keys of C, G, F, $B^{\flat}$, $E^{\flat}$, $A^{\flat}$, and $D^{\flat}$ major.

Listening to, analyzing, and describing music.

WIV.15 describe, using music terminology, what is heard in an ensemble performance.◊

WIV.16 identify characteristics of music from other countries.

WIV.17 demonstrate *presto* and *largo*.

WIV.18 play from memory a relative minor scale.

WIV.19 demonstrate the ability to play in tune as an ensemble member.

Evaluating music and music performances.

WIV.20 evaluate their own performance and performances by others.◊

WIV.21 evaluate their own performance and performances by others and offer constructive suggestions for improvement.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

WIV.22 demonstrate the measurement of sound waves using a tuning device.

Understanding music in relation to history and culture.

WIV.23 discuss distinguishing characteristics of music genres and styles studied.◊

WIV.24 discuss the historical importance of selected musical examples.◊

Level I (Grade Six)
Choral Music

The student will focus on the basics of proper vocal technique creating an understanding of tone production, breath control, and posture. Students at this level will learn to read and use the written language of music to interpret and perform choral scores. They will sing unison and two-part songs and explore the music and cultures of France and Spain.

Singing, alone and with others, a varied repertoire of music.

- Cl.1 sing major scales within their vocal ranges.
- Cl.2 demonstrate proper vocal techniques (tone production, breathing, posture).
- Cl.3 demonstrate proper attacks and releases.
- Cl.4 sing folk songs from France and Spain.
- Cl.5 sing rounds and partner songs using choral arrangements.
- Cl.6 sing SA and SSA music.
- Cl.7 demonstrate *legato* and *staccato* singing styles with proper vocal quality.
- Cl.8 demonstrate piano and forte singing.

Reading and notating music.

- Cl.9 sing at sight literature containing whole, half, quarter, and eighth notes and rests with 2, 3, and 4 meter signatures.
- Cl.10 sing unison and two-part songs from a notated score.
- Cl.11 sing at sight a melody in treble clef.
- Cl.12 sing at sight rhythmic and melodic patterns in 6 time.
- Cl.13 sing at sight a melody containing syncopation and meter changes.
- Cl.14 sightread a two-part vocal composition expressively, observing standard notation symbols.

Listening to, analyzing, and describing music.

- Cl.15 identify AB or ABA form in an aural example.
- Cl.16 identify recurring musical phrases in an aural example.
- Cl.17 identify soprano, alto, tenor, and bass voices in an aural example.
- Cl.18 analyze rhythmic elements in aural examples of French and Spanish folk songs.
- Cl.19 identify the time signature in a choral composition.
- Cl.20 identify the intervals in a two-part choral composition.

Evaluating music and music performances.

- Cl.21 listen to exemplary models and develop criteria for quality choral performances.
- Cl.22 listen to exemplary models of various types/ genres of choral performances (pop, jazz, folk, oratorio, etc.) and develop criteria for quality performances.

Understanding relationships between music, the other arts, and disciplines outside the arts.

- Cl.23 describe the physical characteristics of vocal production.
- Cl.24 describe the anatomical characteristics of the changing voice.

Understanding music in relation to history and culture.

- Cl.25 create a musical genre timeline.
- Cl.26 classify and describe exemplary choral works from the Baroque period (Bach, Handel, etc.).
- Cl.27 compare/contrast the function of vocal/choral music in the French and Spanish cultures.

Level II (Grade Seven) Choral Music

The student will continue to build proper singing techniques and expand the use and performance of musical notation. Students will begin to listen to and develop criteria for evaluating choral performances. Students will participate in researching the history of choral works and create musical style and cultural displays. In addition to studying choral works of the Classical period, students will investigate the uses of music in African and American cultures.

Singing, alone and with others, a varied repertoire of music.

CII.1 sing vocalizes within their vocal ranges with good tone production.
CII.2 perform a minor melody.
CII.3 sing musical phrases with proper breathing.
CII.4 participate in the choral performance of spiritual(s).
CII.5 participate in the choral performance of a canon with attention to balance of parts.
CII.6 sing with proper use of metrical and textual accents.
CII.7 demonstrate pianissimo and fortissimo singing.

Reading and notating music.

CII.8 sing at sight literature containing sixteenth notes and rests and syncopated rhythms in 6 meter. $\frac{6}{8}$
CII.9 sing two- and three-part songs from a notated score.
CII.10 sing at sight a melody in treble and bass clefs.
CII.11 sing at sight literature with *adagio*, *moderato*, and *accelerando* markings.
CII.12 sightread a three-part vocal composition expressively observing standard notation symbols.

Listening to, analyzing, and describing music.

CII.13 identify the changing voice in an aural example.
CII.14 identify the rhythm and tonality of a spiritual in an aural example.
CII.15 identify the beat numbers in each measure of a choral composition.
CII.16 identify the I chord in a three-part choral composition.

Evaluating music and music performances.

CII.17 refine criteria for quality performances.◊
CII.18 listen to and evaluate taped personal and/or group performances in varying types/ genres of choral performance.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

CII.19 discuss and describe texts in choral works, e.g., cooperative unit on poetry with language arts and music.
CII.20 research the historical/cultural context of a given choral work.◊

Understanding music in relation to history and culture.

CII.21 create musical style and culture displays.
CII.22 classify and describe exemplary choral works from the classical period (Beethoven, Haydn, Mendelssohn, etc.).◊
CII.23 describe the conditions under which music is typically performed in the African, American, and Afro-American cultures.◊

Level III (Grade Eight) Choral Music

The student will continue to practice and build on previously learned singing skills. The students will sing songs in foreign languages, improvise melodies and sing three- and four-part songs from notation. The students will listen to and evaluate choral performances and offer suggestions for improvement. The scientific process of human hearing and its relationship to singing will be explored. Students will classify choral works from the Romantic period and compare/contrast the music of modern European and Asian cultures.

Singing, alone and with others, a varied repertoire of music.

CIII.1 sing at sight major and perfect intervals with good tone intonation.

CIII.2 sing major and perfect intervals and minor melodies with good tone production.

CIII.3 participate in the choral performance of foreign language song(s).◊

CIII.4 participate in the performance of chorales.◊

CIII.5 sing I, IV and V^7 chords as accompaniment to a familiar melody.

CIII.6 demonstrate proper expression in the interpretation of phrases.

CIII.7 sing songs with the markings: *accent* (<), *tenuto* (), *largo*, and *presto.*

Improvising melodies, variations, and accompaniments.

CIII.8 sing an improvised melody over a percussion accompaniment demonstrating consistent meter, style, and tonality.◊

Reading and notating music.

CIII.9 sing literature using $\frac{3}{8}$ and *alla breve* meter signatures.

CIII.10 sing three- and four-part songs from a notated score.

CIII.11 sing individual parts at sight in a two-part choral composition.◊

CIII.12 sing at sight literature containing *largo* and *presto* markings.

CIII.13 sing at sight literature containing meter changes with the eighth note remaining constant.

Listening to, analyzing, and describing music.

CIII.14 identify meter changes in an aural example.

CIII.15 identify the homophonic (hymn-like) characteristics of a chorale in an aural example.

CIII.16 identify the metric accents in a choral composition.

CIII.17 identify the I and V chords in a three- or four-part choral composition.

Evaluating music and music performances.

CIII.18 expand criteria for quality performances and compositions.◊

CIII.19 listen to and evaluate others' performances in varying choral types and genres and offer constructive suggestions for improvement.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

CIII.20 describe the scientific principles of the human hearing process and its relationship to vocal production.◊

Understanding music in relation to history and culture.

CIII.21 create a written choral program including examples of Classic, Romantic, and 20th Century choral literature.

CIII.22 classify and describe exemplary choral works from the Romantic period (Schumann, Schubert, Wagner, etc.)

CIII.23 compare/contrast the roles of musicians in modern European and Asian cultures.◊

Adolescent Dance Education

Dance is one of the four programs of study from which an elective course may be chosen to fulfill the graduation requirement of one course in the arts. Electives must be offered to accommodate at least one level of student achievement (Dance I) beginning with the 1998-99 school year. Electives must be offered to accommodate four sequential levels of student achievement (Dance I - IV) beginning with the school year 2001 - 2002. Additional specialized dance electives may be offered based upon student need and interest.

The number of class periods for which dance is offered will depend upon enrollment and the availability of space. Because dance lends itself to small-group as well as large-group projects, students working at four different achievement levels may be accommodated in a single class if the enrollment is small.

The instructional objectives provided in the following pages describe four sequential levels of student achievement.

Elective Courses*

Dance I
Dance II
Dance III
Dance IV

***One level is required to be offered by 1998-1999. Four sequential levels are required to be offered by 2001-2002.**

County school systems may exercise the option of offering additional dance courses. Instructional goals and objectives must be developed for these courses and approved by the county board of education.

Dance I (Grade 9)

Ninth grade dance will focus on technical skills. In addition, the major principles of choreography and the higher level thinking skills necessary to employ dance as an effective means of communication will be a central part of the curriculum.

Identifying and demonstrating movement elements and skills in performing dance.

9.1 review and practice appropriate alignment, body part articulation, strength, flexibility, agility, and coordination in locomotor and nonlocomotor/axial movements.
9.2 identify and practice longer and more complex steps and patterns from two different dance styles/traditions.
9.3 develop rhythmic acuity.
9.4 perform combinations and variations in a broad dynamic range, e.g., forceful, lyrical.
9.5 develop an awareness of and practice projection while performing dances.
9.6 practice extended movement sequences.

Understanding choreographic principles, processes, and structures.

9.7 explore improvisation as a way to generate movement for choreography.
9.8 define and practice structures or forms (such as palindrome, theme and variation, rondo, round, contemporary forms) through brief dance studies.
9.9 perform a duet demonstrating choreographic principles, processes, and structures.◊

Understanding dance as a way to create and communicate meaning.

9.10 explore, improvise, and communicate abstract ideas through movement.
9.11 observe and explore through movement how personal experience influences the interpretation of a dance.
9.12 improvise a dance that effectively communicates a contemporary social theme.◊

Applying and demonstrating critical and creative thinking skills in dance.

9.13 create a series of mini-dance pieces and revise them over time.◊
9.14 establish a set of aesthetic criteria and apply it in evaluating their own work.◊
9.15 answer aesthetic questions (such as, What did I see? What do I feel about what I saw? What questions do I have about what I saw?) in a large group setting.◊

Demonstrating and understanding dance in various cultures and historical periods.

9.16 explore and discuss similarities and differences between two contemporary theatrical forms of dance.
9.17 explore and discuss the traditions and technique of a classical dance form.
9.18 research and answer ten or more prepared questions about dance and dancers prior to the twentieth century.
9.19 research and discuss dance and dancers as portrayed in contemporary media.

Making connections between dance and healthful living.

9.20 set personal goals regarding their study of dance.◊
9.21 identify and portray how lifestyle choices affect the dancer (e.g., role play, case studies, skits).
9.22 research historical and cultural images of the body in dance.

Making connections between dance and other disciplines.

9.23 create a group interdisciplinary project based on a theme identified by the group, including dance and two other disciplines.◊

9.24 discuss commonalities and differences between dance and other disciplines with regard to fundamental concepts such as materials, elements, and ways of communicating meaning.◊

9.25 discuss how technology can be used to reinforce, enhance, or alter the dance idea in an interdisciplinary project.◊

Dance II (Grade 10)

On the tenth grade level, students studying dance will concentrate on comparing and contrasting dances of various cultures and historical periods as well as making connections between dance and other disciplines. Emphasis will be placed on dance as a means of developing and maintaining a healthy lifestyle.

Identifying and demonstrating movement elements and skills in performing dance.

10.1 demonstrate appropriate skeletal alignment, body-part articulation, strength, flexibility, agility, and coordination in locomotor and nonlocomotor/axial movements.

10.2 identify and demonstrate longer and more complex steps and patterns from two different dance styles/traditions.

10.3 demonstrate rhythmic precision.

10.4 create combinations and variations in a broad dynamic range.

10.5 demonstrate projection while performing dance skills.

10.6 demonstrate the ability to remember extended movement sequences.

Understanding choreographic principles, processes, and structures.

10.7 use improvisation to generate movement for choreography.

10.8 perform a brief dance study using at least two structures or forms chosen from: palindrome, theme and variation, rondo, round, contemporary forms.

10.9 choreograph a duet demonstrating an understanding of choreographic principles, processes, and structures.◊

Understanding dance as a way to create and communicate meaning.

10.10 formulate and answer questions about how movement choices communicate abstract ideas in dance.

10.11 use improvisation to structure and communicate abstract ideas.

10.12 demonstrate understanding of how personal experience influences the interpretation of a dance.

10.13 in a small group, create a dance that effectively communicates a contemporary social theme.◊

Applying and demonstrating critical and creative thinking skills in dance.

10.14 create a dance and revise it over time, articulating the reasons for their artistic decisions and what was lost and gained by those decisions.◊

10.15 review and apply aesthetic criteria in evaluating their own work and the work of others in a positive and constructive manner.◊

10.16 formulate and answer their own aesthetic questions (such as, What is it that makes a particular dance that dance? How much can one change that dance before it becomes a different dance?)◊

Demonstrating and understanding dance in various cultures and historical periods.

10.17 perform and describe similarities and differences between two contemporary theatrical forms of dance.

10.18 perform or discuss the traditions and technique of a classical dance form.

10.19 create and answer twenty-five questions about dance and dancers prior to the twentieth century.

10.20 analyze how dance and dancers are portrayed in contemporary media.◊

Making connections between dance and healthful living.

10.21 reflect upon their own progress and personal growth during their study of dance.◊

10.22 effectively communicate how lifestyle choices affect the dancer.
10.23 analyze historical and cultural images of the body in dance and compare these to images of the body in contemporary media.

Making connections between dance and other disciplines.

10.24 create an interdisciplinary project based on a theme identified by the student, including dance and two other disciplines.◊
10.25 clearly identify commonalities and differences between dance and other disciplines with regard to fundamental concepts such as materials, elements, and ways of communicating meaning.◊
10.26 demonstrate how technology can be used to reinforce, enhance, or alter the dance idea in an interdisciplinary project.◊

Dance III (Grade 11)

Eleventh grade dance will stress practice in performing technical and choreographical skills necessary for artful presentation. Emphasis will be placed on the relationship of dance to careers. Research of dance history and artists will be an integral part of this year of study.

Identifying and demonstrating movement elements and skills in performing dance.

11.1 review and practice consistency and reliability in performing technical skills.

11.2 review, identify, and practice technical skills with expression, demonstrating clarity, musicality, and stylistic nuance.

11.3 self assess and correct techniques through extensive rehearsals.

Understanding choreographic principles, processes, and structures.

11.4 demonstrate refined skills in performing a small group dance with coherence and aesthetic unity.◊

11.5 research the creative process of a recognized choreographer.◊

Understanding dance as a way to create and communicate meaning.

11.6 observe and research ways that a dance creates and conveys meaning by considering the dance from a variety of perspectives.

11.7 review and practice previously learned creative dances.

11.8 compare and contrast how meaning is communicated in their own previously created dances.

Applying and demonstrating critical and creative thinking skills in dance.

11.9 discuss and research how skills developed in dance are applicable to a variety of careers, e.g., sports, modeling, secretary, therapist.◊

11.10 research and analyze the styles of several choreographers or cultural forms.◊

11.11 research and discuss issues of ethnicity, gender, social/economic class, age and/or physical condition in relation to dance.

Demonstrating and understanding dance in various cultures and historical periods.

11.12 research and create a time line illustrating important dance events in the twentieth century, placing them in their social and historical contexts.

11.13 compare and contrast the role and significance of dance in two different social/historical/cultural/ political contexts.◊

Making connections between dance and healthful living.

11.14 discuss challenges facing professional performers in maintaining healthy lifestyles.

Making connections between dance and other disciplines.

11.15 research one choreographic work and one other artwork from the same culture and time period in terms of how those works reflect the artistic/cultural/historical context.

11.16 research an interdisciplinary project using media technologies (such as video, computer) that present dance in a new or enhanced form (such as video dance, video/computer-aided live performance, or animation).◊

Dance IV (Grade 12)

Creating and performing dance is the major emphasis of dance study on the twelfth grade level. The creative process will be studied and students will develop an awareness of dance and its place in the present and future culture.

Identifying and demonstrating movement elements and skills in performing dance.

12.1 demonstrate a high level of consistency and reliability in performing technical skills.

12.2 perform technical skills with expression, demonstrating clarity, musicality, and stylistic nuance.

12.3 refine technique through self-evaluation and correction.◊

Understanding choreographic principles, processes, and structures.

12.4 create a small group dance with coherence and aesthetic unity.◊

12.5 accurately describe the creative process used in choreographing their own movement sequence(s).

Understanding dance as a way to create and communicate meaning.

12.6 create and perform a series of mini-dance studies that convey different meanings from a variety of perspectives.◊

Applying and demonstrating critical and creative thinking skills in dance.

12.7 demonstrate and explain how skills developed in dance enhance present and future goals.◊

12.8 analyze the style of a choreographer or cultural form; then create a dance in that style.◊

12.9 analyze issues of ethnicity, gender, social/economic class, age and/or physical condition in relation to dance.

Demonstrating and understanding dance in various cultures and historical periods.

12.10 research and create a time line illustrating important dance events in the twentieth century, placing them in their cultural and political contexts.◊

12.11 perform dances illustrating two different social/historical/cultural/ political contexts.

Making connections between dance and healthful living.

12.12 research and analyze one professional performer's challenges in maintaining a healthy lifestyle.

Making connections between dance and other disciplines.

12.13 compare one choreographic work to one other artwork from the same culture and time period in terms of how those works reflect the artistic/cultural/historical context.

12.14 create an interdisciplinary project using media technologies (such as video, computer) that present dance in a new or enhanced form (such as video dance, video/computer-aided live performance, or animation).◊

Adolescent Music Education

Music is one of the four programs of study from which an elective course may be chosen to meet the graduation requirement of one course in the arts. At a minimum, both instrumental and choral music electives must be offered to accommodate four sequential levels of student achievement.

Within the Music program of study there are six areas of study for adolescent education.

- Instrumental Music - Strings provides instruction in playing the violin, viola, 'cello, and bass. At the adolescent level students playing these instruments are generally grouped in classes of all string players (a String Orchestra), or string players plus wind and percussion (Full Orchestra). The most advanced players (see objectives for Orchestra III and IV) may be given additional challenges of playing more difficult parts, solos, and chamber music (such as quartets and trios).

- Instrumental Music - Winds and Percussion provides opportunities for students in grades 9-12 to participate in marching, concert, and stage bands. Students enrolled in Band I, II, III, and IV may be scheduled into a single class period. If enrollment is large, more than one band may be offered and these may be differentiated by achievement level. Students working at different achievement levels may be scheduled into these large ensemble classes because of the large number of individual parts (representing different levels of difficulty)[1]. The advanced students (Band III and IV) may be given opportunities to participate in a variety of specialized or small ensembles (such as brass quartet, percussion ensemble, steel drum band).

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[1]The sample order form below illustrates the number of parts in band music. The first chair first clarinetist plays a more difficult part than the first chair second clarinetist.

BAND
Title: _____
Composer: _____

COPIES

_____ Full Score
_____ Condensed Score
_____ Piccolo
_____ 1st Flute
_____ 2nd Flute
_____ 1st Oboe
_____ 2nd Oboe
_____ English Horn
_____ 1st Bassoon
_____ 2nd Bassoon
_____ Contrabassoon
_____ E♭ Clarinet
_____ 1st B♭ Clarinet
_____ 2nd B♭ Clarinet
_____ 3rd B♭ Clarinet

_____ E♭ Alto Clarinet
_____ B♭ Bass Clarinet
_____ Contrabass Clarinet (E♭ or B♭)
_____ 1st E♭ Alto Saxophone
_____ 2nd E♭ Alto Saxophone
_____ B♭ Tenor Saxophone
_____ B♭ Baritone Saxophone
_____ 1st F (or E♭) Horn
_____ 2nd F (or E♭) Horn
_____ 3rd F (or E♭) Horn
_____ 4th F (or E♭) Horn
_____ 1st B♭ Cornet
_____ 2nd B♭ Cornet
_____ 3rd B♭ Cornet

_____ 1st B♭ Trumpet
_____ 2nd B♭ Trumpet
_____ 1st Trombone
_____ 2nd Trombone
_____ 3rd Bass Trombone
_____ Baritone (Treble Clef)
_____ Euphonium (Baritone-Bass Clef)
_____ Tuba
_____ String Bass
_____ Timpani
_____ Percussion
_____ Other instruments not listed:
_____
_____

- Choral Music provides opportunities for students to sing in large and small ensembles. When enrollment justifies, two or more choral groups may be offered. These may be differentiated by the achievement level of students and/or by their composition (treble voices, tenor and bass voices, mixed voices). Students at the advanced levels may also participate in chamber choirs, madrigal singers, barbershop quartets, and other select ensembles.

- Piano classes may be offered for beginners and more advanced students. The four levels of objectives included in this area of study provide for beginners and for those who have already studied piano. If facilities and piano lab equipment are available, a teacher can give instruction to students working at several different levels in a single classroom. On the other hand, if enrollment justifies, two or more classes differentiated by achievement level should be provided.

- Folk Music offers opportunities for students to learn to play the guitar, banjo, and dulcimer. Objectives are included in this document for two levels of achievement in Folk Music. Ideally, scheduling for the first level would place guitar and banjo players in one class with dulcimer players in another.

- Music Literature is an area of study that provides instructional objectives for electives such as Music Appreciation, Music History, or Humanities. If a Humanities elective is the choice of the county, the objectives for level I of this area of study, plus those in the Art History, Appreciation, Aesthetics area of study, plus appropriate dance and theatre objectives may be used to provide the framework for instruction. Music Theory, an elective appropriate for advanced students and music majors, is included in this area of study.

Elective Courses

Orchestra I*	**Piano I**
Orchestra II*	**Piano II**
Orchestra III*	**Piano III**
Orchestra IV*	**Piano IV**
Band I*	**Folk Music I**
Band II*	**Folk Music II**
Band III*	**Music Appreciation**
Band IV*	**Music History**
Chorus I*	**Humanities**
Chorus II*	**Music Theory**
Chorus III*	**AP Music Theory**
Chorus IV*	

***Electives must be provided to accommodate four sequential levels of Orchestra and/or Band, and four sequential levels of Chorus.**

It is strongly recommended that students in Advanced Placement courses take the AP exam.

County school systems may exercise the option of offering additional music courses. Instructional goals and objectives must be developed for these courses and approved by the county board of education.

Orchestra I (Grade 9)

Level VI Instrumental Music - Strings (Proficient)

This level provides for the further development of individual and ensemble playing skills. Scales and melodies in major and minor keys up to and including 4 sharps and 4 flats are played. Positions for level VI are:

violin - 4th and 5th position
viola - 4th and 5th position
'cello and bass - 5th and 6th positions and extensions.

Meters of 5, 7, and 12 are introduced and changing meter is studied. Musical vocabulary is expanded and students demonstrate the interpretation of this vocabulary in their playing. Vibrato, performance evaluation, and ensemble techniques continue to be studied.

Performing on instruments, alone and with others, a varied repertoire of music.

SVI.1 play melodies which, because of extended range or convenience of finger patterns, require the use of the higher positions. These positions are different for the various stringed instruments. Thus, they are specified for Level VI as follows:
violin - 4th and 5th positions,
viola - 4th and 5th positions,
'cello and bass - 5th and 6th positions and extensions.

SVI.2 play major and minor scales and melodies in keys up to and including 5 sharps and 5 flats.

SVI.3 play sixths using extended range positions, stopped octaves and fifths (basses excluded), and thirds in the first three positions (exclude 'cellos and basses).

SVI.4 play meters of 7, 12, and pieces containing changing meters.

SVI.5 play 3- and 4-note chords.

SVI.6 play using vibrato.

SVI.7 demonstrate characteristics of good ensemble (string orchestra) playing.◊

Improvising melodies, variations, and accompaniments.

SVI.8 add trills and grace notes to a major or minor melody.

Reading and notating music.

SVI.9 sightread music containing a double flat, double sharp, the tempo marking *accelerando*, contrasting dynamics, *subito p*, and *subito f*.

Listening to, analyzing and describing music.

SVI.10 listen to three symphonies, each from a different country and describe the elements of music and expressive devices that make each unique to its culture.

SVI.11 interpret tempo, dynamic, and expressive terms and symbols used in an unfamiliar piece of music, e.g., *andante, accelerando, sfz, col legno, calando.*

Evaluating music and music performances.

SVI.12 create a list of characteristics of exemplary playing including techniques and expression.

SVI.13 compare *cadenzas* for the same work played by different artists.

Understanding relationships between music, the other arts, and disciplines outside the arts.

SVI.14 compare a painting and a musical work from the Classical period; discuss similarities and differences.

SVI.15 describe ways in which music is related to a foreign language, mathematics, and science.

Understanding music in relation to history and culture.

SVI.16 create a list of 5 various roles that musicians perform and cite two representative individuals in each role; describe their activities and achievements.◇

Orchestra II (Grade 10)

Level VII Instrumental Music - Strings (Proficient)

This level provides for the further development of individual playing skills and ensemble skills. Students play in all major and minor keys. Chord progressions and arpeggiated chords are studied and utilized in learning jazz improvisation and various bowing styles. Students use an extensive vocabulary of music and interpret these terms in their playing. Students research American orchestral composers and the use of stringed instruments in American musical genres. Timbral characteristics of instruments are explored as well as the string quartet score. The fugue is studied and performance evaluation continues.

Performing on instruments, alone and with others, a varied repertoire of music.

SVII.1 play melodies in major and minor keys.

SVII.2 play major and minor scales and melodies in all keys.

SVII.3 perform the following: arpeggiated chords in root position and in first inversion, double stopped perfect fourths (exclude 'cellos and basses), major or minor double stopped sixths using higher range positions (exclude 'cellos and basses).

SVII.4 demonstrate characteristics of good ensemble (full orchestra) playing.◊

SVII.5 participate in the performance of a duet or trio with one person per part (violins and violas using first, third, and fifth positions; 'cellos and basses using first, second, and fourth positions).◊

Improvising melodies, variations, and accompaniments.

SVII.6 perform a jazz improvisation over a chord progression.◊

SVII.7 identify and play arpeggiated I, IV, and V7 chords using bowing styles characteristic of a requested time period.

Reading and notating music.

SVII.8 identify the role each instrument of a string quartet plays by describing its part in terms of the elements of music.

SVII.9 interpret the symbol for a turn (~).

SVII.10 read at sight melodies and rhythmic examples in 5 and 7 meter. $\frac{8}{8}$ $\frac{8}{8}$

SVII.11 perform accurately and expressively dynamic markings in orchestra literature.

Listening to, analyzing and describing music.

SVII.12 listen to three string quartets, each from a different country and describe the elements of music and expressive devices that make each unique to its own culture.

SVII.13 use an extensive technical vocabulary of music.◊

SVII.14 identify, in recorded or played examples and on scores, tone clusters and counter melodies.

SVII.15 explain terraced dynamics and cite examples of the use of the compositional device.

SVII.16 describe the timbral characteristics of specific instruments.

SVII.17 identify the subject and counter subject of a fugue from an aurally presented example.

Evaluating music and music performances.

SVII.18 prepare a solo, record their performances, then critique those performances using criteria developed by the students.◊

SVII.19 perform a movement of a symphony, then listen to a professional recording of the same piece, and critique their performance.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

SVII.20 compare the process of composing a piece of music with painting a picture. Include the process the artist and composer must go through, as well as the basic content of each art form, e.g., unity and variety, repetition and contrast.

SVII.21 compare a painting and a musical work from the Romantic period; discuss similarities and differences.

SVII.22 describe ways in which music is related to history, language arts, geography, and physical education.

Understanding music in relation to history and culture.

SVII.23 label the genre, time, period, and culture of five recorded examples.◊

SVII.24 research an American orchestral composer.◊

SVII.25 research the use of stringed instruments in American music genres, e.g., folk music, jazz, pop.

Orchestra III (Grade 11)

Level VIII Instrumental Music - Strings (Advanced)

Emphasis is placed on orchestral playing and on the application of known techniques to orchestral playing. Individual playing skills are expanded. Positions to be studied at Level VIII are:

violin - 6th position and above
viola - 6th position and above
'cello - thumb position
bass extreme upper position.

At this level a strong emphasis is placed on listening skills which develop the knowledge of musical form, genre, history, and musical interpretation.

Performing on instruments, alone and with others, a varied repertoire of music.

SVIII.1 perform string orchestra works, full orchestral works, and chamber music from various time periods.◊

SVIII.2 play melodies which, because of extended range or convenience of finger patterns, require the use of higher positions. These positions are specified as follows:
violin - 6th position and above,
viola - 6th position and above,
'cello - thumb position,
bass - extreme upper position.

Improvising melodies, variations, and accompaniments.

SVIII.3 improvise a melody in the style requested by the teacher.◊

Reading and notating music.

SVIII.4 describe meter changes, clefs, and transpositions from a full orchestra score.

SVIII.5 play a piece that makes use of non-standard notation and interpret all symbols accurately.

SVIII.6 sightread melodies with changing meters and interpret tempo changes within a piece.

Listening to, analyzing and describing music.

SVIII.7 identify the three parts of a movement in *Sonata Allegro* form presented aurally.

SVIII.8 describe in detail a concerto presented aurally.

SVIII.9 compare timbre, dynamics, and form in two orchestral pieces; list similarities and differences.

Evaluating music and music performances.

SVIII.10 describe feelings evoked while listening to a musical work and list what elements of music contributed to those emotions.

Understanding relationships between music, the other arts, and disciplines outside the arts.

SVIII.11 research the roles of creators, performers, and others involved in the production and presentation of the arts and list the similarities and differences of these roles in the various arts.◊

Understanding music in relation to history and culture.

SVIII.12 list the musical characteristics that contribute to a given musical work's placement in a time period.

SVIII.13 compare a Baroque concerto with a later classical or Romantic concerto and discuss differences in the soloists' styles.

Orchestra IV (Grade 12)

Level IX Instrumental Music - Strings (Advanced)

At this level, students apply known techniques to orchestral playing, study and demonstrate the ability to interpret solo literature for their instrument, and study in detail various forms and genres including the movements of a symphony and Appalachian music with the use of stringed instruments in its culture. Students are introduced to conducting and conduct form a full orchestral score.

Performing on instruments, alone and with others, a varied repertoire of music.

SIX.1 play instrumental literature containing double stopped intervals including thirds, fifths, sixths, and octaves. (Exclude basses.)

SIX.2 interpret a solo.

SIX.3 participate in the performance of a movement of a symphony, an overture, and a concerto.◊

Improvising melodies, variations, and accompaniments.

SIX.4 prepare and perform a *cadenza* that is consistent with the style, tonality, and meter of the piece.◊

SIX.5 play arpeggiated I, iv and V7 chords in minor keys.

Reading and notating music.

SIX.6 conduct tempo changes and expressive markings from a full orchestral score and explain transpositions and clefs.

SIX.7 play at sight melodies having metric modulations and melodies requiring subdivision of the beat.

SIX.8 interpret contrasting dynamics when sightreading an instrumental piece.

Listening to, analyzing and describing music.

SIX.9 describe in detail the forms of the movements of a symphony.

SIX.10 describe the use of the motif and the variations from the traditional *Sonata Allegro* form.

Evaluating music and music performances.

SIX.11 list words describing feeling evoked by listening to a musical work and list musical elements that could create those emotions and feelings.

Understanding relationships between music, the other arts, and disciplines outside the arts.

SIX.12 compare a work of art, a piece of music and a play from the Baroque period with a work of art, a piece of music, and a play from the Romantic period. Discuss the characteristic elements, artistic processes and organizational principles of each.

Understanding music in relation to history and culture.

SIX.13 research Appalachian music and the use of stringed instruments in the culture.◊

SIX.14 research the origins of chamber music and the historical conditions surrounding it.◊

SIX.15 describe the evolution of the role of the composer/musician from church or court musician to independent artist.◊

Band I (Grade 9)

Level V Instrumental Music - Winds and Percussion (Proficient)

This level provides for the refinement of playing skills; more exposure to various composers, compositions, styles, and ornamentation.

Performing on instruments, alone and with others, a varied repertoire of music.

WV.1 play melodies in major keys up to and including 4 sharps and 5 flats.
WV.2 play from memory major scales through 4 sharps and 5 flats.
WV.3 play meter in 7, 9, and 12.
WV.4 play a drag paradiddle number 1, number 2, and a flam paradiddle-diddle (percussion only).
WV.5 play *staccato*, *marcato*, and *legato*.
WV.6 play timpani (percussion only).
WV.7 play conducted dynamic changes.
WV.8 play solos, duets, trios, and quartets.◊

Reading and notating music.

WV.9 interpret a four-stave score for a quartet.◊
WV.10 sightread, accurately and expressively, music with a level of difficulty of 2, on a scale of 1 to 6.

Listening to, analyzing, and describing music.

WV.11 describe the characteristics of the melody, harmony, texture, and rhythm of aural examples.
WV.12 demonstrate a knowledge of musical definitions, symbols, and terms.
WV.13 demonstrate the relationship of tempo indications to metronome markings.
WV.14 compare characteristics of music of different periods.

Evaluating music and music performances.

WV.15 develop a list of criteria to be used in the evaluation of a musical performance through oral discussion or a written report.◊
WV.16 compare student performances with those by professional groups.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

WV.17 explain the physical properties of sound.

Understanding music in relation to history and culture.

WV.18 identify characteristics of music of a variety of genres, styles, historical periods, and cultures.◊

Band II (Grade 10)

Level VI Instrumental Music - Winds and Percussion (Proficient)

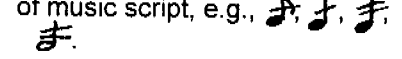
This level provides for the refinement of playing skills, study of additional keys, formal structures, and the elements of music. The evolution of music in America is studied.

Performing on instruments, alone and with others, a varied repertoire of music.

WVI.1 play melodies in major keys up to and including five sharps and six flats.

WVI.2 play from memory major scales through five sharps and six flats.

WVI.3 play a turn.

WVI.4 interpret the rhythmic subdivision of music script, e.g.,  .

WVI.5 play polymeters.

WVI.6 perform a piece using terraced dynamics.

WVI.7 play standard jazz band rhythms (percussion only).

WVI.8 perform in an ensemble, demonstrating well developed ensemble skills.◊

WVI.9 play in a mixed-instrument small ensemble with one person on a part.◊

Reading and notating music.

WVI.10 describe how the elements of music are used in a four-stave score.◊

WVI.11 sightread, accurately and expressively, music with a level of difficulty of 3, on a scale of 1 to 6.

Listening to, analyzing, and describing music.

WVI.12 describe the formal structures, tempos, dynamics, and timbres of aural examples.

WVI.13 classify symbols and musical terms under the seven elements of music.

WVI.14 compare 2 or more compositions by the same composer.

Evaluating music and music performances.

WVI.15 evaluate a performance using the criteria: I liked it, I did not like it, and why?

WVI.16 explain differences between "good" and "great" performances.

Understanding relationships between music, the other arts, and disciplines outside the arts.

WVI.17 explain physical characteristics of particular instruments.

Understanding music in relation to history and culture.

WVI.18 classify unfamiliar aural examples of music by genre, style, historical period, and culture.◊

WVI.19 trace the evolution of music in America.

WVI.20 identify the importance of major American musicians.◊

Band III (Grade 11)

Level VII Instrumental Music - Winds and Percussion (Advanced)

This level provides for the refinement of playing skills, precise rhythmic articulation, and changing meters. Vibrato is introduced. Various genres and timbres are compared.

Performing on instruments, alone and with others, a varied repertoire of music.

WVII.1 demonstrate precise rhythmic articulation.

WVII.2 play melodies with changing meters.

WVII.3 play *rubato* passages.

WVII.4 interpret dynamic changes.

WVII.5 play melodies with vibrato (brass and woodwinds only, except clarinet and French horn).

WVII.6 demonstrate proper techniques of playing chimes and gong along with proper techniques of playing Latin American percussion instruments (percussion only).

Reading and notating music.

WVII.7 perform basic conducting patterns in 2, 3, and 4 meters. $\frac{2}{4}$ $\frac{3}{4}$ $\frac{4}{4}$

WVII.8 identify melodies and harmonic parts in a full score.

WVII.9 perform a piece using nonstandard notation symbols.◊

WVII.10 play at sight melodies in major and minor keys.

Listening to, analyzing, and describing music.

WVII.11 identify forms used in aural examples.

WVII.12 compare two pieces of the same genre, but of different styles, e.g., marches by Sousa and Osterling.

WVII.13 describe timbres created by the use of unique combinations of instruments.

Evaluating music and music performances.

WVII.14 explain how the elements of music can be used to evoke emotion or to describe places or events.

Understanding relationships between music, the other arts, and disciplines outside the arts.

WVII.15 compare the uses of characteristic elements of the arts in different cultures.◊

Understanding music in relation to history and culture.

WVII.16 list characteristics of music representing the major historical periods.◊

Band IV (Grade 12)

Level VIII Instrumental Music - Winds and Percussion (Advanced)

At this level, emphasis is placed upon the ability to make music, sightread music, interpret, and evaluate music.

Performing on instruments, alone and with others, a varied repertoire of music.

WVIII.1 play major and relative minor scales.
WVIII.2 interpret an instrumental solo passage with proper style.◊
WVIII.3 play arpeggiated major and minor triads.
WVIII.4 demonstrate different combinations of articulation.
WVIII.5 play conducted tempo changes.
WVIII.6 interpret contrasting dynamics.

Improvising melodies, variations, and accompaniments.

WVIII.7 improvise background "fills."◊
WVIII.8 use arpeggiated major and minor triads in improvisations.
WVIII.9 improvise variations of a melody.

Reading and notating music.

WVIII.10 conduct a 2, 3, or 4 (4/4, 4/4, 4/4) composition using full score.
WVIII.11 identify counter melodies written in a full score.
WVIII.12 interpret symbols used for nonstandard notation.
WVIII.13 play at sight a melody having metric modulations.

Listening to, analyzing, and describing music.

WVIII.14 prepare a detailed report on a piece of music heard outside of class.◊
WVIII.15 compare musical forms from different eras, e.g., baroque and classical sonatas.
WVIII.16 describe how the elements of music are used in a given work to make it unique, interesting, and expressive.

Evaluating music and music performances.

WVIII.17 describe emotions evoked by the use of the elements of music in a given musical work.

Understanding relationships between music, the other arts, and disciplines outside the arts.

WVIII.18 compare the uses of characteristic elements of the arts in different historical periods.◊

Understanding music in relation to history and culture.

WVIII.19 identify and explain the stylistic features of a given musical work that serves to define its aesthetic tradition and its historical context.◊

Chorus I (Grade Nine)

Level IV Choral Music (Proficient)

Students will add to their singing skills by demonstrating proper breathing and dynamics in musical phrases. The students will improvise harmonies and melodies while participating in a four-part, full choral ensemble. They will create a glossary of music terms and refine their criteria for evaluating choral performances. Students will compare choral music with other arts from the same historical period or culture, classify choral works on a music timeline, and identify the varied roles of musicians.

Singing, alone and with others, a varied repertoire of music.

CIV.1 demonstrate proper breathing and dynamics in singing musical phrases.

CIV.2 sing literature containing *rallentando*, *marcato*, and basic dynamics *f*, *p*, *mf*, *mp*.

CIV.3 sing an accompanied four-part choral composition with good tone production.◊

CIV.4 sing a movement from a cantata with good intonation.◊

CIV.5 sing with good intonation, balance, and blend in SATB, full choral ensemble.◊

Improvising melodies, variations, and accompaniments.

CIV.6 improvise appropriate harmonizing parts to a standard hymn tune.

CIV.7 sing improvised rhythmic and melodic variations on a given pentatonic melody.

CIV.8 improvise an original melody over a given chord progression in a folk music style demonstrating appropriate tonality.

Reading and notating music.

CIV.9 describe the use of treble and bass clef signs in a four-stave vocal score.

CIV.10 sightread his/her own part from a four-part score with a difficulty level of 3.◊

Listening to, analyzing, and describing music.

CIV.11 identify expressive devices and elements of music in an aural example of Baroque choral music, e.g., ornamentation, solo vs. tutti.

CIV.12 identify three characteristics of the cantata.

CIV.13 create a music glossary of choral terms.◊

Evaluating music and music performances.

CIV.14 develop specific criteria for evaluating choral performances, e.g., tone quality, rhythmic accuracy, part singing.◊

CIV.15 evaluate live or taped choral performances of peers, (e.g., All-State, All-County, festivals, and concerts) as compared to exemplary professional performances.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

CIV.16 compare choral music with other arts from the same historical period, style or culture, e.g., music of Palestrina and art of Michelangelo, DaVinci.

CIV.17 compare the ability of both literature and choral music to convey images, feelings, and meanings.

Understanding music in relation to history and culture.

CIV.18 classify aural examples of familiar choral works on a music timeline.◊

CIV.19 trace the source and evolution of the American Spiritual and identify choral arrangers, e.g., Jester Hairston.

CIV.20 identify various roles that vocal musicians perform (performer, composer, conductor) and cite representative individuals (Joan Sutherland, Handel, Robert Shaw).◊

Chorus II (Grade Ten)

Level V Choral Music (Proficient)

The student will continue to improve and expand proper singing techniques. Attention will be given to singing from memory, singing a chorus from an oratorio and double-choir compositions. The knowledge of musical terminology, notation, and symbols will be enhanced through the study of choral scores. Students will study the evolution of American Jazz and the role of musicians in the 20th century.

Singing, alone and with others, a varied repertoire of music.

CV.1 sing dark and bright vowels with good tone quality.

CV.2 sing literature containing *lento*, *grave*, and *vivace*.

CV.3 sing with expression and technical accuracy the choral music studied.◊

CV.4 sing from memory at least four choral compositions studied.

CV.5 sing a chorus number from an operetta/musical with good tone production.◊

CV.6 sing an a cappella multi-part composition with good tone production and intonation.◊

CV.7 sing with good intonation, balance, and blend in SATB, mixed quartets.◊

Improvising melodies, variations, and accompaniments.

CV.8 improvise appropriate harmonizing parts to a jazz tune.

CV.9 sing improvised rhythmic and melodic variations on a given melody in a major or minor key.

CV.10 improvise an original melody over a given chord progression in a pop music style demonstrating appropriate tonality.

Reading and notating music.

CV.11 describe the use of rhythmic and expressive markings in a four-stave vocal score.

CV.12 identify the melody and harmony parts in a four-stave vocal score.

CV.13 sightread, accurately and expressively, his/her own part from a four-part vocal score with a difficulty level of 4.

Listening to, analyzing, and describing music.

CV.14 identify expressive devices and elements of music in an aural example of 20th Century choral music, e.g., atonality, polyrhythms.

CV.15 describe characteristics of an operetta/musical.

CV.16 perform a four-part choral piece demonstrating understanding of musical terminology and signs.◊

Evaluating music and music performances.

CV.17 refine criteria for evaluating choral performances.◊

CV.18 apply criteria to personal participation in music, e.g., concerts attended, tapes of personal performance.◊

CV.19 evaluate a high school choral performance as compared with a college choral performance.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

CV.20 compare choral music with other arts from the same historical period, style, culture, e.g., music of Mozart, art of Gainsborough, writings of Voltaire.◊

CV.21 use scientific principles to describe tone production, the transmission and perception of sound as related to the human voice.◊

Understanding music in relation to history and culture.

CV.22 classify aural examples of unfamiliar choral works on a music timeline.

CV.23 trace the source and evolution of American Jazz and identify singers such as Bessie Smith.

CV.24 identify the roles of 20th-century musicians and cite representative examples (Aaron Copland, Leonard Bernstein, Kathleen Battle, Whitney Houston, Irving Berlin, and others of various styles).◇

Chorus III (Grade Eleven)

Level VI Choral Music (Advanced)

The student will progress into more advanced choral literature including polyphonic compositions, a movement from an oratorio and double-choir compositions. Students will accurately sing their own part in a four-part composition and improvise melodies in various styles (jazz, swing, blues). Students will compare the arts in European and American cultures and the roles of creators/performers in choral music and the arts. The students will trace the historical conditions that resulted in the spiritual (African, American, and Afro-American).

Singing, alone and with others, a varied repertoire of music.

CVI.1 sing literature containing *rubato* and terraced dynamics.

CVI.2 sing with natural vibrato and straight tone.

CVI.3 sing a polyphonic composition with appropriate stylistic tone quality.

CVI.4 sing a selection from an *oratorio*.

CVI.5 sing double-choir choral compositions.◊

CVI.6 sing a four-part choral composition with one singer per part with good intonation, balance, and blend.◊

Improvising melodies, variations, and accompaniments.

CVI.7 improvise stylistically appropriate harmonizing parts over a given melody in blues style.

CVI.8 sing improvised melodies in a variety of styles, e.g., jazz, swing, blues, over given chord progressions.

Reading and notating music.

CVI.9 sing accurately from a full vocal score.

CVI.10 identify melodies and harmonic passages in a full vocal score.

CVI.11 interpret a vocal score containing non-standard notation.◊

CVI.12 sightread a four-part chorale with one person per part.◊

Listening to, analyzing, and describing music.

CVI.13 discuss music events occurring in a given aural example of choral music, e.g., form and textural changes.

CVI.14 compare the ways in which musical materials are used in two choral pieces of the same genre, e.g., musicals of Webber and Hammerstein.

CVI.15 describe voicing combinations in a given choral work that make it unique.

Evaluating music and music performances.

CVI.16 describe a given choral work in terms of its aesthetic qualities.

CVI.17 evaluate musical means used to evoke feelings and emotions in a choral work.

Understanding relationships between music, the other arts, and disciplines outside the arts.

CVI.18 compare the uses of characteristic elements of the arts in the European (Mozart, Haydn) and American (Billings, Ives) cultures.◊

CVI.19 compare and contrast the role of creators and performers of choral music with those in the other arts.◊

Understanding music in relation to history and culture.

CVI.20 prepare program notes for a given performance piece.◇

CVI.21 identify and describe the spiritual (African, American, Afro-American) trace the historical conditions that produced the synthesis of influences.

Chorus IV (Grade Twelve)

Level VII Choral Music (Advanced)

The Level VII choral student will continue to expand a broad base of singing skills and advance into singing solos, madrigals, motets, and eight-part choral compositions. Students use advanced notation (including contemporary and non-traditional) and technical skills to prepare an analysis of a choral score. A increasing foundation of the history of choral music enables students to explain how musical elements may be used to evoke emotions, study operas of the Romantic and 20th Century eras, and compare the choral music of the Classical and Romantic historical periods. Students will prepare a program choosing compositions and creating narration to illustrate the evolution of American folk music.

Singing, alone and with others, a varied repertoire of music.

CVII.1 sing solo literature.

CVII.2 sing literature containing tempo changes, *ad libitum*, and varying dynamics.

CVII.3 sing with uniform tone quality throughout his/her vocal range.

CVII.4 sing a madrigal and/or motet with good tone quality.◊

CVII.5 sing eight-part choral compositions.◊

CVII.6 sing multi-part compositions with one singer per part demonstrating good intonation, balance, and blend.◊

Improvising melodies, variations, and accompaniments.

CVII.7 improvise stylistically appropriate harmonizing parts over a given melody in Baroque style.◊

CVII.8 sing improvised melodies in a variety of styles, e.g., Baroque, Classical, and 20th-century choral styles.◊

Reading and notating music.

CVII.9 prepare a score analysis identifying musical elements used including transpositions and clefs.

CVII.10 perform compositions notated with contemporary and non-traditional symbols.◊

CVII.11 sightread a four-part polyphonic composition with one person per part.◊

Listening to, analyzing, and describing music.

CVII.12 prepare a detailed report on a piece of choral music heard in a live concert.◊

CVII.13 compare the musical materials used in operas of the Romantic and 20th-century historical periods.

CVII.14 describe accompaniments for given choral works that make them unique, interesting, and expressive.

Evaluating music and music performances.

CVII.15 explain how the musical elements in a given work can be used to evoke feelings and emotions.

Understanding relationships between music, the other arts, and disciplines outside the arts.

CVII.16 compare the uses of characteristic elements of the arts in choral music of the Classical (Mozart, Schubert) and Romantic (Brahms, Mendelssohn) historical periods.◊

CVII.17 explain the role of creators, performers, and others in the modern entertainment industry, e.g., managers, costumers, technicians, accompanists.◊

Understanding music in relation to history and culture.

CVII.18 create a display demonstrating the stylistic features, aesthetic tradition, historical and cultural context of a given choral work, e.g., Handel's **Messiah**.

CVII.19 program a concert of American folk music with narration to trace the influence of the English and Scottish cultures and historical conditions which produced the synthesis of influences (possible joint social studies unit).

Piano I (Grade 9)

(Proficient)

Students use correct wrist, hand, and body positions in playing major scales, block and broken chord patterns, cadences using the I, IV, and V^7 chords, and simple pieces in major keys. They compose melodies with block chord accompaniment. Sightreading in treble and bass clefs is practiced and evaluation skills are developed. The physical properties of sound, the evolution of blues piano literature, and composers of the Baroque, Classical, and Romantic periods are studied.

Provide accompaniment for vocalists for a varied repertoire of music.

PI.1 perform at a steady meter to support the soloist.
PI.2 play accompaniments in easy keys, e.g., C, G, F.
PI.3 play accompaniments at a grade level of 1 on a scale of 1 to 6.
PI.4 demonstrate appropriate balance between soloist and accompanist.◊

Performing on piano, alone and with others, a varied repertoire of music.

PI.5 keep a steady beat.
PI.6 use correct hand and body positions to play piano.
PI.7 utilize wrist movement in interpreting phrasing.
PI.8 play repertoire at a level of 1, on a scale of 1 to 6.
PI.9 use block or broken chord patterns for accompanying an instrumental soloist.
PI.10 play all major scales, hands together, for 1 octave using correct fingering.

Improvising melodies, variations and accompaniments.

PI.11 recognize and play cadences using the I, IV and V^7 chords in keys of C, G and F.
PI.12 recognize tonal patterns.

Composing and arranging music within specified guidelines.

PI.13 demonstrate knowledge of chord structure and tonality.
PI.14 write a melody within a given key.
PI.15 compose a block chord accompaniment using I, IV, and V^7 chords.

Reading and notating music.

PI.16 read notation from G (treble) and F (bass) clefs and play the corresponding notes on the keyboard.
PI.17 identify stepwise and skipwise patterns.
PI.18 demonstrate knowledge of bar lines, measures, ties, rests, *fermata*, accidentals, written rhythms, *D.C. al Fine*, *D.S. al Fine*, multiple endings, and accents.
PI.19 perform *piano (p)* and *forte (f)* dynamic levels.
PI.20 read notation in $\frac{2}{4}$, $\frac{3}{4}$, and $\frac{4}{4}$ meters.
PI.21 read  ,  ,  , and  note symbols.
PI.22 demonstrate the value of dotted notes.
PI.23 sightread a simple melody with chordal accompaniment (I, IV, V^7).
PI.24 play pieces in the keys of C, G, D, & F major and recognize these key signatures.

Evaluating music and music performances.

PI.25 develop evaluation skills in one's own practicing to determine correct tonality and rhythmic accuracy.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

PI.26 relate the tonality of the piano to the physical properties of sound, e.g., different length of strings and different thickness of strings produce different pitches.

Understanding music in relation to history and culture.

PI.27 trace the source and evolution of American blues piano literature and cite well-known musicians; e.g., G. Gershwin.

PI.28 present a report on a composer of the Baroque, Classical, or Romantic period citing some important works.◊

Piano II (Grade 10)
(Proficient)

Students refine playing technique, practice minor scales and cadences, and begin improvisation exercises. They compose a melody with accompaniment in three different styles. Music reading and evaluation skills are expanded. The relationship of music and painting is studied. Ragtime piano literature and the various roles of keyboard musicians are examined.

Provide accompaniment for vocalists for a varied repertoire of music.

PII.1 demonstrate dynamic markings that complement the soloist.◇

Performing on piano, alone and with others, a varied repertoire of music.

PII.2 play staccato and legato and continue refining phrasing technique.

PII.3 play literature containing independence of hands and contrary motion.

PII.4 perform a piece demonstrating changes in dynamics.

PII.5 demonstrate chromatic scale fingering.

PII.6 use the damper pedal in legato pedaling.

PII.7 study pieces at a level of difficulty of 2, on a scale of 1 to 6.

PII.8 demonstrate playing glissando.

PII.9 perform all major scales, 2 hands together for 2 octaves maintaining a steady tempo.

PII.10 perform relative minor scales.

Improvising melodies, variations and accompaniments.

PII.11 recognize and play cadences using the i, iv, and V^7 chords in minor keys.

PII.12 improvise chordal accompaniment(s) using I, IV and V^7 chords to a given melody in the keys of C & G.◇

PII.13 take simple dictation of rhythms and melodies.

PII.14 improvise a simple melody over given I, IV and V^7 chords in the keys of C & G.◇

Composing and arranging music within specified guidelines.

PII.15 compose a melody utilizing level 1 rhythms and accompany this in at least 3 different styles, e.g., block chord, arpeggio, waltz.◇

Reading and notating music.

PII.16 recognize the elements of music.

PII.17 identify and perform crescendo and dimuendo markings in pieces studied.

PII.18 read and perform notation in $\frac{6}{8}$ meter.

PII.19 read and perform in cut time (¢).

PII.20 read and perform  note patterns and triplets.

PII.21 interpret tempo markings of andante, allegro, moderato, adagio and ritardando.

PII.22 read and perform music with a syncopated rhythm pattern.

PII.23 sightread, both hands together, at a level of difficulty of 1, using a scale of 1 to 6.

PII.24 play pieces in keys of A, B^b and E^b Major.

Listening to, analyzing and describing music.

PII.25 listen to keyboard music representing different periods of musical history and discuss style.

PII.26 demonstrate knowledge of basic music terminology.◇

PII.27 identify and explain the compositional devices used in a specific work studied.

Evaluating music and music performances.

PII.28 develop evaluation skills to include critical listening to individual and class performances in the following areas: notes, tempo, rhythm, dynamics and other elements of music studied.

PII.29 evaluate his/her present level and set goals to obtain a higher level of proficiency in areas of musical performance.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

PII.30 compare the process of composing a piece of music with painting a picture. Include the process the artist and composer must go through as well as the basic content of each art form, e.g., unity and variety, repetition and contrast.

PII.31 compare characteristics of music and visual arts in the Romantic period and cite examples from keyboard literature (Chopin, Liszt).

Understanding music in relation to history and culture.

PII.32 listen and identify the genre, time period, and culture of five recorded keyboard examples.

PII.33 trace the source and evolution of American ragtime piano literature and cite well-known musicians; e.g., Scott Joplin.

PII.34 identify various roles that keyboard musicians perform (electronic keyboards, rock bands, concert pianist) and cite representative individuals (Van Cliburn, Don Muro).◊

Piano III (Grade 11)
(Advanced)

Students at this advanced level refine playing, sightreading, accompanying, and ensemble skills. They improvise accompaniments and explore composition in major and minor keys. They perform, analyze, and explain compositional devices and forms used in keyboard works of the various periods of music history. They refine evaluation skills.

Provide accompaniment for vocalists for a varied repertoire of music.

PIII.1 play accompaniments reflecting proficiency of grade level 2, on a scale of 1 to 6.

PIII.2 experience accompanying both soloists and small ensembles.◊

PIII.3 continue refinement of ensemble skills.◊

Performing on piano, alone and with others, a varied repertoire of music.

PIII.4 use the body effectively to produce different touches.

PIII.5 perform music with fugal passages.

PIII.6 perform music at a level of 3, on a scale of 1 to 6.

PIII.7 play major scales at increased tempos.

PIII.8 play white key, natural, harmonic, and melodic minor scales for 2 octaves.

Improvising melodies, variations and accompaniments.

PIII.9 play cadences using the I IV I V^7 I chord pattern in all major keys.

PIII.10 utilize different styles (waltz, arpeggiated, etc.) in improvised accompaniments.◊

Composing and arranging music within specified guidelines.

PIII.11 explore composition in major and minor keys.

PIII.12 write an original waltz.◊

Reading and notating music.

PIII.13 read 4-part chorale notation (grand staff).

PIII.14 sightread at a level of 2, on a scale of 1-6.

PIII.15 perform music in the keys of E and A^b major and the minor keys of a, e, and d.

Listening to, analyzing and describing music.

PIII.16 listen to keyboard music representing different periods of musical history and discuss form and style.

PIII.17 listen to and analyze instrumental and vocal presentations from the different periods of musical history.

PIII.18 identify and explain compositional devices used and the form of a work studied.

Develop evaluation skills in ones own practicing to determine correct tonality and rhythmic accuracy.

PIII.19 develop skills in assessing their own musicality at a higher level to include phrasing, dynamics, meter markings, and articulation, e.g., *staccato*, *marcato*.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

PIII.20 explain the multiple uses and career applications of keyboard instruments.◊

Understanding music in relation to history and culture.

PIII.21 perform, identify, and trace the cultural source of repertoire representative of the various periods in music history at a level of 3 on a scale of 1 to 6.

Piano IV (Grade 12)

(Advanced)

Students extend their playing, sightreading, accompanying and ensemble skills with a more demanding repertoire. Transposition is introduced. Analysis and evaluation studies are continued. Characteristic elements of Baroque and Romantic arts are studied.

Provide accompaniment for vocalists for a varied repertoire of music.

PIV.1 play accompaniments reflecting proficiency of grade level 3, on a scale of 1 to 6.

PIV.2 demonstrate well-developed ensemble skills with a soloist and/or ensemble.◊

Performing on piano, alone and with others, a varied repertoire of music.

PIV.3 perform a two-part invention.

PIV.4 continue increasing the tempo of playing all major scales with a suggested pattern of 1st octave , 2nd octave , 3rd octave , and 4th octave  notes.

PIV.5 perform all natural, harmonic, and melodic minor scales for 2 octaves.

PIV.6 perform all major arpeggios, root position, hands together, for 3 octaves at a steady tempo.

Improvising melodies, variations and accompaniments.

PIV.7 play cadences using the i iv i V^7 i chord patterns in all minor keys.

Composing and arranging music within specified guidelines.

PIV.8 continue exploration of original melodic variations and accompaniments.◊

Reading and notating music.

PIV.9 transpose pieces to neighboring keys.

PIV.10 sightread at level of 3, on a scale of 1-6.

PIV.11 read music in all keys.

Listening to, analyzing and describing music.

PIV.12 analyze AB, ABA, and fugal writing in their own repertoires.

Develop evaluation skills in ones own practicing to determine correct tonality and rhythmic accuracy.

PIV.13 define aesthetic qualities.

PIV.14 evaluate performances, their own and others, in terms of aesthetic qualities.◊

Understanding relationships between music, the other arts, and disciplines outside the arts.

PIV.15 compare the uses of characteristic elements of the arts in the Baroque (Bach) and Romantic periods (Liszt).

Understanding music in relation to history and culture.

PIV.16 explain the stylistic features of a given musical work from the Baroque period.

PIV.17 perform, identify, and trace the cultural source of repertoire representative of the various periods in music history at a level of 4 on a scale of 1 to 6.

Folk Music I (Grade 9)

Level I Instrumental Folk Music (Proficient)

This level provides the introduction of basic playing skills of folk instruments: fingerings, characteristic tone qualities, and playing positions. The historical and cultural backgrounds of these instruments and appropriate repertoire are introduced and studied.

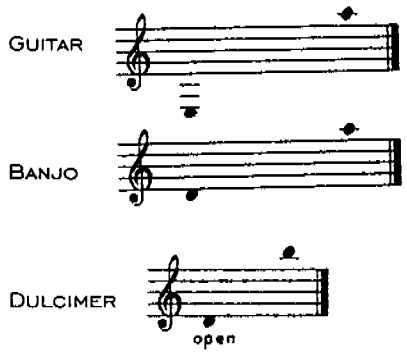
Performing on folk instruments, alone and with others, a varied repertoire illustrating multiple performance styles.

FI.1 match pitch with good intonation.

FI.2 demonstrate appropriate tuning techniques; dulcimer players include relative tuning.

FI.3 demonstrate a steady beat in musical selections.

FI.4 perform instrumental solos with technical accuracy using the following ranges:



FI.5 demonstrate the ability to perform chords:

- GUITAR - G7, C, G, D7, F, D, A7, A, E, E7, Am, Em, Dm, Bm7, B7, Am7, C7, and F7.
- BANJO - G, D7, C, Em, D, F, E7, E, and Am.
- DULCIMER - C, G, D, D7, Cm, Gm, Dm in block style, as well as drones tuned in fifths as harmonic accompaniment for melodies.

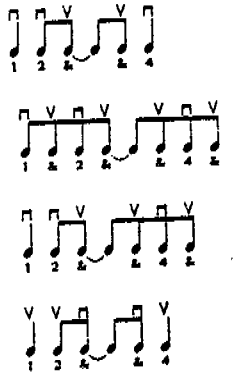
FI.6 perform as members of an ensemble while demonstrating attention to appropriate balance, blend, tonal and rhythmic accuracy.◊

FI.7 participate in the performance of a duet or round with one student per part.◊

Improvising melodies, variations, and accompaniments.

FI.8 improvise a chordal accompaniment utilizing down and up strokes appropriate to melodic rhythms and style.

FI.9 improvise chordal accompaniment using syncopated rhythms, e.g.,

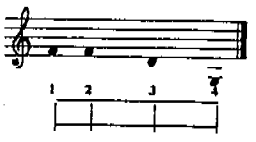


FI.10 improvise rhythmic and melodic variations in the keys of:

- GUITAR - C, G, D, and A major.
- BANJO - G and A major.
- DULCIMER
  - Mixolydian tuning, e.g.,



  - Aeolian tuning, G minor,



FI.11 improvise an eight bar melody over a given chord progression using two chords. The melodic line will include chord tones on the strong beats of each measure.◊

Reading and notating music and musical symbols appropriate for guitar, banjo, and dulcimer.

Fl.12 interpret tied notes, and simple syncopated rhythms.

Fl.13 interpret repeat signs, multiple endings, the measure repeat sign, *D.S.*, and *D.C. al Fine*.

Fl.14 perform melodies and rhythms in meters of two, three, four, and six.

Fl.15 interpret the *fermata*.

Fl.16 play a chromatic scale of one octave.

Fl.17 read and interpret chord charts and tablature.

Fl.18 demonstrate a steady beat within pieces using standard notation including whole, dotted half, half, dotted quarter, quarter, eighth, and sixteenth note and rest values.

Fl.19 interpret the following dynamic markings: *p, mf, f.*

Fl.20 play ascending and descending one-octave scales in the keys of C, F, and G for guitar; C, G, and A for banjo; Mixolydian and Aeolian modes for dulcimer.

Fl.21 interpret the tempo indicators *andante, moderato, allegro,* and *ritardando.*

Fl.22 when given a piece of music consisting of chord and melody lines, identify, play, and describe each line and its usage.

Fl.23 DULCIMER - perform musical selections that utilize fret numbers. BANJO - demonstrate hammer and pull technique in musical selections.

Listening to, analyzing, and describing music.

Fl.24 listen to an example of rock, country-western, hymn, ballad, and/or blues, identify its genre and discuss its content using the technical vocabulary of music.◊

Fl.25 use the technical vocabulary of music in discussion and analysis of pieces played and heard.◊

Fl.26 describe binary, ternary and strophic forms and give examples of each.

Fl.27 identify block and arpeggiated accompaniment styles.

Fl.28 listen to a piece of music, identify the dominant elements of the piece that make it unique, interesting, and expressive, e.g., dynamics, tempo, variations, range, tonality, and modulations.

Evaluating music and music performances.

Fl.29 select valid musical criteria for evaluating their own performances, as well as performances of others, e.g., good ensemble playing, tone quality, and technical accuracy.◊

Fl.30 apply selected musical criteria to evaluations of their own performances and performances by peers.◊

Fl.31 compare examples of student performances.◊

Fl.32 compare two different style forms, e.g., ballad and jig.

Fl.33 describe a musical work in terms of the feelings and emotions its evokes.

Understanding the historical and cultural significance of the guitar, banjo, and dulcimer.

Fl.34 report in prose or pictorial form the development and use of the instrument(s) throughout American history.◊

Fl.35 develop a timeline showing composers and performers of American folk music.

Fl.36 research and report the evolution of Appalachian folk music.◊

Fl.37 interview local folk musicians as to their activities and achievements in music.

Folk Music II (Grade 10)

Level II Instrumental Folk Music (Proficient)

This level provides further study and refinement of playing skills; the ability to make music, alone or with others; the ability to "teach" or "pass-on" the tradition and culture of our folk instruments.

Performing on folk instruments, alone and with others, a varied repertoire illustrating multiple performance styles.

FII.1 perform instrumental solos with expression and technical accuracy.

FII.2 demonstrate the ability to perform the following chords:

- GUITAR - six string barré I major, minor, and seventh chords.
- BANJO - A, Dm, Gm, Bb, B, G7, and C7.
- DULCIMER - Bb, F, G7, A7, E7, Em, Bm, Am, and Dm7 in block and arpeggiated styles.

FII.3 successfully fulfill the role of leader with an ensemble, e.g., church group, youth chorus, sing-along, folk instrument group.◊

FII.4 participate in performances of a duet, trio, and quartet with one student per part.◊

Improvising melodies, variations, and accompaniments.

FII.5 GUITAR AND BANJO - improvise chordal accompaniments utilizing hammer, pull (hammer off), choke, slide, and arpeggio techniques. Banjo players will also improvise using drop thumb and fretted pulls. Dulcimer will use finger picking or arpeggios.

FII.6 improvise a chordal accompaniment using *staccato* and percussion effects.

FII.7 improvise rhythmic and melodic variations as follows:

- GUITAR- Em, F, Dm, Am, and Bm keys
- BANJO - modal tuning (g D G C D), Double C tuning (g C G C D)
- DULCIMER
  - Dorian tuning, e.g.,



  - Ionian tuning, C and G major,



FII.8 improvise an original melody over an eight bar sequence using four chords or more.◊

FII.9 GUITAR - improvise an original melody over a standard twelve bar blues.◊

Reading and notating music and musical symbols appropriate for guitar, banjo, and dulcimer.

FII.10 notate and play a chromatic scale ascending and descending as follows:
- GUITAR - two octaves
- BANJO AND DULCIMER - one octave.

FII.11 interpret triplet rhythm patterns in musical selections.

FII.12 interpret *alla breve* in musical selections.

FII.13 interpret the rhythm pattern of a dotted eighth followed by a sixteenth in musical selections.

FII.14 transcribe existing music into tablature.

FII.15 notate and play ascending and descending two-octave scales listed in item FI.20.

FII.16 sightread harmony using broken and block chords as per item FI.20.

FII.17 identify and describe the usage of a chord line, melody line, and piano grand staff of a given piece of music.

FII.18 GUITAR - demonstrate hammer on and pull techniques in musical selections.

BANJO - demonstrate left hand finger pluck in musical selections.

Listening to, analyzing, and describing music.

FII.19 listen to an example of rock, country-western, hymn, ballad, blues, and/or jig, identify its genre and describe its melody, harmony/texture, rhythm, dynamics, tempo, timbre, and form.◊

FII.20 use an extensive technical vocabulary of music in discussion and analysis of pieces played and heard.◊

FII.21 analyze pieces to determine their form and describe the compositional techniques used to create these forms.

FII.22 identify a piece as major, minor, or modal, and describe how the tonality or modality and other compositional devices contribute to the uniqueness, interest, and expressiveness of the piece.

Evaluating music and music performances.

FII.23 refine valid musical criteria for evaluating their own performances, as well as performances by others.◊

FII.24 compare performances of exemplary models.◊

FII.25 compare student performances with performances of exemplary models.◊

FII.26 compare two different musical selections in terms of the feelings and emotions they evoke.

Understanding the historical and cultural significance of the guitar, banjo, and dulcimer.

FII.27 report in prose or pictorial form the development and use of the instrument(s) from origin to use in current music.◊

FII.28 research and/or collect examples of local folk music and lore.

FII.29 identify successful folk musicians and list their significant roles in the development of diverse styles and forms of American and/or Appalachian folk music.◊

Music Appreciation/History Humanities (Grades 9-12)

Level I Music Literature (Proficient)

General Music, Music Appreciation, Humanities, Fine Arts, and Music History courses at the high school level provide opportunities for non-performing students to examine the basic elements of music (melody, harmony/texture, form, rhythm, tempo, dynamics, and timbre) while participating in the musical processes of singing, playing, improvising/creating, listening to and analyzing music of many genres and styles.

Singing, alone and with others, a varied repertoire of music.

LI.1 demonstrate technical skills, e.g., tone quality, intonation, rhythm, diction, technique.

LI.2 demonstrate ability to sing music written in four parts.

LI.3 sing accurately, independently and confidently throughout their vocal ranges, alone and in small and large ensembles, with good breath control and good posture.◊

Performing on instruments, alone and with others, a varied repertoire of music.

LI.4 demonstrate technical skills, e.g., tone quality, intonation, rhythm, technique, sufficiently to perform instrumental literature.

LI.5 maintain a steady pulse at various tempos.

LI.6 play an appropriate part in an ensemble, demonstrating well-developed ensemble skills, including sensitivity to balance, blend, and prompt response to the gestures of a conductor.◊

Improvising melodies, variations and accompaniments.

LI.7 demonstrate originality and imagination in improvising on given musical materials, e.g., melodic patterns, harmonic progressions, or within the conventions of a particular style, e.g., bluegrass, Dixieland.

LI.8 improvise melodies, rhythmic and harmonic variations of melodic lines in a style appropriate for the specific work in different keys and meters.

Composing and arranging music within specified guidelines.

LI.9 use traditional sound sources (voices, instruments) when composing and arranging; demonstrate knowledge of the ranges and traditional usages of the sound sources.

LI.10 use non-traditional sound sources, including electronic media (personal computers and MIDI devices, keyboards, sequencers, synthesizers, and drum machines) and prerecorded tapes, when composing and arranging.◊

LI.11 compose music in at least three distinct styles, e.g., style of Mozart, Impressionist style, Dixieland style.◊

Reading and notating music.

LI.12 demonstrate knowledge of standard notation of pitch, rhythm, and the terminologies of standard music theory.

LI.13 demonstrate a working knowledge of scale construction, keys and key signatures, intervals and triads, chords and harmony, basic musical forms, melodic construction techniques, and standard use of SATB voicings and their ranges.

Listening to, analyzing, and describing music.

LI.14 concentrate while listening to extended musical works.

LI.15 demonstrate ability to perceive and recall when discussing music heard.

LI.16 listen voluntarily and perceptively to a wide variety of music of challenging complexity and length, representing diverse genres, styles, and cultures.

LI.17 analyze examples of western music of diverse styles and music of representative world cultures, presented aurally or in notation, by describing the uses of musical elements, e.g., pitch, rhythm, meter; expressive devices, e.g., rubato, dynamics; and other important features, e.g., formal structure, performance medium, the emotional responses produced.

LI.18 identify and explain the musical devices and techniques used to provide unity, variety, repetition, contrast, tension, and resolution in a given example and identify examples of other works that make similar uses of these techniques and devices.

LI.19 describe composition styles that are unique, interesting, and expressive of each musical era.

Evaluating music and music performances.

LI.20 develop criteria for selecting music for personal performance and listening, based on increased knowledge, insight and experience in performances, compositions, arrangements, and improvisations.◊

LI.21 evaluate a performance, composition, arrangement, or improvisation by identifying and describing its merits relative to those of similar performances, compositions, arrangements, or improvisations, by persons of comparable background or by persons exemplifying the cultural standards characteristic of the tradition or genre to which the music belongs.◊

LI.22 make informed, critical judgments about the quality and effectiveness of performances, compositions, arrangements, and improvisations in various styles.◊

LI.23 cite examples of music he/she does or does not enjoy listening to or performing. The aesthetic qualities used to evoke feelings and emotions will be determined by the use of the student's developed knowledge and understanding.

Understanding relationships between music, the other arts, and disciplines outside the arts.

LI.24 discuss how various artistic processes (including imagination, craftsmanship, following and extending traditions, developing artistic ideas incorporating cultural references) are applied and manifested in similar and different ways in the arts and cite examples.

LI.25 identify and describe both common and distinctive characteristics of two or more arts within a particular historical period, style or culture, e.g., Baroque, African-American, Japanese, and cite examples.

LI.26 identify and describe ways in which skills and knowledge in music are related to skills and knowledge in other disciplines, e.g., relationships between music and sociology, relationships between musical practices and artifacts, and cultural anthropology.◊

LI.27 identify and describe the similarities and differences in the uses of elements, processes, and organizational principles among the arts in the 18th, 19th and 20th centuries.◊

LI.28 describe how the various art roles (creators, painters, composers, choreographers, playwrights, performers, instrumentalists, singers, dancers, actors) are involved in production and presentation, and how they are similar and different from one another in the various arts.◊

Understanding music in relation to history and culture.

LI.29 identify and describe the distinguishing characteristics of the musical styles of at least four representative world cultures, e.g., American Indian, Moslem African, Near Eastern, North American Indian, Central and Southern Asian.

LI.30 classify unfamiliar but representative examples of world musics, when presented aurally, according to the culture from which each comes.

Music Theory, Composition, Arranging (Grade 12)

Level II Music Literature (Advanced)

High school Music Theory, Composition, and Arranging courses are designed to challenge the most advanced music majors. Emphasis is upon the creation of original pieces, improvisation, and effective use of instruments and voices in a variety of musical styles. Students learn to use the computer as a tool for composing, transposing, and transcribing music.

Improvising melodies, variations and accompaniments.

LII.1 improvise original pieces and variations on existing pieces, using voices or instruments (traditional, non-traditional, electronic) over traditional I, IV, V chord progressions.

LII.2 demonstrate originality and imagination in improvising on given musical materials and harmonic progressions in a variety of styles.◊

LII.3 compose music in a specified form or tradition, demonstrating originality, imagination, and technical skill in applying the principles of composition, e.g., creating unity by stylistic consistency; use of theme and motif; creating variety by diversity in development of ideas with a consistent style, meter, and tonality.◊

Composing and arranging music within specified guidelines.

LII.4 compose and arrange pieces for at least two media, selected from winds, strings, percussion, voices, keyboard, and electronic media.◊

LII.5 demonstrate skill and knowledge in arranging music for voices, various acoustic and electronic instruments.

Reading and notating music.

LII.6 demonstrate the ability to sightsing using solfeggio, numbers, and letter names.

Adolescent Theatre Education

Theatre is one of the four programs of study from which an elective course may be chosen to fulfill the graduation requirement of one course in the arts. Theatre electives must be offered to accommodate at least one level of student achievement (Theatre I) beginning with the 1998-99 school year. Electives must be provided to accommodate four sequential levels of student achievement (Theatre I - IV) beginning with the school year 2001 - 2002.

The number of class periods for which theatre is offered will depend upon enrollment and the availability of space for acting, constructing costumes, scenery, and properties. Theatre classes provide opportunities for both individual and group projects. For this reason, students working at two, three, or four different achievement levels may be accommodated in a single class if the enrollment is small. The instructional objectives provided in the following pages describe four sequential levels of student achievement.

Elective Courses*

Theatre I
Theatre II
Theatre III
Theatre IV

***One level is required to be offered by 1998-1999. Four sequential levels are required to be offered by 2001-2002.**

County school systems may exercise the option of offering additional specialized theatre electives such as play production, technical theatre, film, television, and electronic media production. Instructional goals and objectives must be developed for these courses and approved by the county board of education.

Theatre I (Grade 9)

Upon successful completion of Theatre I, students will be able to: analyze play texts; identify contemporary styles of theatre/drama and depict characters in them. Students will identify basic properties of technical theatre and demonstrate technical knowledge and skills. They will explore multiple interpretations for production ideas and research how the nondramatic art forms enhance a theatre production. Other areas studied include a variety of cultures and historical periods related to theatre.

Script writing through improvising, writing, and refining scripts based on personal experience and heritage, imagination, literature, and history.

9.1 analyze a variety of well-written plays for form and content.

Acting by developing, communicating, and sustaining characters in improvisations and informal or formal productions.

9.2 analyze play texts for the physical, social, and psychological dimensions of characters.◊

9.3 identify and demonstrate selected contemporary styles of theatre/ drama.

9.4 demonstrate various contemporary acting techniques and methods.

9.5 depict characters in selected contemporary styles of theatre/ drama.

Designing and producing by conceptualizing and realizing artistic interpretations for informal or formal productions.

9.6 identify the basic physical and chemical properties of the technical aspects of theatre.

9.7 explore a variety of dramatic texts from cultural and historical perspectives to determine production requirements.

9.8 choose designs that use visual and aural elements to convey environments that clearly support the text, and defend those choices.◊

9.9 demonstrate technical knowledge and skills to collaboratively and safely solve the problems of creating functional scenery, properties, lighting, sound, costumes, and makeup.◊

9.10 explore and evaluate coherent stage management, promotional, and business plans.◊

Directing by interpreting dramatic texts and organizing and conducting rehearsals for informal or formal productions.

9.11 explore multiple interpretations and visual and aural production choices for scripts and production ideas.

9.12 research selections of text, interpretation, and visual and aural artistic choices.

9.13 assist in communicating directorial choices to a small ensemble for improvised or scripted scenes.◊

Researching by evaluating and synthesizing cultural and historical information to support artistic choices.

9.14 recognize and explore cultural, historical, and symbolic clues in dramatic texts and determine the validity and practicality of the information to assist in making artistic choices for use in informal and formal productions.◊

Comparing and integrating art forms by analyzing traditional theatre, dance, music, visual arts, and new art forms.

9.15 identify and describe the basic nature, materials, elements, and means of communicating in theatre, dramatic media, musical theatre, dance, music, and visual art.◊

9.16 research how the nondramatic art forms are modified to enhance the expression of ideas and emotions in a theatre production.

9.17 explore the integration of several arts disciplines.◊

Analyzing, critiquing, and constructing meanings from informal and formal theatre, film, television, and electronic media productions.

9.18 research and discuss the social meanings from informal and formal productions and from dramatic performances from a variety of cultures and historical periods.

9.19 develop personal aesthetic criteria for critiquing dramatic texts and events that compare perceived artistic intent with the final aesthetic achievement.

9.20 research and discuss the whole and the parts of dramatic performances, taking into account the context, and constructively suggest alternative artistic choices.

9.21 discuss their own and others' collaborative efforts and artistic choices in informal and formal productions.◊

Understanding context by analyzing the role of theatre, film, television, and electronic media in the past and the present.

9.22 research and discuss how similar themes are treated in drama from various cultures and historical periods.

9.23 research and discuss the lives, works, and influence of representative theatre artists in various cultures and historical periods.

9.24 identify cultural and historical sources of American theatre and musical theatre.

9.25 discuss the effect of their own cultural experiences on their dramatic work.

Theatre II (Grade 10)

Theatre II students write, perform, and evaluate theatre productions, identify and demonstrate selected historical style of theatre/drama, and perform contemporary and classical characters' parts. Students explain basic properties of technical theatre and apply that knowledge and skill. They develop multiple interpretations for production choices and explain how other art forms enhance a theatre production. Analysis and critique of dramatic performances is required.

Script writing through improvising, writing, and refining scripts based on personal experience and heritage, imagination, literature, and history.

10.1 write, perform, and evaluate scripts for plays based on spinoffs from existing works, histories, myths, stories, news events, and life.◊

Acting by developing, communicating, and sustaining characters in improvisations and informal or formal productions.

10.2 analyze plays, films, and other media for the physical, social, and psychological dimensions of characters.◊

10.3 identify and demonstrate selected historical styles of theatre/drama.

10.4 explore and demonstrate various classical acting techniques and theatre conventions, e.g., Greek masks, Kabuki make-up, period manner and gesture.

10.5 perform and sustain contemporary and classical characters who communicate with audiences.

Designing and producing by conceptualizing and realizing artistic interpretations for informal or formal productions.

10.6 explain the basic physical and chemical properties of the technical aspects of theatre (such as light, color, electricity, paint, and makeup).

10.7 analyze a variety of dramatic texts from cultural and historical perspectives to determine production requirements.

10.8 develop designs that use visual and aural elements to convey environments that clearly support the text.◊

10.9 apply technical knowledge and skills to collaboratively and safely solve the problems of creating functional scenery, properties, lighting, sound, costumes, and makeup.◊

10.10 design and evaluate coherent stage management, promotional, and business plans.◊

Directing by interpreting dramatic texts and organizing and conducting rehearsals for informal or formal productions.

10.11 develop multiple interpretations and visual and aural production choices for scripts and production ideas and choosing those that are most interesting.◊

10.12 justify selections of text, interpretation, and visual and aural artistic choices.

10.13 effectively communicate directorial choices to a small ensemble for improvised or scripted scenes.◊

Researching by evaluating and synthesizing cultural and historical information to support artistic choices.

10.14 identify and research cultural, historical, and symbolic clues in dramatic texts, and evaluate the validity and practicality of the information to make artistic choices for use in informal and formal productions.◊

Comparing and integrating art forms by analyzing traditional theatre, dance, music, visual arts, and new art forms.

10.15 Compare and contrast the basic nature, materials, elements, and means of communicating in theatre, dramatic media, musical theatre, dance, music, and visual art.◊

10.16 Explain how the nondramatic art forms are modified to enhance the expression of ideas and emotions in theatre.

10.17 illustrate the integration of several arts disciplines in informal presentations.◊

Analyzing, critiquing, and constructing meanings from informal and formal theatre, film, television, and electronic media productions.

10.18 construct social meanings, i.e., themes, from informal and formal productions and from dramatic performances from a variety of cultures and historical periods; relate these to current personal, national, and international issues.◊

10.19 articulate and defend personal aesthetic criteria for critiquing dramatic texts and events; compare perceived artistic intent with the final aesthetic achievement.

10.20 analyze and critique the whole and the parts of dramatic performances, taking into account the context, and constructively suggest alternative artistic choices.◊

10.21 constructively evaluate their own and others' collaborative efforts and artistic choices in informal and formal productions.◊

Understanding context by analyzing the role of theatre, film, television, and electronic media in the past and the present.

10.22 compare how similar themes are treated in drama from various cultures and historical periods, illustrate with informal performances, and discuss how theatre can reveal universal concepts.◊

10.23 identify and compare the lives, works, and influence of representative theatre artists in various cultures and historical periods.

10.24 discuss cultural and historical sources of American theatre and musical theatre.

10.25 analyze the effect of their own cultural experiences on their dramatic work.

Theatre III (Grade 11)

Theatre III students will collaborate in developing original dramatic pieces or short plays and will demonstrate ensemble in rehearsing and performing informal and formal theatre works. They will identify how scientific and technological advances have impacted theatre and will assist directors in developing production concepts. Students will also assist in creating and implementing a production.

Script writing through improvising, writing, and refining scripts based on personal experience and heritage, imagination, literature, and history.

11.1 collaborate in the development of original dramatic pieces for monologues, scenes, or short plays developing character, human interaction, conflict, and resolution.◊

Acting by developing, communicating, and sustaining characters in improvisations and informal or formal productions.

11.2 analyze texts for all information and clues relevant to creating characters in at least two different acting styles.

11.3 demonstrate ensemble in rehearsal and performance.◊

11.4 create consistent characters from classical and realistic dramatic texts in informal and formal theatre.

Designing and producing by conceptualizing and realizing artistic interpretations for informal or formal productions.

11.5 identify how scientific and technological advances have impacted set, light, sound, and costume design and implementation for theatre, film, television, and electronic media productions.

11.6 assist directors in developing unified production concepts that convey the metaphorical nature of the drama for informal and formal theatre, film, television, or electronic media productions.◊

11.7 practice techniques of safe construction and efficient operation of technical aspects of theatre, film, television, or electronic media productions.◊

11.8 use problem solving skills to assist in creating and reliably implementing production schedule, stage management plans, promotional ideas, and business and front of house procedures for informal and formal theatre, film, television, or electronic media productions.◊

Directing by interpreting dramatic texts and organizing and conducting rehearsals for informal or formal productions.

11.9 explore and identify the roles and interrelated responsibilities of the various personnel involved in theatre, film, television, and electronic media productions.◊

11.10 assist in collaborating with designers and actors to develop aesthetically unified production concepts for informal and formal theatre, film, television, or electronic media productions.◊

11.11 assist with auditions, casting, directing, and conducting production meetings.◊

Researching by evaluating and synthesizing cultural and historical information to support artistic choices.

11.12 explore and identify appropriate historical production designs, techniques, and performances from various cultures to assist in making artistic choices for informal and formal theatre, film, or television productions.

Comparing and integrating art forms by analyzing traditional theatre, dance, music, visual arts, and new art forms.

11.13 explore through research the interpretive and expressive nature of several art forms in a specific culture or historical period.

11.14 define the unique interpretive and expressive nature and aesthetic qualities of traditional arts from various cultures and historical periods with contemporary new art forms.

11.15 design integrations of several arts and/or media in theatre, film, television, or electronic media productions.◊

Analyzing, critiquing, and constructing meanings from informal and formal theatre, film, television, and electronic media productions.

11.16 research the conventions of nontraditional dramatic performances.

11.17 research various critiques of the same dramatic texts and performances.

11.18 research several dramatic works in terms of other aesthetic philosophies (such as the underlying ethos of Greek drama, French classicism with its unities of time and place, Shakespeare and romantic forms, India's classical drama, Japanese Kabuki, and others).

11.19 gather and evaluate critical comments about personal dramatic work; select points most appropriate to inform further development.◊

Understanding context by analyzing the role of theatre, film, television, and electronic media in the past and the present.

11.20 research the social and aesthetic impact of underrepresented theatre and film artists.

11.21 define the relationships among cultural values, freedom of artistic expression, ethics, and artistic choices in various cultures and historical periods.

11.22 research the development of dramatic forms, production practices, and theatrical traditions across cultures and historical periods and explain influences on contemporary theatre, film, television, and electronic media productions.

Theatre IV (Grade 12)

Theatre IV students will write scripts for multi-media productions and will demonstrate artistic discipline to achieve ensemble in rehearsal and performance of informal and formal theatre works as well as in film, television, or electronic media. They will explain how scientific and technological advances have impacted theatre, and will collaborate with directors to develop unified production concepts. Students will collaborate with designers and actors, and will be able to demonstrate direction skills.

Script writing through improvising, writing, and refining scripts based on personal experience and heritage, imagination, literature, and history.

12.1 write scripts for multiple media with attention to subtext, character motivation, dramatic problems, complications, crises, climax, and resolution.◊

Acting by developing, communicating, and sustaining characters in improvisations and informal or formal productions.

12.2 analyze text for all information and clues relevant to creating a multi-dimensional characterization.

12.3 demonstrate artistic discipline to achieve an ensemble in rehearsal and performance.◊

12.4 create consistent characters from classical, contemporary, realistic, and nonrealistic dramatic texts in informal and formal theatre, film, television, or electronic media productions.

Designing and producing by conceptualizing and realizing artistic interpretations for informal or formal productions.

12.5 explain how scientific and technological advances have impacted set, light, sound, and costume design and implementation for theatre, film, television, and electronic media productions.

12.6 collaborate with directors to develop unified production concepts that convey the metaphorical nature of the drama for informal and formal theatre, film, television, or electronic media productions.◊

12.7 safely construct and effectively operate technical aspects of theatre, film, television, or electronic media productions.◊

12.8 assume a duty in creating and reliably implementing production schedules, stage management plans, promotional ideas, and business and front of house procedures for informal and formal theatre, film, television, or electronic media productions.◊

Directing by interpreting dramatic texts and organizing and conducting rehearsals for informal or formal productions.

12.9 explain and compare the roles and interrelated responsibilities of the various personnel involved in theatre, film, television, and electronic media productions.◊

12.10 collaborate with designers and actors to develop aesthetically unified production concepts for informal and formal theatre, film, television, or electronic media productions.◊

12.11 use problem solving skills to conduct auditions, cast actors, direct scenes, and conduct production meetings to achieve production goals.◊

Researching by evaluating and synthesizing cultural and historical information to support artistic choices.

12.12 research and describe appropriate historical production designs, techniques, and performances from various cultures to assist in making artistic choices for informal and formal theatre, film, television, or electronic media productions.

Comparing and integrating art forms by analyzing traditional theatre, dance, music, visual arts, and new art forms.

12.13 compare and contrast the interpretive and expressive nature of several art forms in a specific culture or historical period.

12.14 compare and contrast the interpretive and expressive natures and aesthetic qualities of traditional arts from various cultures and historical periods with contemporary new art forms.

12.15 apply integrated designs using several arts and/or media in theatre, film, television, or electronic media productions.◊

Analyzing, critiquing, and constructing meanings from informal and formal theatre, film, television, and electronic media productions.

12.16 construct personal meanings from nontraditional dramatic performances.

12.17 analyze, compare, and evaluate differing critiques of the same dramatic texts and performances.

12.18 critique several dramatic works in terms of aesthetic philosophies (such as the underlying ethos of Greek drama, French classicism with its unities of time and place, Shakespeare and romantic forms, India's classical drama, Japanese Kabuki, and others).

12.19 analyze and evaluate critical comments about personal dramatic work explaining which points are most appropriate to facilitate further development of the work.◊

Understanding context by analyzing the role of theatre, film, television, and electronic media in the past and the present.

12.20 analyze the social and aesthetic impact of underrepresented theatre and film artists.

12.21 analyze the relationships among cultural values, freedom of artistic expression, ethics, and artistic choices in various cultures and historical periods.

12.22 analyze the development of dramatic forms, production practices, and theatrical traditions across cultures and historical periods and explain influences on contemporary theatre, film, television, and electronic media productions.

Adolescent Visual Art Education

Visual Art is one of the four programs of study from which an elective course may be chosen to meet the graduation requirement of one course in the arts. Electives in general art and/or studio art must be provided to accommodate four sequential levels of student achievement beginning with the 1997-1998 school year.

Within the Visual Art program of study, there are three distinct areas of study.

- General Art provides experiences in producing two- and three-dimensional artworks using a variety of media, techniques, and processes. Objectives for four sequential levels of General Art are provided in this document. As an alternative, counties and/or schools may wish to offer a combination of General Art and Studio Art classes to provide the four sequential levels of student achievement needed by those considering art careers.

- Studio Art provides opportunities for students to concentrate in work with a single medium such as drawing, painting, ceramics, sculpture, or photography. The selection of Studio Art electives a school will offer should be determined by the needs and interests of students, the expertise of available teachers, the availability of appropriate and safe equipment (for example, a well-ventilated kiln is needed for ceramics).

- Art History, Appreciation, Aesthetics is an area of study with instructional objectives suitable for electives such as Art Appreciation, Art History, or Humanities. If a Humanities elective is the choice of the county, the objectives in this area of study, plus those in the Music Literature area of study plus appropriate dance and theatre objectives may be used to provide the framework for instruction.

The number of class periods for which General Art and Studio Art electives are offered will depend upon enrollment and the availability of space. Art making is essentially an individual endeavor with art teachers offering instruction, assistance, and critiques on individual projects. For this reason, students working at two or more achievement levels may be accommodated in a single class if space permits and/or if enrollment is small.

Elective Courses*

General Art I
General Art II
General Art III
General Art IV
Studio Art I
Studio Art II
AP Studio Art
Art Appreciation
Art History
AP Art History
Humanities

***Electives must be provided to accommodate four sequential levels of General Art and/or Studio Art.**

It is strongly recommended that students in Advanced Placement courses take the AP exam.

County school systems may exercise the option of offering additional art courses. Instructional goals and objectives must be developed for these courses and approved by the county board of education.

Art I (Grade 9)

General Art (Proficient)

Art I is designed to reinforce and build on knowledge and skills developed by the K-8 Instructional Objectives. Experiences in producing two-dimensional and three-dimensional artworks using a variety of media, techniques, and processes will be provided. Critical thinking skills will be developed through analysis of works both orally and in written form. An understanding of the arts in relation to culture, history, other disciplines, and careers will be emphasized.

Understanding and applying media, techniques, and processes.

GAI.1 explore at least six two-dimensional media, techniques, and processes safely in art projects which may include, but are not limited to:
- architectural renderings,
- batik,
- calligraphy/lettering,
- collage,
- computer technology,
- cut paper,
- drawing,
- fashion design,
- graphic design,
- interior design,
- media arts,
- mixed media,
- painting,
- photography,
- printmaking.◊

GAI.2 explore at least three three-dimensional media, techniques, and processes safely in art projects which may include, but are not limited to the following:
- architectural models,
- ceramics,
- enameling,
- fiber arts,
- jewelry,
- product design,
- sculpture,
- paper maché,
- origami.◊

GAI.3 conceive and create two- and three-dimensional artworks using various media, techniques, and processes to communicate ideas and explore expressive qualities. (See GAI.1 and GAI.2)◊

Using the elements and principles of design to create structures and functions in art.

GAI.4 analyze and compare structures and functions of two- and three-dimensional artworks including the following:
- line,
- shape/form,
- color,
- value,
- space,
- texture,
- rhythm/movement,
- repetition/pattern,
- balance,
- unity/harmony,
- dominance/emphasis,
- contrast/variety,
- proportion/scale.

GAI.5 use the elements and principles of design to identify similarities and differences in two- and three-dimensional visual art.

GAI.6 participate in oral and written critiques of artworks showing understanding of elements and principles of design.◊

GAI.7 conceive and create two- and three-dimensional artworks based on elements and principles of design using appropriate media, processes, and techniques to solve assigned problems.

Choosing and evaluating a range of subject matter, symbols, and ideas.

GAI.8 research and discuss the significance of artworks as a means of understanding past and present cultures.

GAI.9 discover similarities and differences in the purposes of artworks of past and present cultures.

GAI.10 create artwork using subjects, symbols, and ideas related to contemporary society.

Understanding the visual arts in relation to history and cultures.

GAI.11 discuss the historical and cultural background for the media used in class projects.

GAI.12 discuss the historical and cultural (western and non-western backgrounds) of subject matter and themes for the media used in his/her projects.

GAI.13 research and review functions and meanings of selected art objects from various cultures.

GAI.14 research and report on the relationship of artworks to one another in terms of history and culture.

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

GAI.15 use the critical process (description, analysis, interpretation and evaluation) in discussing works of art.

GAI.16 analyze how and why specific works were created and discuss the historical and cultural influences upon them.

GAI.17 develop criteria for evaluating works of art from a variety of aesthetic viewpoints and different cultures.

Making connections between visual art and other disciplines.

GAI.18 research and discuss the creative processes used in the visual arts in relation to problem solving in other art disciplines, e.g., composing music, writing plays, choreographing dances.

GAI.19 research and discuss a particular period of history as it relates to art and artists, e.g., Käthe Kollwitz and World War I.

Art II (Grade 10)

General Art (Proficient)

Art II objectives extend the students' artistic skills, critical skills, and concept development through concrete experiences creating, reflecting, and discussing artworks. The exploration of the arts in the context of cultural and historical parameters will be included. Connections will be examined between visual art and other disciplines. Students will also work on developing portfolios.

Understanding and applying media, techniques, and processes.

GAII.1 use and discuss with skill and confidence at least six two-dimensional media, techniques, and processes which may include, but not be limited to:
- architectural renderings,
- batik,
- calligraphy/lettering,
- collage,
- computer technology,
- cut paper,
- drawing,
- fashion design,
- graphic design,
- interior design,
- media arts,
- mixed media,
- painting,
- photography,
- printmaking.◊

GAII.2 use and discuss with skill and confidence at least three three-dimensional media, techniques, and processes for art projects which may include, but not be limited to the following:
- architectural models,
- ceramics,
- crafts,
- enameling,
- fiber arts,
- jewelry,
- product design,
- sculpture,
- paper maché.◊

GAII.3 conceive and create with skill and confidence two- and three-dimensional art using various media, techniques, and processes. (See GAII.1 and GAII.2)◊

Using the elements and principles of design to create structures and functions in art.

GAII.4 formulate and defend personal judgments about the effectiveness of the use of the elements and principles of design to accomplish specific purposes of art, e.g., commercial, personal, communal.◊

GAII.5 analyze and compare the use of the elements and principles of design in works of art.

GAII.6 evaluate with skill, confidence, and sensitivity the effectiveness of artworks in terms of organizational structures and functions.◊

GAII.7 create works of art that use organizational principles and functions to solve specific art problems.

Choosing and evaluating a range of subject matter, symbols, and ideas.

GAII.8 reflect on how artworks differ visually, spatially, intellectually, and functionally, and describe how these are related to history.

GAII.9 reflect on how artworks differ visually, spatially, intellectually, and functionally, and describe how these are related to cultures.

GAII.10 apply subjects, symbols, and ideas in their artworks and use the skills gained for creative problem solving and analogical thinking in their daily lives.◊

Understanding the visual arts in relation to history and cultures.

GAII.11 create artworks which reflect historical or cultural contexts in terms of the characteristics and purposes of works of art.

GAII.12 describe the function and explore the meaning of specific art objects within various cultures, times, and places.

GAII.13 analyze relationships in their own artwork in terms of history, aesthetics, and culture.◊

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

GAII.14 explore motivations for creating artworks, discuss the implications of various purposes, and justify their reasoning.

GAII.15 identify purposes for creating and maintaining portfolios.

GAII.16 develop criteria for the inclusion of works in their own portfolios.◊

GAII.17 use the critical process to write a comparative analysis of aesthetic and sensory qualities in his/her own and others' work.◊

GAII.18 analyze and evaluate works of art created in different media and from cultural viewpoints.◊

Making connections between visual art and other disciplines.

GAII.19 apply creative problem solving techniques to an artwork which incorporates at least two arts disciplines, e.g., theatre set design, events publicity, posters, cover designs.◊

GAII.20 compare works from two or more arts disciplines based on specific issues or themes throughout history, e.g., political cartoons, social commentary.◊

Art III (Grade 11)

General Art (Advanced)

Art III builds on previous skills with a more in-depth approach. Art and cultures will be explored visually, verbally, and in written form. Various themes and purposes of art forms and their relationship to the total educational process will be examined. Art history, criticism, and aesthetics will be studied in relationship to individually selected artworks and will lead to development of a personal philosophy of art.

Understanding and applying media, techniques and processes.

GAIII.1 use advanced techniques and processes to create artworks using various media, techniques, and processes in a two-dimensional format which may include, but not be limited to:
- architectural renderings,
- batik,
- calligraphy,
- computer graphics,
- cut paper,
- drawing,
- fashion design,
- graphic design,
- interior design,
- media art,
- mixed media,
- painting,
- photography,
- printmaking.

GAIII.2 develop and apply in-depth techniques in the three-dimensional area(s) which may include, but not be limited to:
- architectural models,
- ceramics,
- crafts,
- enameling,
- fiber art,
- jewelry,
- product design,
- sculpture.

GAIII.3 conceive, create, and critique two- and three-dimensional works for inclusion in exhibition and/or portfolio.◊

Using the elements and principles of design to create structures and functions in art.

GAIII.4 examine artworks from different viewpoints and cultures in terms of elements and principles of design, e.g. western vs. oriental concepts of pictorial space.

GAIII.5 create multiple solutions through thumbnail sketches, revisions, and rough draft form, to assigned problems.◊

Choosing and evaluating a range of subject matter, symbols, and ideas.

GAIII.6 identify and discuss specific themes or ideas in art in relationship to philosophies of art.

GAIII.7 discuss specific artists and evaluate symbolism used in their work.

Understanding the visual arts in relation to history and cultures.

GAIII.8 research and report on how a criticism effects the way we view works of art.◊

GAIII.9 explore art of various cultures to look for common themes, e.g., design motifs.

GAIII.10 integrate common characteristics of diverse cultures and ethnic groups into individual artworks.

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

GAIII.11 prepare oral or written critiques of their own and other artists' works.◊

Making connections between visual art and other disciplines.

GAIII.12 attend a performing arts event and write a comparison of principles common to art and that event, e.g., critique of qualities of set design and appropriateness to theme/ purposes of performance.

Art IV (Grade 12)

General Art (Advanced)

In Art IV students will develop and clarify their philosophy of art and art making through in-depth advanced explorations with media, techniques, and processes. A portfolio reflecting a broad base of knowledge in the arts and in-depth understanding of personal art forms will be developed and refined. Students will also take part in planning and installing an exhibition of their works.

Understanding and applying media, techniques and processes.

GAIV.1 communicate advanced ideas effectively in two-dimensional media selected from, but not limited to:
- architectural renderings,
- batik,
- calligraphy,
- computer graphics,
- cut paper,
- drawing,
- fashion design,
- graphic design,
- interior design,
- media art,
- mixed media,
- painting,
- photography,
- printmaking.

GAIV.2 apply advanced techniques to communicate ideas through three-dimensional areas which may include, but are not limited to:
- architectural models,
- ceramics,
- crafts,
- enameling,
- fiber art,
- jewelry,
- product design,
- sculpture.

GAIV.3 complete portfolios and participate in exhibitions.

Using the elements and principles of design to create structures and functions in art.

GAIV.4 synthesize two or more viewpoints written about a famous work of art.

GAIV.5 develop multiple solutions in the process of creating an independent project.◊

Choosing and evaluating a range of subject matter, symbols, and ideas.

GAIV.6 develop and write a personal philosophy of art for possible inclusion in portfolio.

GAIV.7 research, report, and discuss how specific artists and symbolism have influenced their work.

GAIV.8 engage in reflective writing in evaluating the influences other artists have on their own work.◊

Understanding the visual arts in relation to history and cultures.

GAIV.9 analyze and interpret artworks using two or more critical models or aesthetic viewpoints, e.g., 19th Century vs. 20th Century Impressionism, western and oriental architecture.

GAIV.10 analyze and interpret artworks showing understanding of the work of critics, historians, aestheticians, and artists.◊

GAIV.11 compare common characteristics of visual art between two or more cultures or ethnic groups.

GAIV.12 analyze, evaluate, and interpret the meaning of artworks across time and among various cultures or ethnic groups.◊

GAIV.13 research and discuss the historical and cultural influences on subject matter and themes of their own work.◊

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

GAIV.14 review and analyze the contents of portfolios or exhibits in terms of ideas, attitudes, reflective critiques, and statement of intent.

Making connections between visual art and other disciplines.

GAIV.15 plan and participate in an interdisciplinary event, e.g., design science or social studies fair layout and publicity, theatre playbills, publicity, scenery.◊

Studio Art I (Grades 9-10)

Studio Art (Proficient)

Studio art electives provide in-depth study in selected media, techniques, and processes. These instructional objectives address offerings for which no prerequisites are required.

The following overall expectations should encompass the proficient level instructional goals and the instructional objectives: proficiency of craftsmanship; participation in field experiences; incorporation of modern technology when applicable; study of art careers and related professions; proficient skills in the use of related vocabulary and knowledge of media; and the safe and responsible care and use of equipment, tools, and materials.

Studio art electives may include but are not limited to the following courses taught at the proficiency level: air brush, animation, architecture, batik, calligraphy, ceramics, color and design, commercial art, computer graphics, crafts, design principles, drawing, electronic imaging, ethnic art, folk art, fiber arts, functional design, graphic design, jewelry, mixed media, painting, photography, printmaking, sculpture, stage design, and stained glass.

Understanding and applying media, techniques, and processes.

SAI.1 use terms, media, techniques, and processes related to the studio area.

SAI.2 use media techniques and processes safely.◊

SAI.3 conceive and create artworks using various techniques and processes.◊

Using the elements and principles of design to create structures and functions in art.

SAI.4 analyze and compare artworks in relationship to elements and principles of design.

SAI.5 formulate, defend, and utilize personal judgments in identifying specific purposes in relation to the elements and principles of design.

SAI.6 discuss techniques used in creating artworks.

SAI.7 participate in oral and/or written critiques showing an understanding of the use of elements and principles of design.◊

SAI.8 conceive and create a series of artworks using elements and principles of design.

Choosing and evaluating a range of subject matter, symbols, and ideas.

SAI.9 discuss the significance of artworks as a means of exploring and understanding past and present cultures.

SAI.10 identify similarities and differences in the purposes of artworks of past and present cultures.

SAI.11 create artworks using symbols related to contemporary society.

SAI.12 create artworks relating to personal subjects and ideas.

Understanding the visual arts in relation to history and cultures.

SAI.13 discuss historical and cultural contexts in terms of characteristics and purposes of works of art.

SAI.14 research and discuss the meanings, functions, and uses of specific art objects from various cultures.

SAI.15 research and report on a personal evaluation of relationships of artworks to one another in terms of history, aesthetics, and culture.◊

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

SAI.16 use the critical process (description, analysis, interpretation, and evaluation) in discussing artworks in the context of structures and functions.◊

SAI.17 analyze how and why specific artworks were created and discuss the historical, cultural, religious, and/or political influence upon them.

SAI.18 in oral or written form, compare and contrast culturally different approaches to the art media.◊

Making connections between visual art and other disciplines.

SAI.19 discuss, then use the creative processes used in the art media in relationship with at least one other arts discipline.◊

SAI.20 research and discuss particular periods of history as related to characteristics of visual art and the contemporary ideas, themes, or issues in the humanities.◊

SAI.21 explore connections between a given historical period or style in the art media with the scientific or cultural ideas, issues, or themes of the time.

Studio Art II (Grades 11-12)

Studio Art (Advanced)

Studio art electives provide in-depth study in selected media, techniques, and process. These instructional objectives address offerings for which prerequisites or teacher recommendations are required.

The following overall expectations should encompass the advanced level instructional goals and the instructional objectives: advanced level of craftsmanship; participation in field experiences; incorporation of modern technology where applicable; study of art careers and related professions; advanced level skills in the use of related vocabulary and knowledge of media; and the safe and responsible care and use of equipment, tools, and materials.

Studio art electives may include but are not limited to the following courses taught at the advanced level: studio art, advanced placement; air brush; animation; architecture; batik; calligraphy; ceramics; color and design; commercial art; computer graphics; crafts; design principles; drawing; electronic imaging; ethnic art; folk art; fiber arts; functional design; graphic design; jewelry; mixed media; painting; photography; printmaking; sculpture; special topics; stage design; and stained glass.

Understanding and applying media, techniques, and processes.

SAII.1 use advanced techniques and processes to communicate advanced intellectual ideas effectively in a significant body of work.

SAII.2 conceive, create, and critique work for inclusion in exhibition or portfolio.◊

Using the elements and principles of design to create structures and functions in art.

SAII.3 compare and contrast through verbal or written format, artworks from different viewpoints or cultures in terms of elements and principles of design.◊

SAII.4 create multiple solutions, (e.g., thumbnail sketches or macquettes, draft forms) in the process of solving assigned problems or independent projects.◊

Choosing and evaluating a range of subject matter, symbols, and ideas.

SAII.5 identify and discuss specific themes or ideas in the art media in relationship to philosophies of art.

SAII.6 develop and write a personal philosophy of art for possible inclusion in portfolio. Include discussion of their own artwork and the artwork of artists who have influenced them.

Understanding the visual arts in relation to history and cultures.

SAII.7 research and report the effect of a historical period and cultural context on the viewpoint of art criticism within the then prevailing philosophies of art.

SAII.8 explore the art media in various cultures to identify common themes or motifs.

SAII.9 analyze, interpret, and evaluate the meanings or functions of the art medium across time and among various culture/ethnic groups.◊

SAII.10 research and discuss the historical and cultural influences on the subject matter, themes, or design qualities of their own artwork.

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

SAII.11 prepare oral and written critiques of their own and other artists' works.◊

SAII.12 develop multi-level portfolio materials and projects, e.g., reflective writing, journals, planning sketches, self-critiques, documentation of completed projects, teacher assessments.

Making connections between visual art and other disciplines.

SAII.13 make a statement that relates their own artwork to another discipline outside the arts, e.g., techniques, methods, or processes from other disciplines.

Art History, Appreciation, Aesthetics (Grades 9-12)

Level I (Proficient)

The purposes of these courses are to identify, discuss, and compare cultural and multi-cultural influences on the arts, including social, political, economic, functional, and aesthetic considerations where appropriate. Critical analyses in written and oral forms will be developed. An awareness of different philosophies and viewpoints will be emphasized.

Understanding and applying media, techniques and processes.

AH.1 identify and describe various styles, techniques, and media in works of art.

AH.2 understand the use of media techniques and processes in relation to artwork studied.

Choosing and evaluating a range of subject matter, symbols, and ideas.

AH.3 identify, discuss, and compare cultural and multi-cultural influences on art, e.g., social, aesthetic, and sensory qualities, and historical events.◊

AH.4 develop an awareness and understanding of symbols, issues, and themes related to artworks of varying time periods and cultures.

AH.5 compare and contrast aesthetic expression in terms of both form and content.

Understanding the visual arts in relation to history and cultures.

AH.6 discuss how art throughout history has influenced the art of today.◊

AH.7 conduct research into specific styles and periods of art and create art projects or written presentations inspired by the same.◊

AH.8 understand that conventions of form are often indicators of systems of belief.

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

AH.9 compare artists, styles, techniques, and their influences on one other within a given period of time.

AH.10 identify and analyze purposes and results of criticism in written or oral form.◊

AH.11 use the critical process (description, analysis, interpretation, evaluation) in critiquing works of art.◊

AH.12 develop criteria for critiques about artists, historical styles, movements, and concepts.◊

AH.13 develop an awareness of different philosophies of art or aesthetic viewpoints.◊

Making connections between visual art and other disciplines.

AH.14 explore art history and its relationships to other disciplines.

Geography

Geography education is essential for students to understand the values and roles of groups and individuals in a "Global Village" where economies, cultures, and environmental concerns are inextricably connected. This course will enable students to view the world from their perspective as United States citizens. The study of geography will contribute to the development of workplace skills and career choices.

G.1 categorize information under the themes of place, regions, physical geography, population, human/environment interaction, perception, geo-politics, landscape, movement, and geographic skills

G.2 understand the principles and concepts of latitude and longitude, and relative location

G.3 explain the physical geography of places (e.g., the processes that have shaped landforms, earth-sun relations, weather and climate systems, the interrelationships between species that share an ecosystem)

G.4 identify the world's major physical and cultural regions and the criteria used to define them

G.5 interpret and compare simple population statistics (e.g., life expectancy, infant mortality rates, population pyramids, in-migration vs. out-migration, birth rates and death rates

G.6 analyze the relationship between people and the agricultural production of their country

G.7 analyze population issues such as overpopulation and underpopulation and evaluate programs designed to alter such population characteristics (e.g., family planning, recruitment of migrant workers

G.8 analyze the connections between regions (e.g., goods, services, and cultural values)

G.9 understand the role of environmental perception in planning on a variety of scales (e.g., the attitudes of governments, corporations, and individuals)

G.10 analyze and interpret patterns of similarities and differences among and between people and places over time and space

G.11 acquire geographic information through map reading, computer mapping, using reference materials, Internet retrieval, interviewing, and statistical methodology

G.12 organize geographic information by writing, making maps, graphs, timelines, spreadsheets,

climographs, cartograms

G.13 describe the distribution of the world's major resources in different regions of the world

G.15 explain how the processes of spatial change have affected history, as exemplified by the spread of the bubonic plague, the movement of AIDS, the diffusion of smoking, the Industrial Revolution

G.16 analyze the impact of people with low technology and people with high technology on the environment over time and space

G.17 analyze the role of physical and human geographic factors in industrial patterns

G.18 analyze the patterns of activities found in cities (e.g., location of services, industry, residence, and government activities)

G.19 discuss the post-industrial nature of North American society (e.g., the production and manipulation of information and the service industries)

G.20 discuss economic, social, and political world geographical situations and their implications (e.g., the Aral Sea, global warming, endangered species)

G.21 discuss human impact upon the landscape

Health Education Instructional Goals

Health literacy for all students is the fundamental goal of a comprehensive school health education (CSHE) curriculum. The health literate student is a critical thinker and problem solver; a self-directed learner; an effective communicator; and a responsible, productive citizen. Students must have the capacity to obtain, interpret, and understand basic health information and services and the competence to use such information and services in ways that enhance a healthy lifestyle. Comprehensive school health education is essential to enable students to acquire and apply health promoting knowledge, skills and behaviors.

Students who have mastered these skills have better health status, higher levels of educational achievement, are better prepared to work more effectively, have better attendance, and have lower health care costs. Comprehensive school health education in combination with school-wide programs and services encourage and support healthy behaviors and prepare students for the challenges of the 21st century.

1. **Students will** comprehend concepts related to health promotion and disease prevention.

2. **Students will** demonstrate the ability to access valid health information and health-promoting products and services.

3. **Students will** demonstrate the ability to practice health-enhancing behaviors and reduce health risks.

4. **Students will** analyze the influence of culture, media, technology, and other factors on health.

5. **Students will** demonstrate the ability to use interpersonal communication skills to enhance health.

6. **Students will** demonstrate the ability to use goal-setting and decision-making skills to enhance health.

7. **Students will** demonstrate the ability to advocate for personal, family, and community health.

The common areas traditionally addressed by health education have been combined with the six most prevalent risk behaviors to form the six components of the West Virginia comprehensive instructional goals and objectives (see next page). Where an objective has been identified as having a link with another category, abbreviations for that category are listed at the beginning of the objective.

The Ten Traditional Areas of Health Education:

Community Health→

Consumer Health→

Environmental Health→

Family Life→

Mental/Emotional Health→

Injury Prevention and Safety→

Nutrition→

Personal Health→

Prevention and Control of Disease→

Substance Use and Abuse→

The Six Components of West Virginia Comprehensive School Health Education:

Skills Development (SD)
Objectives in this category will assist students to develop the skills necessary to ensure their health, well-being and ability to function in society.

Injury Prevention (IP)
Objectives in this category address the knowledge and skills related to preventing unintentional and intentional injuries.

Personal Health and Wellness (PHW)
Objectives in this category address the knowledge and skills that relate to promotion and maintenance of personal well-being and community health.

Relationships (R)
Objectives in this category address the knowledge, skills, behaviors and attitudes that relate to establishing and maintaining lifelong healthy relationships.

Tobacco, Alcohol and Other Drugs (TAD)
Objectives in this category address knowledge, skills, and behaviors that relate to preventing the use of addictive and illegal substances and understanding proper use of medications, both prescription and over-the-counter (OTC).

Nutrition and Physical Activity (NPA)
Objectives in this category address the knowledge, skills and behaviors that relate to dietary habits and fitness activities that promote health.

The Six Risk Behaviors Identified by the Centers for Disease Control and Prevention:

←Dietary Patterns

←Tobacco Use

←Sedentary Lifestyle

←Sexual Behaviors that Could Lead to HIV/AIDS/STDs and Unintended Pregnancy

←Alcohol and Other Drug Use

←Intentional and Unintentional Injury

How Health Education Links With Other Education Goals

Health education instructional objectives reinforce the core curriculum and develop important workplace process skills. Connections across the curriculum enhance students' critical thinking skills and help make content interesting and engaging to students. Integrating content cross-referenced to the health instruction will provide an opportunity to reinforce basic skills and help students see how basic skills are applicable to a wide variety of tasks.

There are many more connections that can be made by individual teachers and schools as they decide how to help students with identified weaknesses. Workplace process skills found in the 7th, 8th and secondary level health education objectives ensure that students leave WV schools ready to assume their roles as responsible, productive citizens.

The integration of health education objectives across the curriculum are denoted after each health objective by subject abbreviation, grade level and objective number (e.g., S,2.35 indicates a cross-reference with 2nd grade science, objective #35). The following abbreviations have been used for core content areas (SS = Social Studies; M = Mathematics; LA = English Language Arts; S = Science) and additional grade or level specific content (WV = West Virginia Studies, E = Economics, C = Civics, AM = Applied Math). Workplace process skills are denoted by a diamond ( ) after objectives in grades 7-12.

K-4

Cross-referenced objectives provide clear connections for elementary teachers to reinforce concepts and skills found in the core content areas of English Language Arts, Math, Social Studies and Science and with basic skills including computer skills. Additional connections to these areas can be developed as thematic units or reteach opportunities as needed. Foundations for many workplace process skills are introduced in the elementary grade health education objectives. Career exploration is easily integrated in several of the objectives in the K-4 health education objectives.

5-8

Although health education is a separate subject in middle school, cross-referencing to core areas provides opportunities for reinforcing basic skills, enhancing critical thinking and offering challenging course material. Fifth and sixth grades provide stepping stones from foundations for many workplace process skills that students begin demonstrating and applying in the seventh and eighth grades. Career awareness highlights skills and opportunities for one of the largest growing fields of employment.

Secondary

Cross-references to other core content in the high school health education objectives clearly demonstrate that students must be able to apply and use skills to be successful in their lives. Thinking critically about the impact of health issues on society and the role individuals' play in individual, family and community health provide challenging, meaningful problem-solving that goes beyond content-specific learning. Workplace process skills are a large portion of the high school health education focus.

Examples of Health Education Workplace Process Goals:

<u>Problem Solving:</u>
* Analyzes data, draws conclusions and applies information.
* Applies core content skills and knowledge to "real world" issues and problems.

<u>Communication:</u>
* Demonstrates respect and positive communication skills with others.
* Uses appropriate communication to negotiate, resolve conflict and settle disputes.

<u>Working With Others:</u>
* Works cooperatively as a member of a team.
* Understands role and responsibility for informed decision making.

<u>Technology:</u>
* Understands injury prevention measures necessary when using technology.
* Demonstrates ability to use technologically advanced methods for research, data collection and communication.

<u>Self-Management:</u>
* Promotes own health and well-being by engaging in health promoting behaviors.
* Manages stress, demonstrates good attendance and attentiveness patterns that lead to high productivity.

<u>Career Development:</u>
* Recognizes the personal value of lifelong learning.

Kindergarten Health Education

Kindergarten health education objectives focus on the development of social skills and interpersonal relationships, a basic understanding of personal health issues, injury prevention and the exploration of nutritious foods and healthy physical activities. Learning opportunities should focus on concrete experiences and provide a nurturing environment that promotes positive interaction with adults and other children and builds a foundation for practicing good health habits. Safety is a prime concern for student health. The objectives may be integrated with many other aspects of the kindergarten curriculum.

Skills Development

K.1 **IP, PHW, R, TAD, NPA**
Explain why good listening skills are important. **LA,K.13; S,K.12**

K.2 **IP,PHW,R,TAD,NPA**
Discuss how to say no to situations threatening to one's health or well-being (e.g., "no to breaking family or school rules", and "no to strangers"). **SS,K.5**

K.3 **IP, PHW, R, TAD, NPA**
Discuss the importance of resolving conflict with peers in a positive manner. **SS,K.4**

K.4 **IP, PHW, R**
Define and identify short term goals. **LA,K.60**

Injury Prevention

K.5 **SD,PHW,R,TAD,NPA**
Recognize hazardous situations and demonstrate safety rules in school, at home and in the community (e.g., school bus, playground, streets, interaction with strangers, motor vehicles, fires, poisons, objects in mouth). **SS,K.5;SS,K.7**

K.6 **SD,PHW,TAD,NPA**
Identify minor and serious injuries and describe possible treatment procedures and how to seek necessary help (e.g. cut finger, bloody nose, broken arm, severe burn, person not breathing, calling for adult help, calling 911).

K.7 **PHW,R,TAD**
Recognize community helpers as resources for safety information and aid.

Personal Health and Wellness

K.8 **SD**
Demonstrate the use of manners in school. **LA,K.6;SS,K.1;SS,K.8**

K.9 **SD,IP,R,NPA**
Describe the proper care of eyes and teeth.

K.10 **SD,IP**
Recognize appropriate dress for weather conditions and describe how it protects the body fromweather. **M,K.25;SS,K.17;S,K.22;S,K.54**

K.11 **SD,IP,R,NPA**
Identify appropriate health practices related to disease prevention (e.g. washing hands, not sharing brushes, food handling, not sharing drinking cups). **SS,K.9**

K.12 **SD,IP,R**
Identify the benefits of proper rest and healthy sleep habits.

K.13 **R**
Identify body parts, vital organs, and systems (e.g. legs, arms, head, heart, lungs, digestive system, muscular system). **S,K.1**

K.14 **SD,IP,R,TAD,NPA**
Identify a variety of feelings and situations or events that create the feeling (e.g. anger, sadness, happiness, surprise). **LA,K.37**

K.15 **SD,IP,R,TAD,NPA**
Identify and describe common childhood illnesses and injuries and simple prevention strategies (e.g., immunizations, falls/safety, colds/washing hands).

K.16 **SD,IP,R,TAD,NPA**
Experience different cultural customs (e.g. foods, games, dance, music, dress) in order to recognize the influence of culture on health. **SS,K.21**

Relationships

K.17 **SD,PHW,TAD**
Identify and use various communication techniques that demonstrate friendship (e.g. waving, smiling, sharing). **SS,K.1**

K.18 **SD,PHW,TAD**
Identify and practice different ways to communicate needs, wants, and feelings, (e.g. raise hand, verbal manners, tone of voice). **LA,K.6;LA,K.37**

Tobacco, Alcohol, and Other Drugs

K.19 **SD, IP, PHW**
Recognize and understand the importance of not using any medication or drug without permission of parent(s)/ guardian(s).

K.20 **SD, IP, PHW**
Recognize the meaning of "No Smoking" signs and their purpose.

Nutrition and Physical Activity

K.21 **PHW**
Identify the basic daily meals (e.g. breakfast, lunch and dinner).

K.22 **IP,PHW,TAD**
Explore healthy physical activities.

K.23 **SD,IP,PHW,R,TAD,NPA**
Taste and identify a variety of nutritious foods. **M,K.8**

Computer and Technology

K.24 Use appropriate software to master kindergarten instructional objectives in health education. **LA,K.66; LA,K.67; LA,K.68; M,K.32; M,K.33; M,K.34**

K.25 **PHW**
Identify the uses of technology at home and play. **LA,K.69; M,K.35**

Grade One
Health Education

The first grade health objectives provide concrete concepts and opportunities to practice and begin to master a variety of physical, social, emotional and cognitive tasks to promote personal health and wellness, prevent injuries, develop skills for interpersonal relationships and health habits to last a lifetime. Students developing positive attitudes toward health should acquire knowledge and skills to prevent injury, illness and disease, and acquire the disposition or inclination to practice health enhancing behaviors. At this grade, personal skills (self-esteem, stress management) build a foundation for social competence that enhances the ability of youth to resist social pressure to use alcohol, tobacco or other drugs in later elementary, middle school and high school grades. Injuries are the most immediate risks to youth health. Enjoyment of physical activity and good nutrition sets the stage for lifelong health habits. The first grade objectives may be closely integrated with and reinforce other aspects of the first grade curriculum.

Skills Development

1.1 **IP,PHW,R**
Identify situations in which good listening skills are needed and use attentive listening skills with teachers and peers (e.g. eye contact, no interruptions). **LA,1.15; SS,1.3**

1.2 **IP,PHW,R,TAD,NPA**
Identify situations where refusal skills are necessary (e.g. say no to suggestion of stealing, or improper touch).

1.3 **IP,PHW,R,TAD**
Identify how positive behavior can resolve conflict and where/ when to go for help when a conflict arises. **SS,1.2; SS,1.7**

1.4 **IP,PHW,R,TAD,NPA**
Recall a short-term goal and practice setting goals and achieving them in the classroom.

Injury Prevention

1.5 **SD,IP,PHW,R,TAD,NPA**
Recognize the universal poison symbol and explain the dangers of poisonous substances. **SS,1.6**

1.6 **SD,PHW**
Demonstrate basic first aid procedures. **SS,1.6**

1.7 **IP,PHW,R,TAD**
Differentiate between safe and unsafe behaviors and emergency and non-emergency situations. **SS,1.6; SS,1.18**

1.8 **PHW,R,TAD**
Identify community helpers as resources for safety information and aid.

Personal Health and Wellness

1.9 **SD,IP,PHW,R,TAD,NPA**
Demonstrate knowledge of acceptable school behavior and practice the use of manners (e.g., please and thank you).

1.10 **SD,IP,R,TAD,NPA**
Recall personal health habits as related to disease prevention (e.g. bathing, washing hands) and discuss reasons why positive mental, emotional, social and physical environments are important to health (e.g. clean water, safe facilities, friendly atmosphere).

1.11 **SD,IP,R,TAD,NPA**
List and discuss activities that generate positive feelings versus sadness or anger. **LA,1.53**

1.12 **SD,IP**
Select appropriate dress for weather conditions and explain the importance of protecting the body from environmental factors. **SS,1.15; S, 1.53**

1.13 **SD,IP,PHW,R,TAD,NPA**
Recognize the systems of the body and discuss the importance of all systems working properly in order to maintain good health. **SS,1.11**

1.14 **IP,TAD,NPA**
Discuss and explain the importance of regular health and dental check-ups.

1.15 **SD,IP,TAD,NPA**
Explain methods for preventing childhood injuries and illnesses; identify personal health needs and reasons for practicing healthy behaviors (e.g., exercise, seat belt use, hygiene, rest). **SS,1.11**

1.16 **SD,IP,R,TAD,NPA**
Identify community health resources (e.g. fire department, hospital, ambulance, health department) and match various health situations with appropriate health resources (e.g. toothache--dentist, burn--doctor). **SS,1.9**

1.17 **SD,IP,R,TAD,NPA**
Identify key adults at home, school and in the community who can assist in accessing available health resources (e.g. teachers, parents, principals); explain when to ask for assistance in making health decisions. **SS,1.9**

1.18 **SD,IP,R,TAD,NPA**
Recognize stressful situations and identify positive stress management skills (e.g. drawing, physical activity, music). **LA,1.106**

1.19 **SD,IP,TAD,NPA**
List media influences on children and identify reactions to media advertisements (e.g., cereal or toy commercials).

1.20 **SD,IP,R,TAD,NPA**
Recognize sources of conflicting health information and the importance of accurate information in making healthy choices.

1.21 **SD,IP,R,TAD,NPA**
Identify positive ways to influence, support or encourage others in making positive health choices; illustrate health tips for a publication.

1.22 **SD,IP,R,TAD,NPA**
Identify individuals whose job includes advocating for health of individuals, families and communities (e.g., doctors, firefighters, mayor, counselor). **SS,1.9; S,1.2; S,1.67**

Relationships

1.23 **SD,IP,PHW,TAD,NPA**
Describe roles within a family and identify ways family members care for each other. **SS,1.19**

1.24 **SD,IP,PHW,TAD,NPA**
Describe the importance of friends and identify characteristics of a good friend (e.g., honest, dependable, caring, friendly). **SS,1.3**

1.25 **SD,IP,PHW**
Demonstrate respect for others' personal space and belongings. **S,1.77**

1.26 **SD,IP,PHW,TAD**
Express needs, wants and feelings in a way that demonstrates respect for self and others. **SS,1.7**

1.27 **SD,IP,PHW,TAD**
Identify positive and negative responses to conflict and helpful resource persons to contact when conflict arises. **SS,1.2**

Tobacco, Alcohol and Other Drugs

1.28 **SD,IP,PHW**
Identify parent(s)/guardian(s) who can give medication.

1.29 **SD,IP,PHW**
Recall the importance of not using any medication or drug without the permission of parent(s)/guardian(s).

1.30 **IP,PHW,NPA**
Discuss the effects of tobacco use on the body (e.g., bad breath).

1.31 **SD,IP,PHW**
Identify ways to move away from sidestream smoke.

Nutrition and Physical Activity

1.32 **PHW,R**
Identify the five food groups in the Food Guide Pyramid and name specific foods in each group.

1.33 **IP,PHW,R,TAD**
List factors that affect one's physical fitness (e.g. physical activity, diet, rest).

1.34 **PHW**
Identify foods that need special handling (e.g., foods need to be refrigerated, covered, resealed).

1.35 **SD,IP,PHW,R,TAD**
Match cultural foods to the Food Guide Pyramid and experience various cultural games and activities (e.g. hop scotch, Mexican hat dance). **SS,1.12**

1.36 **PHW**
Explain why the body needs food and physical activity (e.g., growth, energy and health). **S,1.33**

1.37 **PHW**
Identify foods that comprise combination foods (e.g., taco = meat, cheese, lettuce, tortilla).

1.38 **PHW**
Taste and describe sensory perceptions (e.g., taste, smell, sight, touch, sound) of a variety of foods. **S,1.3**

1.39 **PHW**
List physical activities that you consider enjoyable.

Computer and Technology

1.40 Use appropriate software to practice and master first grade health education instructional objectives.

1.41 **SD,IP,R,TAD,NPA**
Identify ways information is found regarding the benefits of healthy habits (e.g. school, media, computer, radio, newspapers). **S,1.65**

1.42 **PHW**
Identify the health benefits/ disadvantages of technology at home and school (e.g., lack of exercise due to television and computer games, microwave cooking keeps vitamins in vegetables). **LA,1.117; S,1.76; SS,1.33**

1.43 Demonstrate respect for the (computer) work of others. **LA,1.118**

1.44 Select and use appropriate software and/or other technologies to locate and use health reference sources. **LA,1.120; S,1.78**

1.45 Use graphic software to read and interpret health information from charts and graphs. **LA,1.121; M,1.53; S,1.79**

1.46 Use a calculator to perform mathematical functions in data analysis during health investigations. **M,1.52; S,1.80**

Grade Two
Health Education

Students in second grade will be actively engaged in practicing and developing basic health practices and skills. The second grade objectives lead to an increased understanding of the role health and safety play in the lives of students and the interactions of the family, school and community. Skill development in communication and conflict management continues to build on the foundation of concrete experiences developed in previous grades. Social competency to prevent future involvement in risky behaviors and to promote positive, healthy experiences should be apparent in student behavior. Injuries remain the most immediate risk to youth health. Promotion of norms for good nutrition and being physically active have a lasting impact. The second grade objectives may be closely integrated with other aspects of the second grade curriculum.

Skills Development

2.1 **IP,PHW,R,TAD,NPA**
Identify and discuss ways that listening skills can build self-confidence and provide good communication. **LA,2.11; LA,2.18**

2.2 **IP,PHW,R,TAD,NPA**
Recall situations where refusal skills are important and practice using them.

2.3 **IP,PHW,R,TAD,NPA**
Recognize conflict as a normal part of interpersonal relationships; recognize the importance of good communication and fact-finding; and recognize compromise as a way to negotiate a conflict. **SS,2.5; LA,2.18; LA,2.42**

2.4 **IP,PHW,R,TAD,NPA**
Discuss ways goals are influenced by others.

Injury Prevention

2.5 **SD,PHW**
Recognize the universal sign for choking and demonstrate calling 911. **SS,2.6**

2.6 **SD,PHW,TAD,NPA**
Discuss safe practices, dangerous situations and rules that promote personal safety (e.g., child abuse prevention,bus safety, weapons, playing ,exercising, poisons). **SS,2.2; SS,2.6**

2.7 **PHW,NPA**
Explain the importance of being safety conscious. **SS,2.6**

2.8 **PHW**
List dangers of seatbelt nonuse. **SS,2.6**

Personal Health and Wellness

2.9 **SD,IP,TAD,NPA**
Practice acceptable school behavior and use manners in daily activities. **SS,2.8**

2.10 **IP,R,TAD,NPA**
Compare and contrast positive and negative health habits and their consequences (sharing cups, hygiene products, etc.).

2.11 **SD,IP,TAD,NPA**
Demonstrate proper dental care (e.g., brushing, flossing and rinsing).

2.12 **IP,TAD,NPA**
Identify systems that make up the body and recognize those systems work together and need to be healthy in order to keep the body healthy. **SS,2.10; S,2.30**

2.13 **IP,R,TAD,NPA**
Describe the relationships among mental, social, emotional and physical health and identify positive practices that promote health. **SS,2.10; SS,2.14; S,2.64**

2.14 **SD,IP,R,TAD,NPA**
Identify situations encountered during a school day where health is an issue (e.g. asthma attack, playground accident) and list the steps to deal with these situations (e.g., appropriate adults from whom to seek assistance). **LA,2.42**

2.15 **SD,IP,R,TAD,NPA**
Explain how media influences personal health attitudes and behaviors.

2.16 **SD,IP,R,TAD,NPA**
List school situations that cause stress and discuss ways of coping with this stress. **LA,2.110**

2.17 **SD,IP,R,TAD,NPA**
Investigate and list reasons for improving and maintaining personal health.

2.18 **SD,IP,R,TAD,NPA**
Discuss places where home, school and community health services can be located (e.g. telephone book, newspaper, Internet, library). **LA,2.44**

2.19 **SD,IP,R,TAD,NPA**
Express opinions about health issues relevant to second graders and describe ways health information and concerns can be shared (e.g. making a poster, creating a video, writing a letter). **SS,2.29**

Relationships

2.20 **SD,IP,PHW,TAD,NPA**
Describe the influence of family members and peers on health and explain the importance of taking responsibility within these relationships. **SS,2.9**

2.21 **SD,IP,PHW,TAD**
Identify positive verbal and non-verbal communication with peers (e.g., sharing, listening). **LA,2.11; LA,2.18**

2.22 **SD,IP,PHW,TAD**
Differentiate between constructive and destructive ways to express feelings and identify consequences.

2.23 **SD,IP,PHW,R,TAD,NPA**
Identify ways community agencies support family and community health. **SS,2.9; S,2.2**

Tobacco, Alcohol and Other Drugs

2.24 **SD,IP,PHW**
Recognize warning labels on medicines and identify ways over-the-counter drugs are misused.

2.25 **IP,PHW**
Discuss the effects of alcohol use on the body (e.g., mood swings).

2.26 **IP,PHW**
Recognize that use of smokeless tobacco is not a safe alternative to smoking.

Nutrition and Physical Activity

2.27 **PHW**
Select foods for snacks or breakfast from each of the Food Guide Pyramid groups.

2.28 **IP,PHW**
Describe the effects of healthy eating habits and physical activity on personal health (e.g., strong bones, ability to concentrate, energy to play). **S,2.31**

2.29 **PHW,R,TAD,NPA**
Experience activities and exercises that will develop a strong heart, lungs (cardio-vascular health) and muscular strength. **S,2.9**

Computer and Technology

2.30 Use graphics software to create graphs and charts of data collected in health investigations. LA,2.127; SS,2.30; 2,2.69

2.31 Use appropriate software to practice and master second grade instructional objectives in health education. LA,2.121

2.32 Execute a health program from disk and/or CD-ROM. LA,2.123; S,2.68

2.33 Identify the uses of technology in the community to save lives and prevent illness, disease and injury (e.g., 911). LA,2.124; M,2.54

Grade Three
Health Education

The third grade objectives include social skills development and use. The effects of health habits on health are explored, although students are still unable to completely understand the concept of cause and effect, particularly when "effect" is far in the future. Students distinguish between poor and positive health habits and understand concrete ways to prevent illness, injury and poor health through decision making and problem solving techniques. Students investigate the influence of family, friends and community in promoting and reinforcing positive health behaviors and demonstrate non-violent problem solving techniques and stress management skills to promote social and emotional growth while demonstrating the link between good health and citizenship. Hands on health education provides experiences that are easily integrated with other third grade subject matter.

Skills Development

3.1 **IP,PHW,R,TAD,NPA**
Demonstrate attentive listening skills and effective interpersonal communication skills which demonstrate caring, consideration and respect. **LA,3.11**

3.2 **IP,PHW,R,TAD,NPA**
Discuss positive consequences of using refusal skills.

3.3 **IP,PHW,R,TAD,NPA**
Discuss and practice the steps of the peer mediation process (e.g., ground rules, brainstorming, no put downs). **SS,3.4**

3.4 **IP,PHW,R,TAD,NPA**
Identify barriers that interfere with achieving personal and health-related goals and describe strategies that will help overcome barriers to achievement of goals. **SS,3.9**

Injury Prevention

3.5 **SD,PHW,NPA**
Practice first aid techniques for minor injuries.

3.6 **SD,PHW,R,TAD,NPA**
Develop strategies to avoid danger and prevent harm to self or others in potentially dangerous situations. **SS,3.8**

3.7 **PHW,TAD**
Investigate and analyze data relating to seatbelt use and injury prevention. **SS,3.3; SS,3.8**

Personal Health and Wellness

3.8 **TAD,NPA**
Identify types of teeth and their functions. **S,3.35**

3.9 **IP**
Describe signs of vision and hearing problems

3.10 **IP,TAD,NPA**
Recall body systems, list ways to keep these systems healthy, and compare the effects of positive and negative health behaviors. **S,3.35; S,3.36**

3.11 **SD,IP,R,TAD,NPA**
Identify the need for preventing and reporting actual and attempted child abuse or neglect. **SS,3.3**

3.12 **SD,IP,R,TAD,NPA**
Distinguish between effective and ineffective methods of prevention of common health problems and describe activities that are healthful (e.g. cover mouth when coughing, regular physical activity).

3.13 **R**
Explain the impact of cleanliness on social and personal health.

3.14 **SD,IP,R,TAD,NPA**
Identify personal stressors and develop a stress management plan. **LA,3.78**

3.15 **R,TAD,NPA**
Define communicable disease; distinguish between communicable and non-communicable diseases; and identify health behaviors associated with each category.

3.16 **SD,IP,R,TAD,NPA**
Compare different environments and how they relate to health and well-being (e.g. safe school building, non-smoking environment). **SS,3.3; SS,3.8**

3.17 **IP,R,TAD,NPA**
Share and compare cultural customs and traditions and how they relate to health. **SS,3.40; SS,3.42**

3.18 **SD,IP,R,TAD,NPA**
Express opinions about health issues relevant to third-graders. **LA,3.13**

Relationships

3.19 **SD,IP,PHW,R,TAD,NPA**
Identify and discuss the influence of family on health roles and responsibilities of family members in promoting health.

3.20 **SD,IP,PHW,R,TAD,NPA**
List qualities inherent in a good friend.

3.21 **SD,IP,PHW,TAD**
Discuss the role of conflict resolution in maintaining healthy relationships.

3.22 **DS,IP,PHW,TAD,NPA**
Practice positive peer reinforcement skills to influence and support others in making positive decisions. **SS,3.11**

Tobacco, Alcohol and Other Drugs

3.23 **IP,PHW**
List the importance of clean indoor air and identify community places in which smoking may not be allowed. **SS,3.8**

3.24 **IP,PHW**
Demonstrate a knowledge of the importance of following directions when taking medications.

3.25 **IP,PHW**
Recognize medicines, tobacco and alcohol as types of "drugs" that are often used as a "gateway" to other drug use.

3.26 **IP,PHW**
List harmful effects of tobacco and alcohol use on the body (e.g., breath, teeth, slurred words).

Nutrition and Physical Activity

3.27 **IP,PHW**
List the benefits of physical activity and track personal daily physical activity; identify personal activity goals.

3.28 **PHW**
Experiment with and identify the results of improper food storage. **S,3.11; S,3.26**

3.29 **SD,PHW**
Match personal food choices to groups within the Food Guide Pyramid; identify missing servings from each group.

3.30 **PHW**
Identify how foods within each Food Guide Pyramid group contribute to health (e.g., milk - builds strong bones, meat - builds muscles and helps children grow).

3.31 **PHW**
Describe the effects of healthy eating habits and physical activity on growth, health and fitness. **S,3.39**

3.32 **IP,PHW**
Identify safety practices for playing and exercising.

Computer and Technology

3.33 **IP,R,TAD,NPA**
Identify ways technology has increased availability of health information around the world (e.g. DOPPLER radar, facsimile, Internet). **LA,3.87; S,3.74; S,3.88**

3.34 Use appropriate software to practice and master third grade instructional objectives in health education.

3.35 From data collected during health investigations, use a calculator to find the mean and solve problems. **M,3.54; M,3.56; S,3.92**

3.36 Demonstrate the understanding of the concept that copyright law protects a person's (or company's) work. **LA,3.88; S,3.89**

3.37 Use graphing software to construct bar and line graphs from health data. **LA,3.92; M,3.59; S,3.91**

Grade Four
Health Education

Fourth grade objectives allow students to demonstrate health behaviors and skills and to take action and responsibility for personal health, injury prevention and good health habits that prevent disease or poor health. Students investigate the world around them in relationship to health, propose strategies to enhance personal and community health and safety and predict consequences of behavior. Students demonstrate independence, self-motivation and critical thinking skills throughout the curriculum. A development of attitudes and beliefs regarding tobacco nonuse is crucial at this grade. Experiential connections with the curriculum enhance students' inclination to practice positive health habits and believe in the value and importance of good health. These objectives are easily integrated with other aspects of the fourth grade curriculum.

Skills Development

4.1 **IP,PHW,R,TAD,NPA**
Assess personal use of positive communication skills. **LA,4.13; LA,4.14; LA,1.15; S,4.13**

4.2 **SD,IP,PHW,R,TAD,NPA**
Name the steps used in making a healthy decision, use the decision-making process to deal with a health issue and evaluate the results of the process. **LA,4.35**

4.3 **IP,PHW,R,TAD,NPA**
Participate in long-term goal setting and track progress toward health-related goals.

4.4 **IP,PHW,R,TAD,NPA**
Illustrate the refusal skill process for a health-related issue.

4.5 **IP,PHW,R,TAD,NPA**
Discuss and practice the peer mediation process.

Injury Prevention

4.6 **SD,PHW,TAD**
Observe personal environments (e.g., playground, home); assess hazards and identify solutions. **M,4.27**

4.7 **SD,PHW,R**
Develop strategies to promote seatbelt use (e.g., school/ community groups).

Personal Health and Wellness

4.8 **TAD,NPA**
Identify stages of human growth; list factors that affect health, growth and fitness (e.g. weight, physical exercise, blood pressure, blood cholesterol). **LA,4.35; S,4.40; S,4.43**

4.9 **SD,IP,R,TAD,NPA**
Identify personal qualities and strategies that contribute to positive mental, emotional, social and physical health (e.g., self-esteem, attitude, self-image).

4.10 **IP,TAD,NPA**
Experience and observe the responses of the body systems to various stimuli (e.g., exercise, tobacco). **S,4.9; S.4.10; S,4.12; S,4.27; S,4.34 S.4.53**

4.11 **TAD,NPA**
Recall differences between communicable and non-communicable diseases; explain ways that people can prevent germs and viruses from spreading; explain how the body is affected by communicable and non-communicable diseases. **WV.17; LA,4.35; S,4.71**

4.12 **SD,IP,R,TAD,NPA**
Predict the potential consequences of both positive and negative health choices; describe ways to avoid negative consequences. **LA,4.29; S,4.22**

4.13 **SD,IP,R,TAD,NPA**
Locate and use resources in the home, school and community that provide accurate health information; express opinions about health issues relevant to fourth-graders. **LA,4.15; LA,4.83; SS,4.5; S,4.26**

4.14 **SD,IP,R,TAD,NPA**
Evaluate and describe how media influences personal health and consumer choices; identify positive alternatives to enhance self-image. **SS,4.15**

4.15 **SD,IP,R,TAD,NPA**
Research and practice a variety of stress management techniques. **LA,4.81; LA,4.86**

Relationships

4.16 **SD,IP,PHW,TAD,NPA**
Develop strategies, to handle peer pressure, using accurate health information. **LA,4.83; S,4.26**

4.17 **SD,IP,PHW,R,TAD,NPA**
Analyze the consequences of violent versus non-violent means to resolve conflict (e.g. reputation/labeling--bully vs. sissy; isolation; physical injury; self-confidence; attention). **LA,4.35**

Tobacco, Alcohol and Other Drugs

4.18 **SD.IP,PHW**
Identify and explore advertising messages for cigarettes and alcohol. **SS,4.15**

4.19 **IP,PHW**
Investigate the harmful effects of tobacco and alcohol on the body systems (e.g., respiratory and digestive). **S,4.34**

4.20 **IP,PHW**
Discuss the use of illicit drugs, abuse of prescription and nonprescription drugs, the harmful effects of inhalants, and their effects on society.

4.21 **SD,IP,PHW,NPA**
Identify social, emotional and physical reasons why people choose to use tobacco and/or alcohol (e.g., parties, stress and weight loss) and list alternatives. **WV.16**

Nutrition and Physical Activity

4.22 **IP,PHW,TAD**
Examine the relationship between an active lifestyle and health. **WV.17; S,4.53**

4.23 **SD,PHW,R**
Research cultural differences in health practices by experiencing cultural foods and recreational activities. **WV.16; WV.17**

4.24 **PHW**
Define "nutrient" and "calorie" and list the six major nutrient classifications; identify food sources and functions of each nutrient class. **ss,4.21**

Computer and Technology

4.25 **IP,R,TAD,NPA**
Investigate positive and negative ways technology has impacted the environment; develop strategies to improve environmental health. **WV.6; S,4.8; S.4.38; S,4.74; S,4.76**

4.26 Using a word processor, create and spell check an essay on a health topic. **LA,4.95; LA,4.99; LA,4.101**

4.27 Identify ways technology is used to access health information. **LA,4.96; S,4.81; S,4.53**

4.28 Demonstrate the understanding that the violation of copyright law is a crime. **LA,4.97; SS,4.54**

4.29 Select and use appropriate software and/or other technologies to locate and use reference sources. **LA,4.98**

4.30 Use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts. **LA,4.100; M,4.56; S,4.79**

4.31 Use a calculator to find the mean, mode and range of data collected during health education investigations. **M,4.57; S,4.84**

Grade Five
Health Education

Grade five represents the beginning of an important time in the social, emotional and physical growth of students. Students are assessing future prospects and making important decisions that will shape who they become as adults. Because of these factors, the health education curriculum will focus on promoting positive behaviors as societal norms, critically examining the influence of media, peers and society on individual decisions and actions and improving proficiency and confidence with skills that will enhance health and safety. Students will understand the physical changes occurring during puberty, the relationship of varying growth and development patterns to health and self acceptance and the role of physical activity and nutrition to personal health, growth and self-concept. Attitudes toward tobacco, alcohol and other drug nonuse are important and students should recognize the benefits of being drug-free. Respect for individuality and independence are incorporated in the delivery of the fifth grade curriculum.

Skills Development

5.1 **R**
Propose guidelines for healthy communication (e.g., respect, listening); role-play healthy communication and refusal skills. **LA,5.1; LA,5.2; LA,5.3; LA,5.4; LA,5.6**

5.2 **IP, PHW, R, TAD, NPA**
Use the peer mediation process to resolve conflict.

Injury Prevention

5.3 **SD,PHW,R,NPA**
Develop guidelines for preventing accidents, indoor and outdoor; explain how protective devices/ equipment can prevent injuries and save lives. **S,5.19**

5.4 **SD,PHW**
Demonstrate basic first aid procedures for a variety of common emergencies.

5.5 **SD,IP,PHW,R,TAD,NPA**
Describe actions that enhance personal safety in severe weather, community emergencies, and situations in which personal responsibility is needed for self-protection; describe self-protection strategies. **SS,5.27**

5.6 **IP**
Analyze the relationships among safety procedures, rules, laws, prevention of injuries, and environmental hazards. **M,5.23; M,5.26**

Personal Health and Wellness

5.7 **SD,R**
Describe the relationship between personal hygiene and the prevention of illness and disease; list guidelines for self care. **S,5.17**

5.8 **SD,NPA**
Examine the relationship between regular dental, medical, and visual exams and the prevention of disease; list other health problems requiring professional health services. **SS,5.7**

5.9 **SD,IP,NPA**
Analyze media influences on health care product purchasing; compare product labels.

5.10 **SD,IP,TAD**
Develop guidelines for responsible purchases of health care and hygiene products. **SS,5.1**

5.11 **SD,IP,NPA**
Identify agencies that will provide assistance to customers dissatisfied with a product or service; practice making a consumer complaint (e.g., letter to Better Business Bureau). **LA,5.162**

5.12 **IP,NPA**
Explain how the body protects itself from disease and describe ways to prevent the spread of communicable diseases (e.g., hand washing). **S,5.3**

5.13 **IP,R,TAD,NPA**
Describe the difference between a chronic and communicable disease and give examples of each; identify ways to reduce the risk of chronic diseases. **SS,5.7; S,5.26**

5.14 **SD,IP,R,TAD,NPA**
Develop a time management plan outlining adequate time for personal hygiene, health-promoting habits and social relationships.

5.15 **SD,R**
Identify the importance of bonding with school, community and a significant adult.

Relationships

5.16 **PHW,NPA**
Describe body changes that occur during puberty; explain the relationship of varying growth and development patterns to emotional health and self acceptance. **S,5.33**

5.17 **IP,PHW,TAD,NPA**
Identify family influences on health (e.g., heredity, family rules); analyze the effects of major family changes on personal health. **SS,5.27**

5.18 **SD,IP,PHW,TAD,NPA**
Identify skills and responsibilities that support healthy family relationships; practice communication skills which promote good family relationships. **LA,5.14**

5.19 **IP,PHW,TAD,NPA**
Recall characteristics of a responsible friend; discuss the relationship between peer/friend influence and health (e.g., peer pressure to take risks).

Tobacco, Alcohol and Other Drugs

5.20 **IP,PHW,R,NPA**
Explain the difference between illegal and legal drugs; examine short and long term physical and social effects of drug use on the body. **S,5.3; SS,5.27**

5.21 **IP,PHW**
Explain the difference between over-the-counter drugs and prescription drugs; define "side-effect" and give examples; differentiate between drug misuse and abuse.

5.22 **IP,PHW,R**
Examine the influence of peers, family and the media on the decision to be drug-free; identify the benefits of being drug-free; demonstrate peer pressure resistance to drug use. **SS,5.7; SS,5.27**

5.23 **PHW,R**
Identify resources for substance using/abusing persons, their families and friends (e.g., AA, Al-Anon). **LA,5.162**

Nutrition and Physical Activity

5.24 **PHW**
Locate nutrient information on food labels and discuss use of labels to select healthy food choices. **S,5.35**

5.25 **PHW**
Explain the concept of energy balance as it relates to food intake and physical activity. **S,5.3; S,5.35**

5.26 **PHW**
Describe the impact of food and activity choices on personal health, growth and development. **S,5.3; S,5.35**

5.27 **SD,PHW**
Use food labels to compare the nutrient contribution of foods (e.g., types of snacks, cereals, beverages). **S,5.3**

5.28 **PHW**
Recognize serving sizes and numbers of servings as they relate to Food Guide Pyramid recommendations.

5.29 **PHW,R**
Discuss factors that influence food choices.

5.30 **PHW**
Develop guidelines for proper food handling and storage to prevent food-borne illnesses. **S,5.3**

5.31 **SD,PHW**
Examine body weight in relationship to height, age, gender and frame size to determine recommended healthy weight range. **S,5.10**

5.32 **SD,IP,PHW,R,TAD**
Identify barriers to regular physical activity and strategies to overcome these barriers. **SS,5.27**

Computer and Technology

5.33 **PHW,IP,NPA**
Identify and explain the impact of social and technological changes that took place during the Industrial Revolution in the United States and subsequent time periods on health. **SS,5.48; S,5.56; S,5.64**

5.34 Using the graphing applications of appropriate software, select the suitable graph, chart or table to display a set of health data. **LA,5.182; LA,5.188; M,5.54; S,5.73; S,5.75; SS,5.60; SS,5.61**

5.35 Use a calculator to perform functions in data analysis. **M,5.50; M,5.52; M,5.53; S,5.69**

5.36 **PHW, R**
Describe the influence of technology on communication (reading, writing, etc.). **LA,5.185; S,5.78; SS,5.65**

Grade Six
Health Education

The sixth grade health objectives address important social, emotional and physical changes young adolescents experience. Decision making steps and application are integrated into all topics of discussion as students examine potential long and short term consequences of decisions and their impact on all aspects of health (e.g., mental, emotional, physical). Students critically examine concepts related to personal health and wellness, injury prevention and tobacco use and recognize the impact of positive health decisions on personal goal attainment. Students improve social skills, discuss the impact of peer pressure and distinguish between positive and negative influences in relationships. Students demonstrate ability to plan physical activity and nutrition that promotes good health and recognize their relationship to body image and weight maintenance. Teaching strategies should provide students with opportunities to work in small groups and express individual opinions.

Skills Development

6.1 **IP,PHW,R,TAD,NPA**
Identify factors that influence decisions; describe a decision making model; demonstrate the model by using situations and problems encountered by adolescents; discuss methods of evaluating previous decisions. **S,6.3; S,6.77**

6.2 **IP,PHW,R,TAD,NPA**
Identify important decisions made during adolescence; analyze the cause and effect relationship between decision making and long and short term consequences (e.g., injury, illness, disease and premature death). **S,6.3**

6.3 **IP,PHW,R,TAD,NPA**
Give examples of strategies used by advertisers to influence decision making (e.g., use of celebrities); explain responsibility in making decisions (e.g., reduced stress). **LA,6.28**

6.4 **IP,PHW,R,TAD,NPA**
Identify resources that can assist decision making; demonstrate the ability to influence others by making responsible decisions. **LA,6.33**

6.5 **PHW,R**
Describe the benefits of team decision making; identify strategies to become a good team member; practice team decision making. **S,6.3**

Injury Prevention

6.6 **SD,PHW,R**
Develop self-protection strategies to avoid personal harm and injury (e.g., walk in groups, confide in trusted adults). **SS,6.5; S,6.77**

6.7 **PHW,TAD**
Analyze the correlation between motor vehicle related injuries with speed, alcohol use and seat belt use. **M,6.19; M,6.27; M,6.28**

Personal Health and Wellness

6.8 **R,TAD,NPA**
Describe characteristics of positive mental and emotional health; discuss self-concept, self-esteem and self-control as they relate to personal decision making and mental/emotional health.

6.9 **SD,IP,R,TAD,NPA**
Describe sources of anger and stress; demonstrate healthy ways to communicate emotions; evaluate healthy methods of reducing anger and stress. **LA,6.2; LA,6.3; LA,6.5**

6.10 **SD,IP,R,TAD,NPA**
Describe behavior that provides warning signs of stress and/or depression; identify health services and agencies that specialize in teen health problems. **SS,6.5**

6.11 **SD,R**
Identify ways adults can support healthy choices for teens. **SS,6.5**

6.12 **SD,IP,R,TAD,NPA**
Identify personal goals; analyze the relationship between personal choices and attainment of goals. **S,6.77**

Relationships

6.13 **PHW,TAD,NPA**
Describe emotional changes that occur during adolescence; explain the relationship between self-esteem and personal lifestyle choices.

6.14 **SD,IP,PHW,TAD,NPA**
Describe qualities of responsible friends and how friends and peers influence personal decisions; explain and demonstrate the importance of building healthy social relationships.

6.15 **PHW**
Describe types of families and changes in families (roles and responsibilities) occurring over the past several decades.

6.16 **PHW**
Describe the effects of divorce, illness and death on family relationships.

6.17 **PHW**
Define terminology related to reproduction and fertilization; identify related myths; discuss sexual abstinence as the best choice to avoid HIV/STD's and unintended pregnancy. **S,6.28**

6.18 **SD,PHW**
Describe characteristics of responsible dating; distinguish between safe and risky behaviors in dating relationships; demonstrate the use of resistance skills when pressured to engage in risk behaviors.

6.19 **SD,IP,PHW,TAD,NPA**
Match typical adolescent problems with resources available to teens. **LA,6.143; LA,6.144; SS,6.5**

Tobacco, Alcohol and Other Drugs

6.20 **PHW**
Explain the short and long term consequences of tobacco use on the respiratory and cardio-vascular systems; describe other harmful effects of tobacco and secondhand smoke. **SS,6.6; S,6.10; S,6.14**

6.21 **PHW**
Compare current tobacco use data and health statistics which demonstrate the effects of tobacco use on health. **LA,6.24; M,6.19; M,6.27**

6.22 **SD,IP,PHW**
Analyze advertising strategies used by the tobacco industry to influence the use/sale of tobacco; develop an effective anti-tobacco message targeting peers (e.g., pamphlet, commercial, newsletter, school newspaper article, etc.). **LA,6.24; LA,6.28; S,6.19**

6.23 **SD,PHW,R,NPA**
Explain reasons for teen use and nonuse of tobacco; evaluate the truth/fallacy of tobacco use in stress management, weight loss, and personal image. **LA,6.24; LA,6.27; LA,6.28; S,6.11**

6.24 **PHW**
Compare the attitudes concerning tobacco use among different socioeconomic groups, cultures, and ages.

6.25 **SD,PHW,NPA**
Apply a decision making model to tobacco use; evaluate the consequences of tobacco use in relation to the achievement of personal goals.

6.26 **PHW**
Identify smoking cessation programs/resources for teens in the community. **LA,6.143; LA,6.144**

Nutrition and Physical Activity

6.27 **PHW,TAD**
Describe the health benefits of good nutrition and regular physical activity. **SS,6.31; S,6.38**

6.28 **PHW**
Analyze positive and negative factors that influence food choices; describe the influences of culture and environment on food choices and eating habits. **LA,6.28**

6.29 **PHW**
Identify special nutritional needs and current health issues of adolescents and the importance of adequate food intake and nutrition during adolescence. **S,6.26**

6.30 **PHW**
Demonstrate use of the Food Guide Pyramid and label-reading to identify healthy food choices; evaluate restaurant choices. **S,6.25**

6.31 **SD,PHW**
Evaluate a one-day food and physical activity record based on the Food Guide Pyramid and physical activity guidelines; develop a personal nutrition and physical activity plan.

6.32 **PHW**
Distinguish between fact and opinion in food advertising. **LA,6.12; LA,6.28**

6.33 **PHW**
Identify the dangers of fad diets; differentiate between media images and the range of normal body types in the population at large; discuss the impact of media on body image. **LA,6.28; S,6.19**

6.34 **PHW**
Identify community resources that provide opportunities for physical activity and referral and counseling on nutritional issues. **LA,6.143; LA,6.144; SS,6.5**

Computer and Technology

6.35 Explore the connections between health, technology, and career opportunities. **LA,6.159; S,6.80; S,6.97**

6.36 Select and use appropriate software and/or other technologies to locate and use reference sources to prepare a health report. **LA,6.161; 2,6.93; S,6.98**

6.37 Use a word processing program to produce a report on a health topic. **LA,6.155; LA,6.156; LA,6.157**

6.38 Identify examples of copyright law violations and possible penalties. **LA,6.158; S,6.94**

6.39 Use graphic software to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts. **LA,6.162; SS,6.61; SS,6.62**

Grade Seven Health Education

Skills practice, improvement and application in stress management, positive communication skills, conflict resolution, decision making and refusal skills provide the potential for guiding seventh graders through one of the most difficult developmental periods and for helping students distinguish between normal transitional behaviors that are developmentally enhancing and those behaviors that can be risky or lead to unforeseen consequences. Drug, alcohol and pregnancy prevention should focus on correcting erroneous perceptions of the prevalence and acceptability of behaviors, establishing conservative group norms and establishing or reinforcing perceived personal susceptibility to the consequences of risk-taking behavior. Students demonstrate responsible personal health choices and competence with skills for developing positive relationships. Students investigate the relationship of personal diet and physical activity to good health and disease prevention. Multiple teaching strategies and activities enhance the student's experience and perceived relevance of health education. Students learn to access and use available information and services to enhance and advocate for health.

Skills Development

7.1 **IP,PHW,R,TAD,NPA**
Define stress; analyze the relationship of stress to personal health, family health and relationships. **SS,7.24; S,7.29**

7.2 **IP,PHW,R,TAD,NPA**
Explain the impact stress has on injuries, illness and premature deaths (e.g., depression, stroke, ulcers, headaches).

7.3 **IP,PHW,R**
Describe behavioral tendencies and/or stress-induced situations that may require professional health services (e.g., violent temper, child and spouse abuse).

7.4 **IP,PHW,R,TAD,NPA**
Identify ways individuals and families can reduce stressful situations; experiment with activities that may lessen the development of personal stress. **LA,7.18; SS,7.24**

Injury Prevention

7.5 **PHW,R,TAD,NPA**
Contrast the relationship among healthy behaviors, personal responsibility, and the prevention of injury.

7.6 **SD,PHW,R,TAD,NPA**
Demonstrate strategies to manage conflict and stressful situations.

7.7 **PHW,R**
Describe causes of conflict among youth in schools and communities. **SS,7.24**

7.8 **PHW,R,TAD**
Analyze environmental factors contributing to violence; discuss barriers to violence prevention.

7.9 **PHW**
Identify community resources and services for violence prevention. **LA,7.146; SS,7.18**

Personal Health and Wellness

7.10 **IP,TAD,NPA**
Identify health services and health products available to teens. **SS,7.56**

7.11 **IP,R,TAD,NPA**
Analyze influences on personal health decisions (e.g., media, culture, peers). **LA,7.36; SS,7.24**

Relationships

7.12 **PHW,TAD**
Analyze the relationship between responsible behaviors and the prevention of unintended pregnancy and HIV/STD's (e.g., sexual abstinence). **M,7.28**

7.13 **IP,PHW,TAD,NPA**
Identify ways to build positive personal relationships and demonstrate care and affection without engaging in sexual activity. **LA,7.2**

7.14 **PHW**
Identify methods of HIV/STD transmission and ways to prevent their spread. **S,7.27**

7.15 **IP,PHW,TAD**
Compare behavior patterns of safe and risky dating relationships (e.g., group dating vs. car dating).

Tobacco, Alcohol, and Other Drugs

7.16 **PHW**
Identify the location of health services for individuals with alcohol and other drug abuse problems (e.g., Alcoholics Anonymous, health clinics). **SS,7.18**

7.17 **IP,PHW**
Explain the relationship between the use of alcohol and other drugs and the incidence of disease, illness and premature death. **LA,7.28; M,7.19; S,7.17; S,7.29**

7.18 **IP,PHW**
Analyze the impact of media influences related to alcohol and other drug use, including illegal, prescription and over-the-counter medications. **LA,7.36; SS,7.56**

7.19 **PHW,R**
Describe the effect of alcohol and other drug use on interpersonal communication and the ability to build and maintain healthy relationships.

7.20 **PHW,R**
Analyze the influence of peers, family, heredity and lifestyle on decisions concerning alcohol and other drug use; describe ways families and friends can be supportive of a drug-free lifestyle (e.g., family meetings and rules, listening skills). **LA,7.36; SS,7.24**

7.21 **SD,IP,PHW,R,NPA**
Practice responsible personal health choices, communication skills, and decision making skills to avoid alcohol and other drug use (e.g., refusal skills, assertiveness).

Nutrition and Physical Activity

7.22 **PHW**
Describe the relationship of dietary choices and physical activity habits to prevention of disease and development of positive self concept; explain the relationship of family history and disease. **LA,7.28; SS,7.30; SS,7.31; S,7.29**

7.23 **PHW**
Analyze personal diet by listing nutritional information regarding calories, fats, sodium and sugar content of food choices. **S,7.3**

7.24 **PHW**
Investigate current health information regarding weight management; evaluate fad diets using the information discovered. **LA,7.36; S,7.11; S,7.19**

7.25 **PHW,TAD**
Identify strategies to prevent behaviors that could result in eating disorders; locate services available for eating disorders.

7.26 **PHW**
Demonstrate ways to improve physical activity habits; list services and products available to enhance physical activity. **SS,7.18; SS,7.56**

7.27 **PHW**
Define "recommended daily allowances (RDA's)"; research information on RDA's and Dietary Guidelines for Americans to use in developing model nutritional plans.

Computer and Technology

7.28 **PHW,NPA**
Analyze the impact of technology on physical activity.

7.29 **IP,PHW,R,TAD,NPA**
Discuss the confidentiality of medical data and identification of reliable and valid sources of information and discriminate between ethical and unethical access to information. **LA,7.167**

7.30 **IP,PHW,R,TAD,NPA**
Use appropriate software to practice making predictions, inferences, and hypotheses from charts, graphs and tables. M,7.86

7.31 **SD**
Identify technological skills required for various health careers. **LA,7.168; S,7.91**

Grade Eight
Health Education

The eighth grade health education objectives provide opportunities for students to practice using decision making, communication skills and goal setting in role-played or simulated situations that outline the importance of taking responsibility for individual actions. Consequences of poor decisions are examined closely in relationship to a variety of important risks and strategies to enhance personal health and wellness. Students examine violence prevention and develop strategies to promote safety among themselves and others. Discussion of the negative consequences of drug, alcohol, and tobacco use and sexual activity are important components of the eighth grade health education curriculum. Multiple teaching strategies and activities enhance the student's experience and perceived relevance of health education. Students learn to access, use, critically evaluate and apply health information and services.

Skills Development

8.1 **IP,PHW,R,TAD,NPA**
Discuss the importance of taking responsibility for decisions made during adolescence; examine the relationship between teen decisions and opportunities in adulthood. **SS,8.13; S,8.3; S,8.79**

8.2 **IP,PHW,R,TAD,NDA**
Evaluate the cause and effect relationship of decisions and stress; discuss coping with the consequences of decisions. **S,8.19; S,8.30**

8.3 **IP,PHW,R,TAD,NPA**
Demonstrate a decision making process to make quick, effective decisions in difficult situations (e.g., refuse the invitation to an unsupervised party); debate the best strategies for avoiding these situations. **LA,8.12; S,8.3; S,8.19**

8.4 **IP,PHW,R,TAD,NPA**
Demonstrate the ability to communicate ideas and work together to achieve a common goal (e.g., cooperative learning group). **LA,8.2; LA,8.5; SS,8.13; S,8.3; S,8.10; S,8.19; S,8.26**

8.5 **IP,PHW,R,TAD,NPA**
Describe benefits of goal setting to achieve long-range aspirations; develop strategies to overcome roadblocks. **S,8.3**

Injury Prevention

8.6 **PHW,TAD**
Identify reasons individuals become depressed and/or consider suicide; describe the referral procedures for these health issues. **SS,8.18**

8.7 **PHW,R,TAD,NPA**
Identify factors in the home, school and community that decrease violence; describe gang-like and other abusive behaviors and their harmful effects; identify the behavioral characteristics of perpetrators and victims of violence. **M,8.16; SS,8.18**

8.8 **PHW,R**
Examine ways conflicts can be resolved; identify barriers to communication and potential triggers for violent behavior; list examples of non-verbal communication and discuss its use to de-escalate potentially violent situations. **LA,8.12**

8.9 **PHW**
Identify hunting/firearm safety procedures (e.g., Department of Natural Resources Hunter Safety Program).

8.10 **SD,PHW**
Design personal strategies to avoid injury in a motor vehicle, on a bicycle, in a fire and during water-related activities. **S,8.3**

8.11 **SD,PHW**
Develop a family/school evacuation plan and other emergency procedures to follow in the event of fire or other catastrophe.

Personal Health and Wellness

8.12 **IP,TAD**
Analyze the relationship between alcohol and other drug use and behavior. **LA,8.142; SS,8.18; S,8.17; S,8.30**

8.13 **SD,IP**
Demonstrate first aid procedures and link with local community resources.

8.14 **IP,R,TAD,NPA**
Evaluate the importance of peer perceptions, family and media influences (e.g., "Just Do It" and "No Fear" logos) on risk taking behaviors. **LA,8.30**

8.15 **SD,R**
Propose strategies to enhance connections between adolescents, school and community.

8.16 **SD,IP,R,TAD,NPA**
Discuss methods of advocating for personal, family and community health. **SS,8.13; SS,8.14; SS,8.15; S,8.3; S,8.79**

Relationships

8.17 **PHW**
Compare the safety and risks of a variety of pregnancy prevention strategies (e.g., abstinence, condom use, oral contraceptives); discuss the advantages of abstinence from sexual activity. **LA,8.22; M,8.16; M,8.30; S,8.17; S,8.19; S,8.30; S,8.31**

8.18 **IP,PHW,TAD,NPA**
Explain the risks and consequences of sexual activity and/or unprotected sex (e.g., teen pregnancy, HIV/STD's); examine the influences of home, school and community on the choices teens make regarding sexual activity. **LA,8.12; M,8.16; M,8.30**

8.19 **PHW**
Analyze the impact of teen pregnancy/having a baby on a teenager's social activity, daily routine, and growth and development.

8.20 **PHW**
Analyze current state and national teen pregnancy statistics to determine the financial burdens of teen pregnancy to individuals and society. **LA,8.22; M,8.16; M,8.28; M,8.30; SS,8.5; SS,8.8**

8.21 **PHW**
Examine myths and misinformation that affect sexual decision making of teens; compare the perceptions of norms for sexual activity by society, family, peers and self. **LA,8.12; LA,8.27; S,8.30; S,8.31**

8.22 **IP,PHW,TAD**
Examine the relationship between alcohol and other drug use on sexual activity; describe the effects of tobacco, alcohol and other drug use on the fetus (e.g., fetal alcohol syndrome, low-birth weight). **SS,8.5; S,8.19**

8.23 **IP,PHW**
Analyze media use of sexual images, words and behaviors to promote the purchase of products. **LA,8.30**

8.24 **SD,IP,PHW**
Demonstrate communication techniques and behaviors to resist pressures to engage in sexual activity.

8.25 Describe different cultural beliefs related to dating and marriage. SS,8.41; SS,8.54

8.26 PHW
Describe the importance of prenatal care as it relates to the health of the mother and baby; list resources for counseling, information and health services related to family planning and pregnancy. SS,8.18

Tobacco, Alcohol and Other Drugs

8.27 IP,PHW,R
Assess health problems and social consequences related to the use of alcohol, tobacco and other drugs. SS,8.5; SS,8.8

8.28 IP,PHW,R,NPA
Examine the importance of self-control and self-discipline in developing positive personal health behaviors (e.g., results of expressing anger, impulsive decisions, victim mentality).

8.29 IP,PHW,R,NPA
Examine factors that promote a responsible friendship; differentiate between constructive and destructive elements in a relationship.

8.30 IP,PHW
Develop counter-advertising messages for alcohol, tobacco and other drug use, including illegal, prescription and over-the counter medications.

8.31 PHW
Debate the benefits of remaining drug-free; examine reasons drug use will interfere with personal future plans. M,8.16

Nutrition and Physical Activity

8.32 SD,PHW
Explain the relationship between food intake, physical activity and energy balance in weight management; calculate the number of calories needed to maintain weight (based on physical activity level). SS,8.36; S,8.35; S,8.68

8.33 PHW
Define types of inadequate nutrition (e.g., hunger, undernutrition, overnutrition) and explain their effects on health, physical appearance and performance. SS,8.5; SS,8.18

8.34 IP,PHW
Compare nutrient needs at various life stages; identify special nutritional concerns associated with pregnancy, athletics, dieting and vegetarianism.

8.35 SD,PHW
Use food labels and nutrient value tables to determine the calorie and nutrient content of food choices; complete a personal dietary assessment. M,8.8

8.36 SD,PHW
Demonstrate meal planning using recommended servings from the Food Guide Pyramid and national dietary guidelines (e.g., Dietary Guidelines for Americans, Recommended Dietary Allowances).

Computer and Technology

8.37 PHW,IP,NPA,TAD
Use available technologies to gather current information about specific health issues. LA,8.144; S,8.98

8.38 Use a spreadsheet and/or database to sort and search data, set up formulas, create graphs and analyze health data. LA,8.148; M,8.57; S,8.86; S,8.95; S,8.97

8.39 **PHW,IP,NPA,TAD**
Identify and discuss the impact technological advances have had on the health of West Virginians (e.g., access to health care, availability of health information). **SS,8.40; SS,8.54; SS,8.68; S,8.83**

8.40 Research technological skills needed for various health careers. **LA,8.149; S,8.96**

8.41 Use a calculator to perform mathematical functions in data analysis of health information. **S,8.88; M,8.49; M,8.51**

8.42 Use appropriate software to practice making predictions and drawing conclusions in health investigations. **M,8.46; S,8.91; S,8.92; S,8.93**

8.43 Use appropriate software to analyze personal health behaviors.

Secondary Health Education

This program of study builds on the foundation established in the K-8 health education curriculum and prepares students to become wise health care consumers and responsible, productive citizens. The relationships among personal, community and world health and economic, cultural, sociological and biological factors are examined in interdisciplinary discussions, debates and class projects. Students examine personal health choices and the connection to the world of work and assumption of adult roles. In-depth analysis of current health issues and concepts coupled with school-wide opportunities that promote and reinforce the importance of good health and positive choices need to be coordinated to have the greatest impact on adolescent behavior. Instruction continues to focus on prevention of all risk behaviors, however instruction must also emphasize limiting the negative consequences of high risk behavior and promote values and norms that are age-appropriate and realistic. Students should have a personal perception of risk, the ability to recognize and resist social pressures and the skills to build positive social relationships. ("E" denotes Economics, "C" denotes Civics, "AM" indicates Applied Mathematics).

Skills Development

HE.1 **IP,PHW,R,TAD,NPA**
Investigate career opportunities in health care and human services. **E.3; S,9.21; S,9.100**

HE.2 **IP,PHW,R,TAD,NPA**
Review the steps in the decision-making model and compare ways to communicate decisions by evaluating recent decisions (was your decision making effective?). **LA,9.1; S,9.7; S,9.12**

HE.3 **IP,PHW,R,TAD,NPA**
Analyze behavioral choices and their influence on goal achievement. **LA,9.89; S,9.8; S,9.10**

HE.4 **IP,PHW,R,TAD,NPA**
Complete a personal health assessment and detail behavioral changes and strategies to enhance health and reduce risk. **S,9.7; S,98; S,9.12**

HE.5 **IP,PHW,R,TAD,NPA**
Give examples of decisions that affect a person's quality of life. **LA,9.89; SS,9.35**

HE.6 **IP,PHW,R,TAD,NPA**
Identify factors relating to intrapersonal skills and interpersonal skills and assess the importance of each. **LA,9.1**

HE.7 **IP,PHW,R,TAD,NPA**
Demonstrate the ability to work cooperatively and resolve conflict peacefully. **S,9.12; SS,9.15**

Injury Prevention

HE.8 **SD,PHW**
Demonstrate basic cardio-pulmonary resuscitation and the Heimlich procedure techniques.

HE.9 **SD,PHW**
Differentiate between emergency situations that are life-threatening and those that are not and list action steps for each situation. **S,9.8**

HE.10 **PHW,TAD**
Analyze the causes of motor vehicle accidents and construct a detailed proposal regarding how they can be avoided (e.g., human factor, mechanical, pedestrian, driving under the influence of alcohol/drugs, etc.). **LA,9.40; AM,1.11; AM,2.10; AM,2.11; SS,11.15; SS,11.16; C.5; C.6; S,9.8; S,9.10; S,9.12**

HE.11 **SD,PHW**
Demonstrate first aid skills and simulate responses to emergencies.

HE.12 **PHW**
Develop safety procedures for recreational activities (e.g., boating, bicycling, hunting, firearm safety, etc.). **S,9.12**

HE.13 **PHW**
Identify emergency procedures for disaster situations and prepare a plan outlining steps to follow in these emergencies. **SS,11.16; S,9.12**

HE.14 **PHW,TAD,NPA**
Describe occupational safety procedures that provide protection from short and long term health-related injuries and illnesses in a variety of work settings. **E.17**

Personal Health and Wellness

HE.15 **IP,R,TAD,NPA**
Investigate facilities, types of activities, services and programs available within the community to promote a healthy lifestyle (e.g. gymnasiums, health centers, HMO's, community health facilities). **LA,9.79; LA,9.80; SS,9.16; SS,11.23; E.1; E.2; E.3; E.4**

HE.16 **IP,R**
Identify the major causes of pollution that may cause health risks (e.g., water, air, land, noise). **SS,9.35; SS,11.36; S,9.26**

HE.17 **SD,IP**
Develop a community action plan to improve pollution concerns (e.g., recycling plant). **SS,9.11; SS,9.8; SS,9.16; SS,11.16; E.17; C.2; S,9.7; S,9.97**

HE.18 Analyze the effects of overpopulation on personal and community health. **AM,1.11; AM,2.10; S,9.27**

HE.19 **IP,TAD,NPA**
Define consumer health and identify the rights and benefits of the consumer (e.g., safe and effective products, proper advertising, etc.). **SS,9.22; SS,9.23; SS,9.24; C.2; C.6; C.7**

HE.20 **IP,TAD**
Formulate precautions and directions for purchasing and taking prescription and over the counter medications.

HE.21 Define procedures and terminology regarding medical payments (e.g., insurance co-payment, assisted, premiums, deductible). **LA,9.35; SS,9.16; SS,11.45; E.1; E.2; E.3; E.4; E.10**

HE.22 **IP,R,TAD,NPA**
Analyze the role of individual responsibility for enhancing health. **SS,10.3; SS,11.10; SS,11.23; E.17; C.2; C.5; C.6**

HE.23 **IP,R,TAD,NPA**
List behaviors, both positive and negative, that impact body functions, organs and systems and explain how lifestyle factors influence health (dietary, physical activity, injury, habits, etc.). **SS,9.35; S,9.7; S,9.10; S,9.25**

HE.24 **IP,R,TAD,NPA**
Analyze how the environment influences the health of the community, family and individual. **SS,9.35; SS,10.36; S,9.26**

HE.25 **IP,TAD,NPA**
Analyze over-the-counter drugs and their impact on personal health.

HE.26 **SD**
Prepare guidelines and procedures for selecting a physician and/or health care provider and develop a list of patients rights and responsibilities. **SS,9.16; E.1**

HE.27 Identify the purpose and procedures of various physical examinations. S,9.25

HE.28 SD,IP,R,TAD,NPA
Research and propose methods of changing unhealthy behaviors and the expected long term benefits. S,9.7; S,9.8; S,9.12

HE.29 IP,R,TAD,NPA
Give examples of individual involvement that can improve the health of the community. SS,9.8; SS,9.9; SS,9.11; SS,9.35; SS,11.15; SS,11.16; C.2

HE.30 IP,R,TAD,NPA
Review the positive and negative effects of stressors on the body, and complete a personal stress management journal. LA,9.39; S,9.24; S,9.25

HE.31 R
Propose prevention strategies for communicable vs. non-communicable diseases. S,9.26; S,9.25

HE.32 SD,IP,R,TAD,NPA
Analyze factors that influence an individual's choices of health products and services (e.g.., advertising, cost, availability, etc.) and practice selecting these services or products. SS,9.16; SS,9.24; E.1; E.2; E.3; E.4; S,9.7

Relationships

HE.33 PHW
Categorize examples of personal respect for self and others and related behaviors and consequences; practice skills to promote healthy relationships and wise health decisions in high pressure situations. S,9.8; S,9.10

HE.34 PHW
Describe elements that healthy families have in common.

HE.35 SD,IP,PHW
Evaluate violent situations and determine how best to avoid and/or resolve these situations. S,9.12

HE.36 SD,IP,PHW
List and explain examples of defense mechanisms. S,9.24; S,9.25

HE.37 PHW
Identify Maslow's hierarchy of needs and relate to stages of life.

HE.38 PHW
Develop a community resource guide identifying local contacts for health related issues. LA,9.29; LA,9.80

HE.39 PHW
Analyze factors that influence perceptions of the significance, or credibility of data or health information.

HE.40 PHW
Analyze current national, state and local statistics addressing sexual activity (e.g., teen pregnancy, HIV/AIDS/STD's) develop prevention strategies for the community. E.17; S,9.10; S,9.12

Tobacco, Alcohol, and Other Drugs

HE.41 IP,PHW,NPA
Determine and chart the effects of alcohol on the body. S,9.25

HE.42 PHW
Determine and chart the effects of tobacco on the body. S,9.25

HE.43 SD,IP,PHW,R,NPA
Analyze the factors that influence decisions dealing with the use of tobacco, alcohol and other drugs; recall and demonstrate effective refusal skills to impact risky situations. SS,9.35; E.17; S,9.12

HE.44 **IP,PHW,R**
Assess the effects of drugs (prescription/over-the-counter and illegal) on the body and the dangers of misuse. **S,9.25**

HE.45 **IP,PHW**
Analyze media influence on tobacco and alcohol and develop counter-advertisements for peer education. **LA,9.40; S,9.12**

HE.46 **SD,PHW,R**
Compare societal perceptions of various drugs to their known dangers and design an educational campaign which addresses misconceptions. **LA,9.7; LA,9.34; LA,9.40; LA,9.66; S,9.25**

HE.47 **PHW**
Analyze the extent to which there is an "alcohol or other drug problem" in the school(s).

HE.48 **PHW,R,NPA**
Create strategies that provide alternative activities to alcohol use.

HE.49 **IP,PHW,R**
Compare and evaluate the economic impact of alcohol and substance abuse to a healthy lifestyle. **SS,11.23**

Nutrition and Physical Activity

HE.50 **SD,PHW**
Investigate the relationship between age, weight, and body fat percentage and discuss advantages of health promoting behaviors in weight loss and maintenance. **AM,1.11; AM,2.10**

HE.51 **PHW,TAD**
Analyze media influence on body image and dietary practices (e.g. risk of eating disorders). **S,9.7**

HE.52 **PHW**
Design a plan that will increase the amount of time expended daily and weekly in physical activity in the school and community. **S,9.12**

HE.53 **SD,IP,PHW,R,TAD**
Develop and analyze methods of changing undesirable patterns of behavior (e.g., sedentary lifestyle, eating disorders). **S,9.8; S,9.12**

HE.54 **SD,PHW**
Evaluate the concepts of balance, variety and moderation using the Food Guide Pyramid and national dietary guidelines; develop a personal plan that exemplifies these concepts. **S,9.8**

HE.55 **PHW**
Evaluate personal health and the importance of physical activity and healthy eating habits in maintaining desired personal health qualities. **LA,9.89; SS,9.35; S,9.12**

HE.56 **PHW**
Evaluate nutrition advice, diet plans and advertising as each relates to national guidelines for a healthy diet; predict associated short and long term effects. **S,9.8; S,9.12; S,9.24; S,9.25; S,9.26**

HE.57 **PHW**
Relate dietary practices to the prevention and control of chronic disease and other health problems. **SS,9.35; E.17; S,9.25; S,9.26**

HE.58 **SD,IP,PHW,R,TAD**
Compare the advantages and disadvantages of vitamin and mineral supplements to eating a balanced diet. **S,9.24; S,9.25**

Computer and Technology

HE.59 **SD,IP,PHW,R,TAD,NPA**
Demonstrate how to access health information through the use of technology (e.g., www.,WV YRBS, CDC, journals, articles and profiles). **LA,9.75; LA,9.86; LA,9.95; S,9.20; S,9.103**

HE.60 **IP,TAD,NPA**
Compare and detail medical advances that have improved personal health (e.g., personal hygiene, cure for polio, cancer, smallpox, tuberculosis, diabetes). **SS,9.35; S,9.7; S,9.73; S,9.96**

HE.61 **SD,IP,PHW,R,TAD,NPA**
Demonstrate skills in the use of word processing, data bases, spreadsheets, graphics and telecommunication. **S,9.104**

HE.62 **SD,IP,PHW,R,TAD,NPA**
Collect, analyze and display data using computers and other electronic technology. **S,9.102**

HE.63 **SD,IP,PHW,R,TAD**
Demonstrate the use of the Internet to advocate and communicate regarding health issues. **LA,9.40 LA,9.48; S,9.103; C.21**

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FISCAL NOTE WORKSHEET
(Submit 4 Copies)

D _____ DRAFT NO _____ BILL NO _____ RESOLUTION NO _____

ECT Policy 2520: Instructional Goals and Objectives FUND _____

RCE OF REVENUE: ☐ GENERAL FUND ☐ SPECIAL ☐ OTHER (SPECIFY) _____

OF ESTIMATE BASED ON: ☐ AN ORIGINAL ESTIMATE ☐ BUDGET BILL ☐ OTHER (SPECIFY) _____

ME ESTIMATE BASED ON: ☐ AN ORIGINAL ESTIMATE ☐ BUDGET BILL ☐ OTHER (SPECIFY) _____

SHOW OVER-ALL EFFECT IN ITEMS 1 AND 2 & GIVE EXPLANATION OF BREAKDOWN BY FISCAL YEAR INCLUDING LONG-RANGE EFFECT

	ANNUAL		FISCAL YEAR		
FFECT OF PROPOSAL	INCREASE	DECREASE	CURRENT	NEXT	THEREAFTER
ESTIMATED TOTAL COST	$	$	$	$	$
PERSONAL SERVICES CURRENT EXPENSES REPAIRS/ALTERATIONS EQUIPMENT OTHER	$	$	$	$	$
ESTIMATED TOTAL REVENUES	$	$	$	$	$

EXPLANATION OF ABOVE ESTIMATES (INCLUDING LONG-RANGE EFFECT):

There will be no increase in costs due to this policy.

AGENCY

AUTHORIZED REPRESENTATIVE

April 10, 1997

ARTS INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG
May 1, 1997 - June 4, 1997

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL		
May 13, 1997	Carol M. Hall	Much in favor of this addition to the curricula.		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Most art teachers are aware of correlations with other subjects. General teachers who teach art with or without specialists could greatly benefit if all subjects' instructional objectives were cross listed with the arts.		
May 16, 1997	Fran Schoolcraft Wheeling Park High School	Finally, guidelines for the areas of Theatre and Dance! Could there be some theatre goals for K-8?		
May 20, 1997	Michael Green North Elementary School	My concern is to make sure all schools have the resources and accesses to do the Program of Study.		
May 23, 1997	Eugenia Price Sylvia Elementary School	Are we going to receive funding for instruments to help us teach these concepts?		
May 29, 1997	Faculty Senate Cross Lanes Elementary	There is a lack of contemporary art - which is more familiar to a child's work and life's experience to compare with past art eras and styles (although curriculum merely suggests works of certain artists). - Art History -		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	Implementing these goals throughout all schools in West Virginia is crucial. Include values that communicate to those with little or no background in the arts.		

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N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College (continued)	Theatre (creative dramatics) is one of the most powerful teaching/learning tools available. Why is this material not included in the elementary curriculum? Why are there no theatre objectives in middle school?		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	Emphasize more music reading skills in lower grades.		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	Are the other subjects correlated to the "Arts." They are not correlated among themselves. Where is art for the sake of pure art!		
June 3, 1997	Linda Elmer Marion County Art Teacher	This has been well organized. I feel, as an art instructor, that our goals now show our correlation with a student's intellectual growth and the entire curriculum.		

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N	=	No Response	-	=	Negative
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		INSTRUCTIONAL GOALS		
		Dance		
May 13, 1997	Carol M. Hall	Those who put together the people who came up with the Arts Programs of Study did an outstanding job. This looks like a really excellent program. However, I wondered if the added teachers it seems will be necessary can be afforded by the less affluent school districts?		
May 14, 1997	John D. Kerzic Assistant Principal Independence Jr. High School	1. Who will teach Dance? 2. What are the certifications required? 3. Will additional staff be hired? 4. At what cost? 5. What level of participation is necessary in order to keep a class in the schedule?		
May 15, 1997	Jack C. McClanahan Kanawha County Schools	It is indicated that there will be no additional costs in offering dance at our schools. I believe there will be additional costs in hiring staff and providing the appropriate facilities when a school system as large as Kanawha County struggles to provide theatre classes, there will be a major problem in providing enough staff for dance electives.		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	Dance improves coordination and poise.		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	Dance skills are maintained here for the lower grade levels - where are they in the breakdown of objectives? I found music and visual arts - no dance - is this not an "art" in the early years.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Music		
May 13, 1997	Carol M. Hall	Those who put together the people who came up with the Arts Programs of Study did an outstanding job. This looks like a really excellent program. However, I wondered if the added teachers it seems will be necessary can be afforded by the less affluent school districts?		
May 14, 1997	John D. Kerzic Assistant Principal Independence Jr. High School	Isn't 4 levels going a little overboard - other than required courses, I cannot think of a single elective offering four levels of instruction.		
May 14, 1997	Todd Barnette Sherman High School	New Goal - Learn to enjoy music as the independent art form it is. Appreciate art for its own worth and not try to justify its existence for Schools to Work or Goals 2000 by demonstrating its "business" value.		
May 23, 1997	Eugenia Price Sylvia Elementary School	I would like to see a 3-12 Choral Music Area of Study and a 4-12 Band Area of Study.		
May 28, 1997	Gilbert Middle School Gilbert, WV	This is all well and good. Who's supposed to teach it? In Stafford District in Mingo County, only one music teacher is hired next year to teach all music. Regular classroom teachers, although supposedly versed in music, do not teach it. Many won't even sing with students. Unless teachers and funds are provided to implement the plan, it'll look nice on paper and that's it.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
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A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Music		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	Studies have revealed music study increases intelligence.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV 26101	Music exercises the creative side of the brain, allowing the student to reach full human potential. K-4 music helps solidify academic skills through songs, movement, and the playing of instruments (math, language, social studies, etc.).		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV 24844	Need time allotment (minimum) for Band/ Choir - 30 minutes/wk. for Ensemble at Elementary, 90 min./wk. at Junior High.		

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N	=	No Response	-	=	Negative
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Theatre		
May 13, 1997	Carol M. Hall	Those who put together the people who came up with the Arts Programs of Study did an outstanding job. This looks like a really excellent program. However, I wondered if the added teachers it seems will be necessary can be afforded by the less affluent school districts?		
May 16, 1997	Fran Schoolcraft Wheeling Park High School	Goals are general enough to suit all types and levels of programs. Just need some general goals for K-8.		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	Theatre provides experiential education in teamwork and in preparing to cope with accelerating change.		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	Where are the theatre objectives? Is theatre not an "Art."		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Visual Art		
May 13, 1997	Carol M. Hall	Those who put together the people who came up with the Arts Programs of Study did an outstanding job. This looks like a really excellent program. However, I wondered if the added teachers it seems will be necessary can be afforded by the less affluent school districts?		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Under **CHOOSING & EVALUATING** . . . own works by observing "and analyzing" the visual environment & the work of others. Under **MAKING CONNECTIONS** . . . relationships between visual arts & other disciplines or "art disciplines as well as other subject areas in the curriculum "contribute to understanding . . . . Make statement content compatible with heading. Right now they say two different things.		
May 20, 1997	Michael Green North Elementary School	After reviewing the Art section; I feel this section is a strong list of objectives and goals in each grade level. Would also like to see an honors' or gifted art programs (magnet school for arts) adopted in counties where students that show major interest and talent are exposed to mediums their schools cannot provide. This would encompass K-12 areas.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Visual Art		
May 27, 1997	Anona Berry Buckhannon, WV	1. I believe it is important to preface the beginning description of goals with; <u>The subject of Visual Art includes the content areas of Art History, Art Criticism and Aesthetics in correlation with Art Production procedures and inquiry processes.</u> Reason: Six content headings refer to this premise. 2. In last sentence of description, change beginning of sentence to read; <u>Because motivation and sources for visual communication originate from all knowledge (disciplines) and life experience,</u> it is necessary that students are given a balanced and sequential education in visual art. Reason: Feel ideas are not parallel in this sentence or inclusive of other disciplines and implies only importance of visual art today. 3. 6th goal heading, change to; <u>Making Interdisciplinary Connections.</u> Reasons: Clarifies inclusion of other Arts and core subjects in child art studies.		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	This is a visual age and everyone needs to understand visual messages.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		INSTRUCTIONAL GOALS (continued)		
		Visual Art		
June 3, 1997	Linda Elmer Marion County Art Teacher	*Could we say: In order to carry out these goals, effectively, that certified visual art instructors must be used? I cannot see any other teacher classification that will be able to do this. *Under making connections . . . (7) Could a reference to other curricular areas and the work place be used and would it be appropriate? *(p.7) under understanding the visual arts . . . "add" visiting exhibits and through the exhibition of their work (be specific).		

ACTION			TYPE		
N	=	No Response	-	=	Negative
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
DOCUMENT GUIDE				
May 16, 1997	Fran Schoolcraft Wheeling Park High School	Put together well. Easy to use.		
May 27, 1997	Anona Berry Buckhannon, WV	Like This!		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	(VA) Visual Arts, (D) Dance, (M) Music, (CHM) Choral Music, (IM) Instrumental Music, etc. Why are these not correlated? Why are the other disciplines not correlated to other subject areas.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

\- = Negative
\+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Music		
May 20, 1997	Boone County Kindergarten Academy P.O. Box 730 Uneeda, WV 25205	If such skills as K.13, K.14, & K.15 are to be taught, a certified music teacher should be made available to ALL schools (especially small schools).		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with all goals set forth but need the melodic instruments necessary for K-7.		
May 28, 1997	Gilbert Middle School Gilbert, WV	I only introduce two and three line staffs with s-m. I don't introduce 𝄞 until later. My kindergarten students still have trouble finding a steady beat; therefore, it is difficult to read ♩ ♫ and accurately. I feel this is best saved for first grade.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	Fine		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	◇ - many of the objectives in the early years do build workplace skills.		

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A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	K.3 Missing e.g. - e.g., paint versus cut paper shapes as distinguished from shapes (2-D). Differences in paper are not 2-D media. K.9 . . . explore forms (3-D) K.13 Shapes (2-D) & forms (3-D)		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	It would be nice to see how the skills build on each other. A different format - similar to the national goals for the Arts would be more useful.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Music		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	1.13 Writing skills are very limited in first grade students. They will have difficulty writing a poem.		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with all goals set forth but again need the melodic instruments necessary for 1-7.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	Add - distinguish between speaking and singing voice. 1.13 - Change to create a song for an original or existing poem or both. 1.25 - Distinguish between speaking and singing voice, not head voice.		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV	1.15 - half note ( ) not taught in series till Grade 2.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Looks to be in pretty good shape. In general statement at end add - . . . theatre, music, as well as other subject areas. (math and language arts and social studies are also listed as content in objectives)		

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N	=	No Response	-	=	Negative
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Second Grade: Music		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	This is also a difficult task for 2nd graders. It is not an objective to allow for vocal expression at this age - sometimes blending.		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with all goals set forth but again need the melodic instruments for 2.4, 2.5, and 2.6.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV 26101	Please begin music reading skills now or better define what skills are to be taught here.		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV	2.27 - not currently covered in series until Grade 5.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Second Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Opening statement, line 4 . . . as they see images in art. Line 5 . . . and relate to other subject areas. 2.1 e.g., . . . two different techniques ~~media~~. 2.13 people, "animals," ~~creatures~~, plants. 2.16 same as 2.13. (4.1 - all) Jeanne? Shouldn't these be split 4.3 into 2 separate sentences? 4.5 4.6		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Music		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	3.20 - This is pretty lengthy. What about rondo form?		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with the goals but would need the instruments for goals 3.5 through 3.9.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	Add Introduction into Musical Theatre prerequisite to 3.2.		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV 24844	3.10 - minor tonality not covered till 5th or 6th grade in series. 3.19 - sharps and flats covered in 6th grade. 3.25 - a bit young at third grade to critique vocal performance.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Looks pretty good.		
May 27, 1997	Anona Berry Buckhannon, WV	Page 25, number 3.7 - Movement of figure as observed in dance, body positions, and facial expression/emotion is most important at this level. (Expressive quality of figure/face.)		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Music		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	4.9-4.12 - Schools must be provided with midi systems and computer software to accomplish these goals.		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with the goals.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	Fine		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV	4.14 - mixed meter not taught till grade 5 or 6.		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	4.1 - or "an" assemblage process to create an art project.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Music		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	5.25-5.28 - Where are the materials to teach these objectives?		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with the goals.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	5.4 - To do this you need to emphasize more round, partner songs in lower grades. 5.15 - Need more ground work in lower grades before they are ready for this.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	5.7 - demonstrate ~~the~~ knowledge of color "theory" by using . . .		
May 27, 1997	Anona Berry Buckhannon, WV	Page 33, 5:15 - Figure studies noting proportion here. Interested in achieving realistic qualities here.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Music		
May 23, 1997	Eugenia Price Sylvia Elementary School	I agree with the goals.		
May 30, 1997	Kelly Beckett Music Teacher Franklin Elementary Center Parkersburg, WV	6.21 - This needs to begin sooner - 4th or 5th grades.		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV	6.26 - must have a **SOURCE**, not currently covered in textbook.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

\- = Negative
\+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Looks O.K.		
May 27, 1997	Anona Berry Buckhannon, WV	Page 37, 6:14 - . . . and expressive qualities through gesture.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Seventh Grade: Music		
May 14, 1997	Todd Barnette Sherman High School	Will the state purchase dulcimers, guitars, etc. for students to use? Has anyone analyzed the amount of time the average students receives in music class?		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Seventh Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	O.K.		
May 27, 1997	Anona Berry Buckhannon, WV	Page 41, Introductory paragraph - third sentence, "Knowledge of art history is shown through research of artists' works from various time periods." (See 7:18)		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Eighth Grade: Music		
May 14, 1997	Todd Barnette Sherman High School	Will the state purchase dulcimers, guitars, etc. for students to use? Has anyone analyzed the amount of time the average students receives in music class?		
May 28, 1997	Gilbert Middle School Gilbert, WV	8.15 Electronic media? Having Orff instruments is a dream right now. The music books do not correlate with objectives.		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Eighth Grade: Visual Art		
May 16, 1997	Dr. Victoria Fergus West Virginia University	8.21 - perhaps refer to **West Virginia Resources for Teaching Art** -- one of the units is exclusively contemporary artists.		
May 27, 1997	Anona Berry Buckhannon, WV	Page 45, Introductory paragraph, second to last sentence. . . . writing about own artworks and art exhibitions. (see 8:18)		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Instrumental Music - Strings I - V		
May 28, 1997	Gilbert Middle School Gilbert, WV	Who's to teach strings? I'd love to see it.		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV	SI and SII - Appropriate, but not currently offered.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

\- = Negative
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0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Instrumental Music - Wind and Percussion I - IV		
May 14, 1997	Todd Barnette Sherman High School	Level II - WII.22 - This is perhaps a little too advanced for this age. General comment Level I - IV - Has anyone analyzed the average amount of time students received instrument instruction? If they do not have class everyday, it is impossible to accomplish many of these.		
May 23, 1997	Eugenia Price Sylvia Elementary School	I would like to see band offered in 4-12 grades.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

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0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Choral Music I - III		
May 23, 1997	Eugenia Price Sylvia Elementary School	I would like to see chorus offered 3-6 in Elementary.		
May 30, 1997	Pam Hunt Iaeger Elementary Iaeger, WV	CI.18 and CI.25-27 - not feasible when only given ½ hour per week to practice - students cannot study Music History and prepare for performance in this length of time. My students have never seen an orchestra, classical performance - they like to sing - they must enjoy it - I try to incorporate pop literature to keep their interest.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Dance I - IV		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	Why is this program not offered in all West Virginia schools?		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

\- = Negative
\+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Orchestra I - IV		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Band - I - IV		
May 14, 1997	Todd Barnette Sherman High School	WV.1 - This is a requirement for the All-State Band. Students should be able to use scale sheet. Band II - WVI.2 - Same as above. Band II - WVI.4 - This is a goal that many college boards find difficult. Band III - WVII.6 - Will the state purchase this equipment?		
May 23, 1997	Eugenia Price Sylvia Elementary School	I would like to see band in 4-12 grades.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Chorus I - IV		
May 23, 1997	Eugenia Price Sylvia Elementary School	Offer this starting in third grade.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

- = Negative
+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Piano I - IV		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	Must provide piano lab to teach piano.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Folk Music I - II		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Music Appreciation/History		
May 14, 1997	Todd Barnette Sherman High School	LI.7 - Is this for the average student taking music appreciation? LI.10 - Is the state going to buy this equipment?		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Music Theory/Composition		
May 14, 1997	Todd Barnette Sherman High School	LII.3 - This is a third year college class?		
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	Additional Staff - if we are to get serious about teaching		

ACTION

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TYPE

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Theatre I - IV		
May 16, 1997	Margaret Baker Artist in Residence Hillsboro, WV	I am a WV certified teacher. I also have an MFA in acting and directing. I was a theatre artist in residence for two years in Pocahontas County and one year in Greenbrier County. I've been performing and teaching drama for all ages for 17 years. I have some concerns about the goals and objectives for theatre. Many of the objectives are expressed with terms such as *analyze, identify, evaluate, explain, justify*. Theatre is often taught at the grade school level as if it is something which engages only the brain. The physical, emotional, and vocal aspects of the art form of acting are left to fend for themselves. Children are capable of learning to use their physical imagination. For example, they learn to move differently if they are walking through mud than through jello or hot sand. They are capable of creating the illusion that they are being blown about by the wind or drawn into a giant magnet. They can learn to change their physical shape to indicate the emotional state of a character or develop a different rhythm and style of walking, sitting, standing to match personality traits, prissy, tough, shy, bossy, perky, etc. Without props or costumes they can move in a way that lets the audience know that		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		INSTRUCTIONAL OBJECTIVES GRADES 9-12		
		Theatre I - IV		
May 16, 1997	Margaret Baker Artist in Residence Hillsboro, WV (continued)	move in a way that lets the audience know that they are a specific animal or fantastic creature. They can learn to exaggerate movement for humorous effect. Children can also learn to breath and project their voices from the diaphragms. They can learn to make a more resonant sound without screeching. They can improve their diction for clarity of performing verbally. At the high school level, students are capable of adding emotional dimension to a character and learning more subtle ways of assuming a new persona. They can alter tone and quality of voice and develop a body language which allows for a character's attitude, mood and condition changes in the course of a play. To truly understand the art of acting, students must learn to "doodle" with movement and sound the way a visual artist would doodle on paper. You probably prefer the word, *improvise*, but so often improvisation is seen as verbal and rewards the student who is verbally clever or can script write on his feet. There are many students who are verbally slow, but physically brilliant. I've seen students who break every rule of grammar in the book, but can move an audience to feel laughter, warmth, or sadness by		

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A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Theatre I - IV		
May 16, 1997	Margaret Baker Artist in Residence Hillsboro, WV (continued)	the use of primal sound as an instrument for emotion or use of a kinesthetic vocabulary. Theatre is about great literature. But great playwrights did not write plays to be read at a desk. They wrote them to be staged and performed. A living, moving, breathing picture is painted for the audience. An actor's carriage, stance, gestures, and physical pacing all support the emotional *subtext*, that which lies beneath the words. When students at the high school level brag to me that they know their lines, I say great, you've done about one tenth of the work you need to do. I am very pleased that West Virginia is not ignoring the importance of such an ancient art form in each child's education. It is widely acknowledged that plays help us learn about a culture, but they also let us know about the human condition. They show us how we "act" and we learn about ourselves. It is my hope that a study of Theatre Arts will address the true craft of acting. There is no better way to learn about plays.		
May 16, 1997	Fran Schoolcraft Wheeling Park High School	Well done.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Theatre I - IV		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	Performance experience is imperative.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		General Art I - IV		
May 16, 1997	Dr. Victoria Fergus West Virginia University	pg. 138 - last statement should clarify that specific studio objectives developed for county approval should incorporate the general objectives in this document. As written, it leaves a loophole for anything to be approved - unless this is the intent. Art GAI.4 shape/form ← 2D & 3D equivalent of each other - not considered separate elements in most texts.		
May 27, 1997	Anona Berry Buckhannon, WV	Making Interdisciplinary Connections		
June 3, 1997	Linda Elmer Marion County Art Teacher	Excellent depth of subject!		

ACTION			TYPE		
N	=	No Response	-	=	Negative
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Studio Art I - II		
May 16, 1997	Dr. Victoria Fergus West Virginia University	Looks fine.		
May 27, 1997	Anona Berry Buckhannon, WV	Making Interdisciplinary Connections		
June 3, 1997	Linda Elmer Marion County Art Teacher	It is good to see that workplace skills apply to this class.		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Art History/Appreciation		
May 16, 1997	Dr. Victoria Fergus West Virginia University	AH.3 - wording awkward - aesthetic; and sensory qualities, "and" historical events. The rest looks great.		
May 27, 1997	Anona Berry Buckhannon, WV	Making Interdisciplinary Connections		
June 3, 1997	Linda Elmer Marion County Art Teacher	Good use of DBAE approach to teaching this class. A product brings history to life.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
§126-44-4. SUMMARY OF THE INSTRUCTIONAL GOALS AND OBJECTIVES				
May 15, 1997	Ann Funkhouser East Hardy Early/Middle Childhood Center	OK - need money and staff as usual!		
May 23, 1997	Eugenia Price Sylvia Elementary School	Well defined and set up but band and chorus could be more supported in grades 3-6.		
May 27, 1997	Anona Berry Buckhannon, WV	Good		
May 30, 1997	Dr. Charles H. Swanson Professor Fairmont State College	The minimal attention to theatre suggests a lack of awareness of the power for teaching and learning inherent historically in theatre.		
June 2, 1997	Wanda Jo Kirchner South Charleston, WV	What happens to a student if they decide to take an "Arts I" course after the grade listed behind the title (i.e.) Art I (grade 9).		
June 3, 1997	Linda Elmer Marion County Art Teacher	Cross references are excellent proof of the arts' role in everyday living and the workplace. P. 137, paragraph 1 - Should we say -- four programs of "arts" study so no other "study" can be interpreted?		

JM/comtlog1

ARTS INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG
June 4 - June 13, 1997

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL		
June 4, 1997	Eileen M. Miller State Director West Virginia Thespians Magnolia High School New Martinsville, WV	Thank goodness we've finally recognized the importance of the arts in educating a "whole person." I sincerely hope that all elementary "specials" will be taught by certified teachers. Multi-subject classroom teachers are usually not qualified or motivated to teach the arts!		
June 4, 1997	S. Vickers Robert L. Bland Middle Sch. Weston, WV	The goals and objectives are excellent, but I question if they are realistic. It would take many hours and much money. Even then I question if all could achieve these goals.		
June 4, 1997	K. Brown Robert L. Bland Middle Sch. Weston, WV	I defer to Mrs. Vickers, Mr. Wolfe, and Mr. Woofter since they are the experts.		
June 4, 1997	J. Wolfe Instrumental Music Teacher Robert L. Bland Middle Sch. Weston, WV	I have thoroughly gone over and READ the (Draft) of Learning Outcomes for INSTRUMENTAL MUSIC and I agree whole heartedly with the Outcomes except that to successfully initiate these Outcomes . . . the Instrumental Music department here at Robert L. Bland Middle School will need to come up with thousands of dollars to make these Outcomes fly . . . where will the money come from?		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
GENERAL (cont.)				
June 4, 1997	Marcella Linger Principal Robert L. Bland Middle Sch.	These comments on the Arts Instructional Goals and Objectives were made by my arts teachers.		
June 5, 1997	David Bess Vice President of the West Virginia Music Educators Association and Associate Professor of Music at West Virginia University	As the executive summary indicates (see 126-44-4), the instructional goals and objectives in the arts were developed in a three-year project involving writing committees of experts in each field; frequent reviews by a steering committee of arts supporters from various walks of life; review by additional panels of experts in each field; and a public comment period of four months. This project represented an unprecedented effort to create a widespread concensus in the state about what students should know and be able to do in the arts, and the documents that resulted from the project were exemplary in every respect. In general, I am very disappointed that the draft of Policy 2520: Arts Instructional Goals and Objectives for West Virginia Schools does not more accurately reflect the work of the various expert committees associated with the three-year project. The following are my primary recommendations. • The dance and theatre goals and objectives for K-8 students should be included in the document. To leave these goals and objectives out is to open the door for the complete elimination of any attempt to teach these important subjects to K-8 students.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 5, 1997	David Bess Vice President of the West Virginia Music Educators Association and Associate Professor of Music at West Virginia University (continued)	• The national achievement standards from which the goals and objectives were extrapolated should be included in the document. The inclusion of these standards will clarify the relationship between state goals and objectives and national standards in the arts. Since the national arts standards are widely recognized as the best expression of what students should know and be able to do in the arts, it is important for West Virginia to demonstrate the linkage between its objectives and the national model. • The linkage between the WV arts goals and objectives and the national arts standards should be clearly stated somewhere in the document. • The number of arts objectives per grade level should not be limited. As a former member of the steering committee for the development of goals and objectives in the arts, I realize that many arts objectives have been left out of this document. I sincerely hope that these objectives were not eliminated purely to meet some artificial limit. • Virtually all of the arts objectives encourage the development of process/ workplace skills. In fact, it is clear to me that any well-taught objective in any subject would develop process/workplace skills. The selection of specific objectives as being more suitable for the development of process/workplace skills is an artificial process at best.		

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N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 5, 1997	Anne Lawrence Keyser Primary-Middle Sch. Keyser, WV	K-5 General Comments - Due to the facilities, materials available, and the class schedule where I teach, it would be impossible to accomplish the composing, improvising, and playing objectives. Sightreading objectives advance faster than I can accomplish within one year. Some terms suggested do not appear in our general music text (such as staccato, andante, adagio, ritard, a tempo, etc. Grades 6-7-8 General Music and Choral Music: How many minutes per student should we spend on solo/performing activities? How many minutes per class per week should we spend on improvising, composing, arranging, etc.? I meet all General Music and Choral students for one 6-weeks - 30 days. My class size is 20 to 30 students. The cover sheet of the Executive Summary states, "No Cost to local schools or county boards of education will result from this policy." Who is going to buy the materials that I do not have? Many of the tempo terms and dynamics markings are not in the music texts. I do not believe that I can effectively teach all the Instructional Goals and Objectives in a 30-day period.		

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NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 5, 1997	John L. Puffenbarger Buckhannon, WV	I have read the Arts Instructional Goals and Objectives for West Virginia schools. I find that the document is well written and well organized. I concur with its content and have no additional changes to make. I feel it should be passed as is.		
June 6, 1997	Music Specialist Milton Elementary Milton, WV	I believe you are placing too much emphasis on creating, improvising, and trying to play above their level. These children need to sing, dance, play rhythm instruments, learn to read music, listen to great works and learn about composers. Teaching individual melodic parts eats up the valuable time we have with our students. It's almost impossible to teach core lessons and reserve one class per unit for evaluation on an 8-9 class per 6-week schedule. If I'm having trouble getting my basics, then your goals and objectives are way above the classroom teachers in counties without music specialists.		
June 9, 1997	James C. Guerriero President, West Virginia Music Educators Assoc. Hall of Fine Arts West Liberty State College	A very readable and concise format.		
June 9, 1997	Melissa Edwards, Kim Cantley, Karen Carrico, Ellen Anderson Independence Junior High Sch. Sophia, WV	Very thorough and clearly written		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 10, 1997	Harold D. Reed Art Teacher Nutter Fort Primary School Salem, WV	I support and encourage adoption of goals and objectives for the arts as written in policy 2520.		
June 10, 1997	Judith Reed Nutter Fort Intermediate Sch. Nutter Fort, WV	Here is a document that really sets the high standards of visual art education in a "user friendly" way. It will guide the knowledgeable art teacher to provide the best visual art experience and education to all children in the state. Thank you.		
June 10, 1997	Harry R. Faulk Co-Chair of the Arts Instructional Goals and Objectives Steering Committee Chair, Coalition for Arts Education in West Virginia Professor of Music and Assistant Vice President for Academic Affairs Fairmont State College Fairmont, WV	As Co-Chair of the Steering Committee responsible for the development of the Arts Instructional Goals and Objectives, I support Instructional Goals and Objectives for the Arts (Dance, Music, Theatre, and Visual Art). While the document has been revised since the Steering Committee approved it for submission to the Department of Education, it does contain much of what students should know and be able to do in the arts. It must be noted that the Steering Committee, comprised of arts' educators, parents, and school administrators, worked diligently to develop a document that had widespread consensus. The project, which took three years, involved writing committees of experts in each art area. Their work was reviewed first by the Steering Committee and then by a select panel of art		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 10, 1997	Harry R. Faulk Co-Chair of the Arts Instructional Goals and Objectives Steering Committee Chair, Coalition for Arts Education in West Virginia Professor of Music and Assistant Vice President for Academic Affairs Fairmont State College Fairmont, WV (continued)	specialists in each field. Following revisions, the documents were distributed for a public comment period, revised and again reviewed by the Steering Committee. I urge the adoption of Instructional Goals and Objectives for the Arts. If the document can be revised, I would strongly encourage the inclusion of the K-8 goals and objectives for dance and theatre and the inclusion of all the goals and objectives as originally submitted to the Department of Education.		
June 11, 1997	Sandra King Clay Middle School Clay, WV	The learning outcomes for Art at the middle school level are comprehensive and should well prepare students for high school art programs.		
June 11, 1997	Theresa Parker Member of the Arts Instr. Goals and Objectives Steering Committee, Representing Special Ed. Special Education Teacher Spencer Middle School	As a member of the Steering Committee responsible for the development of the Arts Instructional Goals and Objectives, I support the Instructional Goals and Objectives for Dance, Music, Theatre and Visual Art. The Steering Committee was made up of arts' educators, special education educator, parents and school administrators. We worked to develop a document that involved a widespread consensus. This project took three years to finish. Experts from the different arts fields were on the writing committees. When finished		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 11, 1997	Theresa Parker Member of the Arts Instr. Goals and Objectives Steering Committee, Representing Special Ed. Special Education Teacher Spencer Middle School (continued)	writing, the committees submitted them to the Steering Committee for revision. Other art specialists were selected to further examine and revise the document. The public had a chance to comment on the document. It was then returned to the Steering Committee for final revision and then submitted to the Department of Education. I feel we produced an outstanding document and urge the adoption of the Instructional Goals and Objectives for the Arts as originally submitted to the Department of Education.		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	My comments are based upon five years of teaching elementary art and thirteen years of teaching middle school art education.		
June 11, 1997	Ohio County Schools Wheeling, WV	The correlation to goals in other content areas is very helpful. Thank you.		
June 11, 1997	Brenda M. Joe Fairmont, WV	It is absolutely imperative that **certified** arts instructors be employed in every county to teach our children! The arts are more specialized than any other curricular area!		
June 11, 1997	Doris Shaw Nutter Fort Primary School Nutter Fort, WV	The music objectives at each grade level are too extensive to be completed in one school year. A qualified music specialist is necessary to properly teach these objectives.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 11, 1997	Judith M. McCoy Member of the Arts Instructional Goals and Objectives Steering Committee and Curriculum Coordinator for Mingo County Schools	As a member of the Steering Committee responsible for the development of the Arts Instructional Goals and Objectives, I support the Instructional Goals and Objectives for the Arts--Dance, Music, Theatre, and Visual Art. While the document has been revised since the Steering Committee approved it for submission to the Department of Education, it does contain much of what students should know and be able to do in the arts. The Steering Committee, comprised of arts' educators, parents, and school administrators, worked diligently to develop a document that had widespread consensus. The project, which took three years, involved writing committees of experts in each area of the arts. Their work was reviewed first by the Steering Committee and then by a select panel of art specialists in each field. Following revisions, the documents were distributed for a public comment period, revised, and again reviewed by the Steering Committee. I urge the adoption of Instructional Goals and Objectives for the Arts. If the document can be revised, I would strongly encourage the inclusion of the K-8 goals and objectives for dance and theatre and the inclusion of all the goals and objectives as originally submitted to the Department of Education.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
GENERAL (cont.)				
June 11, 1997	Bruce L. Ensinger Music Specialist New Martinsville School New Martinsville, WV	I am writing at this time to express my support of the Arts Instructional Goals and Objectives for West Virginia Schools. As a Music Specialist in Wetzel County, I know how important it is to have this document so that all students in the state will have a thorough knowledge of the arts. Last week, I worked with other Music and Visual Arts teachers from the New Martinsville School, and we used this document in its draft form as our guide for our lesson plans for the 1997-98 school year. The comments from all teachers were positive, and we especially valued the cross references for other areas of study. We also noticed the great detail that was taken to include West Virginia music and musicians at the fourth and eighth grade level where West Virginia studies are concentrated. I am certain I speak for many General Music teachers from the state who are very pleased with these goals and objectives. It took many years of writing, rewriting, waiting for comments, rewriting and coordinating to get this document to state board members. I urge the adoption of Instructional Goals and Objectives for the Arts.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 12, 1997	Ellen Kell Cheek Huntington, WV	My overall opinion is that these goals and objectives look very workable from the elementary art specialists position.		
June 12, 1997	Phyllis M. Osenton Music Writing Committee of the Arts Instructional Goals and Objectives	During the 30 years as Supervisor of Music for a county school system, I served on music writing committees three times. Each time experts in the field of music pooled their many years of training and teaching experience in writing goals and objectives for their colleagues to use in their classrooms. After working on this last project for three years and relying on my 42 years of teaching music, I strongly urge the adoption of the Instructional Goals and Objectives for the Arts.		
June 12, 1997	Jerry D. Stover Art Instructor Clay County High School Clay, WV	I believe that most educators realize the impact that the Goals 2000 legislation represents and that, as educators, it presents us with a challenge with an opportunity for change. This gives us an opportunity to provide guidance and set a direction that will affect each student in West Virginia, each program in the arts, for many years to come. Albert Shanker, President of the American Federation of Teachers, stated that Goals 2000 "is the most significant piece of educational legislation we've ever had." While "in and of itself, (Goals 2000) won't solve the problems of our education system . . . it provides a structure without which we can't begin to solve them . . . ."		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 12, 1997	Jerry D. Stover Art Instructor Clay County High School Clay, WV (continued)	As the Chairman of the Visual Arts Writing Committee and a member of the WV Arts Instructional Goals and Objectives Steering Committee, I support adoption of Instructional Goals and Objectives for the Arts (Dance, Music, Theatre, and the Visual Arts). I realize that the Visual Arts document is a condensed version of what the Steering Committee first approved however, it still contains pertinent information regarding what students need to know as well as what they should be capably to do in the arts. (See Attachment)		
June 12, 1997	Arlene Bennett Suncrest Middle School/ Traveling Strings Teacher, Monongalia Co. Schools	The arts are an extremely vital part of our children's education. The Arts Instructional Goals and Objectives that I have reviewed provide an outstanding framework for what each child should know and be able to do in the arts. As a Music Writing Committee member, I know the care and quality that has gone into the development of this document and I support the Arts Instructional Goals and Objectives. As both a music educator and parent of a child in the West Virginia public schools, I urge the adoption of this document.		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	There will be a fiscal impact because additional instructors will have to be hired to be able to offer all these levels and class offerings.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 13, 1997	Karen K. Larry West Virginia Department of Education	I should have noticed this concern when reviewing the first section of §2520 this past summer, but I did not. These comments, therefore, apply to both that first section of IGOs for the core academic areas as well as to this section on The Arts. The ◊ reference to process/workplace goals and skills is a general reference. Why is the reference not to a specific goal or skill? There is no sure way of determining if the content objective is related to problem solving, or to communication, or to working with others, or to . . . . I am not sure this lack of specificity is a good idea. Because the **Document Guide** says, "◊ indicates the objective is a workplace readiness skill," should not the ◊ items be correlated to one of the six skills areas (problem solving, communication, working with others, technology, self management, career development)???? If "The Arts" is an area defined as dance, music, theatre, and visual arts, and if goals are available for all of the four arts areas, why are objectives at K-8 available for only two areas--music and visual arts? Where are the objectives for theatre and dance? As art forms, theatre and dance both have very specific skills and knowledge that a student should know and be able to do. Those skills and knowledge areas should be part of this document, if theatre and dance are considered part of "The Arts."		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 13, 1997	Karen K. Larry West Virginia Department of Education (continued)	If "The Arts" is an area defined as dance, music, theatre, and visual arts, and if goals are available for all of the four arts areas, why are objectives for electives that must be offered available in only one area of The Arts, music? Where are the required electives for the other three areas, dance, theatre, and visual arts?		
June 13, 1997	John Ryder Chorus Ripley High School	Allow me to start by saying the overall ideas expressed in the goals and objectives for music are good. Developing basic singing skills, reading and notating, listening, and evaluating are all outstanding goals. I did get a kick out of the fiscal impact statement in the executive summary - how can anyone possibly believe these goals can be accomplished without expense to local boards? Funding for the purchase of music alone will run into thousands of dollars per year at each school! (see attachment)		
June 13, 1997	Jim Bush Theatre Ripley High School	These goals and objectives seem to assume that every high school has (1) a scene shop complete with all materials, tools, and safety equipment (2) a vast library of plays, critical writings, technical books, and philosophy (3) a dedicated sewing laboratory with endless materials (4) a fully-equipped television studio		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 13, 1997	Jim Bush Theatre Ripley High School (continued)	(5) a modern auditorium with a working light and sound system (6) instructors who are trained to use all of the above (7) students who spend all day, every day for four years doing nothing but theatre. I don't believe any of the above to be the case. (see attachment)		
June 13, 1997	Judy Staats Music Representative Nicholas County Schools	The instructional goals document for the arts is much needed especially in rural areas such as Nicholas County where there are many grade schools and the junior high and senior high schools are separated by quite a distance. This document will provide for continuity. As with mathematics, reading, and grammar skills, students do need a balanced and sequential education in the arts. When teaching the various subjects in a comprehensive classroom setting I have found myself singing a song, having students illustrate what image came to mind when reading a passage, putting rules in a sing-song chant, writing a play, acting out parts in history, etc. One cannot separate one subject from another. The arts make learning enjoyable and memorable. My main concern with the document is the regular classroom teacher may be overwhelmed as there is no explanation or terminology to aid in carrying out the objectives. Colleges today seem to be training specialists in one field rather than expecting educators to be well rounded in all areas of instruction.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	This program of study seems to be based on the National Standards for Art Education and make West Virginia's Senate Bill 300 treatment of the Arts illegal. These goals and objectives show why trained music and art specialists are needed.		
June 13, 1997	Bridge Elementary Faculty Senate Elkview, WV	These goals are wonderful if you have teachers trained to teach Art and Music as well as providing the funding for supplies and equipment above and beyond the regular funding. Also, when is the time going to be found to do in-depth teaching of these skills with the amount of knowledge that needs to be learned in the areas of basic skills. There will be a fiscal impact to meet these goals and objectives. It will require additional funding.		
June 13, 1997	Rose Mary Irwin Elementary Teacher Hinton Area Elementary	I have had the privilege of working on the steering committee, under the leadership of Dr. Jeanne Moore, for the development of the arts curriculum for West Virginia. Never have I seen such enthusiasm or dedication to the task shown by Dr. Moore and members of the writing committees and the steering committee.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL (cont.)		
June 13, 1997	Rose Mary Irwin Elementary Teacher Hinton Area Elementary (continued)	When concerns about various items were expressed, they were taken back to the committees for re-wording, re-defining or deleting. Through it all, the guiding hand of Dr. Moore was there to maintain the integrity and high standards of the arts curriculum. (See Attachment)		
June 13, 1997	Jennifer Wiley Milton, WV	Where are visual art electives for middle childhood? Most junior highs offer some electives and need guidelines. We need this document adopted as soon as it is completed for use this coming year. Due to the overwhelming evidence of increased test scores when arts are concentrated on, it is important we have properly sequenced objectives to ensure a quality education for every West Virginian child. Thank you for the attention you have given this document.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		INSTRUCTIONAL GOALS		
		Dance		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 13, 1997	Patricia Edwards Charleston, WV	If the West Virginia School System is going to offer a comprehensive educational program in all the Arts, then how can it justify only offering dance 9-12. If foundational learning is important for music and visual arts, then what possible rationale can justify not offering the foundation in dance? For three years I was a member of the committee that worked on the dance curriculum K-12. This program of study was built to be comprehensive and sequential. Only offering a third of the intended curriculum is by no means comprehensive and certainly does not give dance a fair chance for the success which can be possible when put on an equal plan with other arts programs.		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	Every student must have access to a balanced and comprehensive study in dance because it fosters self-esteem which carries over into the core classes.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	Given more than 40 min. a week, these would be accomplished.		
June 9, 1997	James C. Guerriero President, West Virginia Music Educators Assoc. Hall of Fine Arts West Liberty State College	An excellent presentation of the importance and necessity of music in our society. Good general statements for each of the national standards.		
June 9, 1997	Jeff Smith Huntington, WV	As a music specialist, I want attainable goals for all - not just fancy words written on paper that one says is happening. Take in consideration time allowed, taught by a specialist or not, and monies allowed for the county.		
June 9, 1997	Kim Cantley Independence Junior High Sch. Sophia, WV	I question the use of solfege -- you only have to translate it into regular notation later and the students do not see the connection - I am glad other methods were mentioned. I think the recorder <u>should</u> be required in grades 4-5 & 6 if in the elementary school. Some teachers are playing nothing and if principles knew this was required they could enforce it.		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Nutter Fort, WV	The cross-referencing of our goals lends the arts the validity necessary for some people. The information on multiple intelligence shows the		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Music		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Nutter Fort, WV (continued)	necessity for a variety of ways to learn. The arts can provide this! Statistics also show that children involved in the arts are more advanced in many areas.		
June 11, 1997	Sharon Cundiff Ohio County Schools Wheeling, WV	I feel the objectives proposal is excellent, but the information can only be realized if the music classes are year long, and if they meet more than once or twice per week. If there is not enough time to teach the skills in grades 1-5, then middle school teachers might not be able to start with 6th grade objectives due to insufficient skills of students who have not had enough time to master elementary skills. The one deficit in the objectives is a complete lack of any skills related to Pop Show Choir. This is particularly needed because with an emphasis on school-to-work skills, most students who train to perform for a living will need skill in performing pop, Broadway, and show music. By not training students in entertainment skills, including drama and dance, we are ignoring some of the most likely wage earning skills our students may need. I also feel the state needs to provide Orff, West Virginia Folk, and/or keyboard instruments, if general music is going to require that students learn how to play them. In looking toward the future, I would like to see more objectives that include working with technology.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Music		
June 11, 1997	Brenda M. Joe Fairmont, WV	Good goals!		
June 11, 1997	Doris Shaw Nutter Fort Primary School Nutter Fort, WV	If we were required to test on each objective, the teaching time would be greatly reduced. I like the wide range of activities suggested - but, again, not enough class time to cover everything.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 13, 1997	Betty Wilson Beckley, WV	P.3 - Because music is a basic expression of human culture, and has been identified as one of our intelligences		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	Every student must have access to a balanced and comprehensive study in music because it fosters self-esteem which carries over into the core classes.		
June 13, 1997	Kathryne Williams Beckley, WV	p. 3 - insert after . . . culture (and has been identified as one of the basic intelligences), every . . .		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Theatre		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 13, 1997	Karen K. Larry West Virginia Department of Education	I do not understand the usage of the word "improvisations." My schooling and work experience tell me that an improvisation is something done on the spur of the moment with no real preparation. One of the purposes of improvisation work is to learn to think on one's feet, regardless of what comes one's way. "Improvisation" is not used with this meaning in this document. Under "Directing," the second sentence reads, "In grades 5-8 they learn to organize rehearsals for improvised and scripted scenes." Again, an improvisation does not involve an organized rehearsal; rather, the "scene" is enacted once the directions/details are given. The use of the terms "informal and formal productions" is confusing. A student might be engaged in a theatre exercise or a staged production, but what are "informal and formal productions"? (I realize that the terms I call into question are used in the **National Standards for Arts Education**. I still question their usage.)		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Theatre		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	Every student must have access to a balanced and comprehensive study in theatre because it fosters self-esteem which carries over into the core classes.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Visual Art		
June 10, 1997	Judith Reed Nutter Fort Intermediate Sch. Nutter Fort, WV 26301	Good variety in art disciplines including all aspects of art education: processes, appreciation, critique, and aesthetics.		
June 10, 1997	Judith Reed Nutter Fort Intermediate Sch. Nutter Fort, WV 26301	Integrating art with LA, MA, SS, WV, US, and SC will be much easier now.		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	The committee that wrote these goals should be commended. Not only do these objectives include the classic elements and principles by which art has traditionally been taught, but encourages higher level thinking skills and a deep appreciation and understanding of cultures and history.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 12, 1997	West Preston Jr. High Sch. P.O. Box 70 Masontown, WV	General observation: Most elementary students have art only once a week - the number of goals and objectives for each grade needs to take this into account. The organization and progression of goals and objectives appears well developed. Need to take into account traveling teachers and "cart" teachers where they teach in regular classrooms - paint, carpet, clay, water, etc.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Visual Art		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	Every student must have access to a balanced and comprehensive study in visual art because it fosters self-esteem which carries over into the core classes.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		DOCUMENT GUIDE		
June 4, 1997	Eileen M. Miller State Director West Virginia Thespians Magnolia High School New Martinsville, WV	We must be careful not to limit the grade level (9-12) at which a student could begin studying a discipline - (ex. theatre I could be taught to 11th grade).		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Sch. Nutter Fort, WV	The vertical format was much easier to follow. It might be easier if all music K → was kept together, then art, etc.		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	The description of the correlative subject that are included in each art lesson are very important for the art teacher. Often students are removed from our classes for remediation. This gives us some satisfaction for keeping these students in our classes.		
June 13, 1997	Karen K. Larry West Virginia Department of Education	My comment under "General" applies here regarding the use of the symbol ◊ and the lack of correlation to one of the six workplace readiness skills. Again, this comment applies to both this program of study as well as to the previous ones adopted.		
June 13, 1997	Jennifer Wiley Milton, WV	Due to new correlations listed below each objective and the term "arts" disciplines under explanation of "Making connections between visual art and other disciplines," the last objective of visual arts in each section K-5 should be changed or omitted.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	K.12 is too advanced in K for each child.		
June 9, 1997	Jeff Smith Huntington, WV	These objectives are simple for a specialist to teach, but for the regular education teacher, these objectives are difficult and not covered.		
June 11, 1997	Brenda M. Joe Fairmont, WV	K.21 may be too difficult at this level for students to distinguish. K.21 should read "distinguish between child and adult voices" at this level.		
June 11, 1997	Doris Shaw Nutter Fort Primary School Nutter Fort, WV	K.15 - recognizing treble clef and staff should be taught later - when the students are writing music.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 13, 1997	Mary Rush Logan, WV	K.25 more detail; include additional items in subheading; Include K.26 in culture and history.		
June 13, 1997	Betty Wilson Beckley, WV	O.K.		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	Page 11 - The sentence above indicator K.1 should read, "The student will be able to sing alone with others, a varied repertoire of music. Page 12 - Indicator K.25 does not fit goal.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Music		
June 13, 1997	Kathryne Williams Beckley, WV	K.15 - change treble clef to "grand staff using treble and bass clefs. (They need to know the 𝄞 is only half of the staff. Piano music and hymns they see look queer if they don't know this. Also, some very young people take piano early. (sic.)		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Visual Art		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	The following comments will pertain to K-3 Visual Art: I find these objectives to be exciting as well as challenging. My only concern is from my experience as a traveling elementary art teacher in that your objectives included a considerable amount of papermaking, printmaking, and sculpting. Many of these elementary schools do not have an art room, let alone a storage room. I found a big discrepancy in funds for art even within one county. One principal may provide an ample amount of funds while another gives very little. In order for these high quality art objectives to be implemented, funds need to be assured for all art specialists.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	The statement, "It is important that "creative work" is distinguished from prepared models" - very good.		
June 13, 1997	Jennifer Wiley Milton, WV	K.1 - why tack on exploring "papers?" It's covered with "2-dimensional." K.3 - again this concentration on "papers" - other media such as drawing need to be specified in early grades. K.5 - again, why include "collage" - NEED DRAWING! By 1st or 2nd at least. K.7 - remove word "collage" -- covered by 2-D.		

ACTION			TYPE		
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Visual Art		
June 13, 1997	Jennifer Wiley Milton, WV (continued)	K.8 - MUST separate color objective and exploring line types into 2 different objectives. K.9 - "Shape" exploration different from "form" objective - should be listed separately. K.16 - same as K.6 with different wording.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	1.7 - Perform easy rhythmic patterns not melodies. 1.11 - Improvise a rhythmic pattern - too hard for every child. 1.13 - Create a song for an original poem - too hard. 1.16 - Too hard. 1.18 - Too hard.		
June 6, 1997	Music Specialist Milton Elementary School Milton, WV	O.K.		
June 9, 1997	Jeff Smith Huntington, WV	1.13 - Time with specialist does not allow for this. 1.20 - Musically this is difficult at this age. 1.21 - This is more of a second grade activity and correlates with a second grade book. 1.22 - They are just learning male and female, they won't remember soprano, bass. 1.28 - This discussion would need to be brief, time is hardly allowed for basics. 1.29 - No time - their understanding is limited.		
June 11, 1997	Brenda M. Joe Fairmont, WV	1.25 "head" voice concept should be developed through singing and imitation by teacher without reference to technical term or explanation to students; students imitate/match pitch with teacher.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Music		
June 11, 1997	Doris Shaw Nutter Fort Primary School Nutter Fort, WV	1.16 - Delete - Change to: Singing in tune with matching hand signs for patterns containing the tones s-m-l, s-m-d, and m-r-d (echo sing, then from notation). 1.18 - eliminate words "on a staff."		
June 13, 1997	Weimer Elementary St. Albans, WV	I can not do all the skills listed in the first grade, Policy 250. You need an art major, music, or dance teacher to teach this. It also takes too much time away from Language Arts and Math.		
June 13, 1997	Mary Rush Logan, WV	1.26 - vague according to subheading.		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	1.4 - Many of the goals address folk songs and the state-adopted text has very little in the way of our traditional American folk songs.		
June 13, 1997	Betty Wilson Beckley, WV	1.14 - tied notes? We do not use a music book in 1st grade - half notes are [sic.] 2.27? Material is not introduced until grade 3 in our music series.		
June 13, 1997	Kathryne Williams	1.4 - the world is full of Folk Songs. Do you mean from any country or USA folk songs? 1.15 - use grand staff; 1.20 - identify what cultures? 1.22 - showing where written on grand staff.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Visual Art		
June 12, 1997	Ellen Kell Cheek Huntington, WV	These goals are important and will be easily obtained when taught by a certified art specialist with cooperation from classroom teachers.		
June 12, 1997	Holly W. Adams and Mary Ann Nichols Elkins, WV	How about mentioning the appearance of themes in art work? 1.23 - instead of using the word "group" maybe art movement or artistic style of a period in history. 1.22 - students at this age can work on learning the description stage of critically evaluating an art work. Please mention the importance of drawing at all elementary grade levels. Drawing allows students to be creative and exercises their observation skills.		
June 16, 1997	Milton Elementary Milton, WV	Everything sounds good except 1.4 - two different types of paint with 1st grade seems too complicated and much too messy. Two media of different types such as paint and crayon to show how they react together is better.		
June 13, 1997	Jennifer Wiley Milton, WV	1.3 - why concentrate on paper media when not even clay is specified in elementary grades (which it should). 1.15 - covered with wording in 1.9. Add 1.19 - create secondary colors by mixing primary colors. - add no later than second grade.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
		INSTRUCTIONAL OBJECTIVES GRADES K-8		
		Second Grade: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	2.5 - perform a harmonic accompaniment using tonic dominant - too hard. 2.8 - only a few would be able to do this. 2.10 - create a song in binary form. 2.12 - read notation - not possible. 2.16 - identify tonal center. 2.18 & 2.19 - identify instrumental families - just starting this.		
June 4, 1997	Music Specialist Milton Elementary Milton, WV	2.20 - presented in third.		
June 9, 1997	Jeff Smith Huntington, WV	2.1 - Proper breath control hard to attain at this age. 2.3 - Some not able to sing on pitch - how do they blend timbres? 2.7 - Not always time to improvise and create. 2.16 - Tonal center - too difficult to actually conceive and identify aurally at this age. 2.20 - Instruments are mentioned until grade 3. 2.22 - Not attainable.		
June 11, 1997	Brenda M. Joe Fairmont, WV	2.22 - "head/chest" voice concept should be presented in middle grades; students should continue to develop head voice by matching pitch, imitating the teacher.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Second Grade: Music		
June 11, 1997	Brenda M. Joe Fairmont, WV (continued)	2.16 - Too difficult at this level to identify tonal center; this is a process that takes longer than presenting it at grade 2.		
June 13, 1997	Mary Rush Logan, WV	2.2 - cross reference to culture and history. 2.23 - tie examples to the arts more carefully.		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	2.27 - Teachers will need more guidance in what to do and what to cover.		
June 13, 1997	Betty Wilson Beckley, WV	2.7 & 2.12? Pentatonic scale is introduced in grade 3 - while we use it in grade 2, the goal is stated in grade 3.		
June 13, 1997	Kathryne Williams Beckley, WV	2.20 - might add Sitar for music of India.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Second Grade: Visual Art		
June 11, 1997	Ohio County Schools Wheeling, WV	Student art opportunities could be more effectively used in other art skill areas rather than paper making.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	These goals appear to relate well to the 2nd grade curriculum and will enhance learning in the other subjects as well as life skills.		
June 12, 1997	Holly W. Adams and Mary Ann Nichols Elkins, WV	Sounds good.		
June 16, 1997	Milton Elementary Milton, WV	Sounds good.		
June 13, 1997	Jennifer Wiley Milton, WV	2.2 - AGAIN, a concentration on "paper." What about drawing and clay? 2.5 - too specific for second grade - need to move to fourth grade. Secondary colors have not even been addressed in the document yet! 2.7 & 2.8 - both contains two or more objectives which should be separated according to the format used in other instances of document. 2.11 - already stated in 2.5 (maybe 2.5 should be edited instead). 2.10 - again intermediate colors need to be in fourth grade objectives. 2.16 - objectives "explore" and "use" are combined in some places and separated in other instances - needs to be consistent.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	3.6 - impossible for every child. 3.11, 3.12, 3.13, 3.14, 3.15, 3.17, 3.18, 3.21, 3.23, 3.28 - Possible only if you see children more than once a week and eliminate all performances.		
June 6, 1997	Music Specialist Milton Elementary School Milton, WV	3.24 - presented in 4th.		
June 9, 1997	Jeff Smith Huntington, WV	3.2 - If offered in book. 3.10-3.14 - Time plays a factor in allowing all to do this. 3.16 - Why pentatonic - harmonic is the usable scale. 3.28 - What is their basis - what kind of forms?		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Sch. Nutter Fort, WV	3.2 - (musical theatre) not in music texts. 3.5-3.9 - more difficult than 4.5-4.8! third ostinatos, etc. 3.16 - notes on staff. When was it introduced. Lines and spaces sometimes difficult. On line (staff) different than on the line for classroom teacher. 3.23 - Do <u>all</u> instruments at once??! Why not concentrate on some families one year - others the next?		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Music		
June 11, 1997	Brenda M. Joe Fairmont, WV	Need an objective that states "identify meter signatures 2, 3, 4 by manipulating accents/ $\frac{4}{4}$ $\frac{4}{4}$ $\frac{4}{4}$ barlines, to form measures through reading quarter, half, whole, eighth notes and rests."		
June 13, 1997	Mary Rush Logan, WV	3.2 - tie to understanding relationships. 3.16 - Question note name reading at this point; emphasis needed in solfeggietto and/or numbers and interval reading; 3.26 to history and culture Suggestion: 3.26 Texture; senses/emotion; modes of presentation among the arts.		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	3.7 - I don't feel third graders are ready to play complete melodies at this level.		
June 13, 1997	Betty Wilson Beckley, WV	3.7 - this seems a little advanced for level 3.		
June 13, 1997	Berkeley Heights Faculty Senate Martinsburg, WV	Page 23 - indicator 3.10 - only if minor is taught in text. Indicator 3.26 and 3.30 should be combined.		
June 13, 1997	Kathryne Williams Beckley, WV	3.16 - use grand staff - both $\mathbf{\mathfrak{G}}$ & $\mathbf{\mathfrak{F}}$ clefs.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Visual Art		
June 10, 1997	Judith Reed Nutter Fort Intermediate Sch. Nutter Fort, WV	Under Using Art Elements and Principles of Design (3.4) - I would like to see mixing of tints and shades (4.5) in the 3rd grade instead of 4th - Mix the complementaries in the fourth grade.		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	Excellent!		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 12, 1997	West Preston Jr. High Sch. P.O. Box 70 Masontown, WV	Study art history through changes in architecture.		
June 16, 1997	Milton Elementary Milton, WV	Everything seems ok except 3.2. Creating a 3-D structure from the materials listed may be a little difficult.		
June 13, 1997	Jennifer Wiley Milton, WV	3.2 - contains two very different objectives, therefore, should be separated into separate objectives. 3.7 - omit "create 3-D portraits" because of 3.15 - add "three-dimensional" to 3.15. Exchange numbers for 3.10 and 3.11 for correct order.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	4.8 - need instruments to perform on. 4.12 - need more equipment. 4.13 - maybe 4.14 - maybe 4.16, 4.17, 4.18, 4.24 - most of these are not in 4th grade music book L.O.'s or they only touch on them - need more time with kids.		
June 6, 1997	Music Specialist Milton Elementary School Milton, WV	4.13 - rondo is in 5th. Theme and variations is in 4th. 4.18 - rondo is in 5th.		
June 9, 1997	Jeff Smith Huntington, WV	4.9 - Syncopation difficult to play. 4.12 - Computers not available in every music class along with time available. 4.20 - Ballads aren't always available in books. 4.29 - What is the basis for this?		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Nutter Fort, WV	4.5-4.8 are easier than 3.5-3.9! 4.14 - when were meters discussed and experienced? 4.15 → dotten rhythms should not be introduced before  or  Is 4.22 same as 3.23? Why not split as described above?		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Music		
June 11, 1997	Brenda M. Joe Fairmont, WV	4.14 should read "perform (not create) a piece having mixed meters" - A firm background in accent and meter needed before creating can occur. Students have to understand what meter is more thoroughly. 4.19 - syncopation introduced too early at this level. Must have thorough grasp of meter, rhythmic notation before syncopation can be identified with understanding. 4.21 - tough to identify soprano from alto/tenor from bass at this level.		
June 13, 1997	Mary Rush Logan, WV	4.16 - read notation (how?) 4.26 - belongs with 4.27, etc.		
June 13, 1997	Betty Wilson Beckley, WV	4.6 - seems simpler than some of the activities in levels 2 & 3.		
June 13, 1997	Kathryne Williams Beckley, WV	4.7 - are these orff or other instruments seems difficult? 4.21 - might show on grand staff voice range of each. 4.27 - "discuss textural and/or harmonic . . ." (add or)		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Visual Art		
June 10, 1997	Judith Reed Nutter Fort Intermediate Sch. Nutter Fort, WV	I like the objectives in all grade levels that I teach, 3rd, 4th, & 5th. I feel competent in teaching the goals, I hope my schedule of seeing my children once a week for 40 minutes will be adequate.		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	Excellent!		
June 12, 1997	Ellen Kell Cheek Huntington, WV	With the foundation built in kindergarten through 3rd grade - the visual art goals carry the students' learning to higher levels. Very good.		
June 12, 1997	Holly W. Adams and Mary Ann Nichols Elkins, WV	Students at this grade level could also benefit from working at drawing objects for life. Once again continuing to exercise and strengthen their observation skills.		
June 16, 1997	Milton Elementary Milton, WV	O.K.		
June 13, 1997	Jennifer Wiley Milton, WV	4.1 - "including clay" added or "create a clay sculpture" and "use media, tools, techniques and processes of pastels and chalk" as separate objectives. Add objective: "create intermediate colors by mixing primary colors with secondary.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	5.9, 5.10, 5.11, 5.12, 5.15, 5.17 - need more time with students for this.		
June 6, 1997	Music Specialist Milton Elementary School Milton, WV	2.c.1. & 2.d.1. - sounds good but keyboard playing in an 8 or 9 class per six week schedule is virtually impossible. I am certified by MTNA in piano and have a MA in music education. I feel that your emphasis on performing is inappropriate for general music if we are going to teach the basics.		
June 9, 1997	Jeff Smith Huntington, WV	5.5 - Define keyboard type and who provides, how much time allowed? 5.24 - Why discuss - if they pay attention they will see the correlation.		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Sch. Nutter Fort, WV 26301	Much of this is too difficult. In our situation, almost all (⅔) of "good" students go to band. Most left are B.D. & L.D. students! Objectives are far too difficult!		
June 11, 1997	Brenda M. Joe Fairmont, WV	5.17 should introduce the minor scale concept; students not prepared to create/notate a minor melody when the background of it is not provided in previous level objectives. 5.5 - chords should be <u>aurally</u> identified only.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Music		
June 11, 1997	Brenda M. Joe Fairmont, WV (continued)	5.6 - students do not have background to change keys unless they can read lines/ spaces or melodic instrument; nowhere in previous levels is this addressed; also 5.7 can't be done unless previous study of lines/spaces is firmly understood by students.		
June 13, 1997	Mary Rush Logan, WV	1. Now, where is emphasis on reading enhancement skills? 2. Good examples now developing in "understanding relationships"		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	5.5 and 5.7 - This is easily accomplished with an autoharp, but I'm not sure fifth graders can actually build triads and know where they fit within the melody.		
June 13, 1997	Betty Wilson Beckley, WV	5.5 & 5.7 are very ambitious unless the keyboard builds the triad for the student. 5.16 - currently this is done in 6th grade and only one example is found in the student's text.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Visual Art		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	I especially applaud the emphasis on personal expression. So much elementary art is based upon copy work and using patterns its any wonder students have any creativity left by middle school.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	It is important that now at 5th grade students can be more selective because of the background they have been given.		
June 12, 1997	Holly W. Adams and Mary Ann Nichols Elkins, WV	When speaking of the elements of design, the word "dominance" is an out of date term. Focus, emphasis, or focal point are much better terms to use in this case. How about beginning co-operative learning activities in the classroom. It would allow the students to practice intercommunication skills and working as a team to fulfill a common goal.		
June 16, 1997	Milton Elementary Milton, WV	O.K. - As long as the students are not allowed to choose different media at the same time. (5.1) It would get out of control with each student choosing a different media to work with.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Visual Art		
June 13, 1997	Jennifer Wiley Milton, WV	5.1 and 5.3 - seem to "fit" under the heading of "Choosing and evaluating . . ." as they are presently worded. 5.2 - could be under "Reflecting upon and assessing . . ." 5.15 - is usually listed under fourth grade. 5.20 and 5.23 are the same.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Music		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	6.4, 6.5, 6.6, 6.8, 6.9, 6.11, 6.12, 6.13, 6.15, 6.16, 6.18, 6.19, 6.20, 6.25, 6.26, 6.27 - need more than once a week to teach all this.		
June 9, 1997	Peggy Jo Parks, Walter M. Mick, Daniel B. Williams Buckhannon-Upshur Middle Buckhannon, WV	This is doable.		
June 11, 1997	Brenda M. Joe Fairmont, WV	6.9 - can't improvise triad unless have previously aurally identified that concept; students need to "note" read first so they understand how to make a triad on melodic instruments. 6.12 - too difficult - background not there from previous levels. 6.16 - bass clef should be reserved until next level, at least, because more time needs to be spent on reading treble, notes/rests and firmly establishing these skills.		
June 13, 1997	Weimer Elementary St. Albans, WV	These goals are fine if you are an art or music major. I am not either one of those. Please provide appropriate personnel to accomplish these goals and objectives and I will be happy to oblige.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Music		
June 13, 1997	Mary Rush Logan, WV	6.16 - read in what way? solfege., numbers, absolutes and/or treble transposition.		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	6.13 - Maybe improvise, but not notate. 6.16 - Students have no need for this in the General Music class, only for instrumental.		
June 13, 1997	Betty Wilson Beckley, WV	6.16 - Why? No music is written for them to sing - only trombone (in my school) plays from it, and we teach them to read it.		
June 13, 1997	Kathryne Williams Beckley, WV	6.25 - classify by composers? Would they have enough background for this?		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Visual Art		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	These objectives prove that the arts reinforce what is being taught in the regular classroom and brings learning to a higher level with problem solving, personal expression, and critical thinking.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	It is important that history is incorporated into these goals - the arts (all of them) parallel much of our world history - if not all!!! A certified art person always needs to be available to students on the elementary levels.		
June 12, 1997	Holly W. Adams and Mary Ann Nichols Elkins, WV	Create an artwork using direct observation, e.g., still life, landscape, portrait work. They can do this and again these articles completed early on really help to increase observation skills.		
June 13, 1997	Jennifer Wiley Milton, WV	6.1 could be listed under "Choosing and evaluating . . ." as well as 6.2. 6.2 also "fits" under "Reflecting upon and assessing . . . ." 6.4 already covered in fourth and fifth grades. 6.7 listed in third grade.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Seventh Grade: Music		
June 9, 1997	Walter M. Mick, Peggy Jo Parks Buckhannon-Upshur Middle Buckhannon, WV	This is doable		
June 9, 1997	Kim Cantley Independence Jr. High Sch. Sophia, WV	In these grades we only have music for 6 week periods and I think the objectives are too repetitious and things they already know. I feel the singing objectives should have already been mastered at this age. However, all the other categories are doubled in the 12 weeks we have. I would like to have more info on the history objectives for where I could get more materials since it is not in the textbook.		
June 11, 1997	Brenda M. Joe Fairmont, WV	7.15 should state "read notes in bass clef." Add "Identify voice types Soprano, Alto Tenor, Baritone, Bass (aurally)" and add "Analyze changing voice characteristics and process of changing voice." (Needs to be in general music as well as choral music.) 7.12 - too difficult at this level.		
June 13, 1997	Mary Rush Logan, WV	Good!		
June 13, 1997	Kathryne Williams Beckley, WV	7.19 and 7.25 need to be listed only once. 7.12 seems too hard unless limited in some manner by chorus, etc. 7.27 - limit eastern hemisphere to more specific area.		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Seventh Grade: Visual Art		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	Time is a very important element to the success of this program. I have concerns that I will be able to accomplish all of this in the framework of a six weeks course.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	Very good.		
June 13, 1997	Jennifer Wiley Milton, WV	7.1 - add "clay, wire" 7.5 - "and a monochromatic color scheme" should not be placed there, but moved to 7.9 or listed separately. 7.22 - add "watercolor" to "paintings done in . . ." 7.23 - change to "subtractive/additive"		

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INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Eighth Grade: Music		
June 9, 1997	Walter M. Mick, Peggy Jo Parks Buckhannon-Upshur Middle Buckhannon, WV	This is doable.		
June 9, 1997	Kim Cantley Independence Jr. High Sch. Sophia, WV	In these grades we only have music for 6 week periods and I think the objectives are too repetitious and things they already know. I feel the singing objectives should have already been mastered at this age. However, all the other categories are doubled in the 12 weeks we have. I would like to have more info on the history objectives for where I could get more materials since it is not in the textbook.		
June 11, 1997	Brenda M. Joe Fairmont, WV	8.8 - Add "based on the 12 bar blues." 8.10 - substitute "embellishments" with "variations."		
June 13, 1997	Mary Rush Logan, WV	Good!		
June 13, 1997	Kathryne Williams Beckley, WV	8.7 - too inclusive - don't have instruments to play a "variety" - only percussion - pentatonic.		

ACTION		TYPE	
N =	No Response	- =	Negative
NA =	Not Accepted	+ =	Positive
A =	Accepted	0 =	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Eighth Grade: Visual Art		
June 11, 1997	Terry M. Chandler Faculty Senate Chair Musselman Middle School Bunker Hill, WV	It is especially exciting to see an emphasis on the professional artist's work. Students develop a sense of art criticism as well as an appreciation for the work of the professional artist.		
June 12, 1997	Ellen Kell Cheek Huntington, WV	It is important that this also has incorporated our state's history through the arts!		
June 12, 1997	West Preston Jr. High Sch. P.O. Box 70 Masontown, WV	Teach 1 & 2 pt. perspective at this level for majority of students to grasp concept.		
June 13, 1997	Jennifer Wiley Milton, WV	8.3 - ? "to" communicate experiences and/or ideas. 8.4 - Why at the beginning? 8.20 - ?		

ACTION		TYPE	
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Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Instrumental Music - Strings I - V		
June 4, 1997	Betty P. Pratt East Dale School Fairmont, WV	Need more time with students to accomplish all these.		
June 9, 1997	Charity Manspeaker Buckhannon-Upshur Middle Buckhannon, WV	This is doable.		
June 11, 1997	Brenda M. Joe Fairmont, WV	Is there money to fund string programs in all counties? If not, there is no reason to respond to this section.		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	There are no provisions for a string program in Raleigh County.		
June 13, 1997	Betty Wilson Beckley, WV	Sadly, we have no string program in Raleigh County.		
June 13, 1997	Kathryne Williams Beckley, WV	SI.1 - match pitches by learning to tune instrument. SII.10 - change various to European add symphonic excerpts. SIII.22 - listed too late. Tuning & playing in tune should be stressed early. SIV - more playing, less writing, research, composing.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Instrumental Music - Wind and Percussion I - IV		
June 9, 1997	James C. Guerriero President, West Virginia Music Educators Assoc. Hall of Fine Arts West Liberty State College	I think Level 1 should be listed as 5th grade only (Level 2 as - 6th grade only) for less confusion. Note concerning start of sequence could be attached to each page. Criteria for evaluating Music for Level 1 might have to be very basic. Level 8 - identifying music characteristics of other countries might be too difficult.		
June 9, 1997	Andrew H. Scott Buckhannon-Upshur Middle Buckhannon, WV	This is doable.		
June 9, 1997	Melissa Edwards Independence Jr. High Sch. Sophia, WV	History objectives are already in general music objectives. My 7th grade beginning band is comprised of students who have never played an instrument prior to my class. I feel that may not be a reality for wind players at this point nor (WIII.21) syncopation.		
June 13, 1997	Betty Wilson Beckley, WV	My instrumental students meet 2 times a week for 20 min. each session. We do well to finish Level 1.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Choral Music I - III		
June 9, 1997	Peggy Jo Parks, Walter M. Mick Buckhannon-Upshur Middle Buckhannon, WV	This is doable.		
June 11, 1997	Brenda M. Joe Fairmont, WV	CI.9-CI.14 Can only be accomplished if adequate instructional time is provided in general music and followed through with adequate time in choral music; same is true for CII.8-CII.12 and CIII.10-CIII.11 and CIII.1 and CIII.2.		
June 13, 1997	Mary Rush Logan, WV	Level I - CI.23 & 24 - Develop further; see subheading parts. CII.20 - make part of CII.21, etc. CIII. Good!		
June 13, 1997	Vickie Pachuta Raleigh County Schools Beckley, WV	We must mandate whether the classes will be performance-oriented or objective-oriented. Any of the objectives could be met with emphasis on the objectives, but realistically, to fund or continue to fund music in our schools, we must produce performing groups. I would love to offer these classes purely for the love and study of choral music, but it will not happen.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Choral Music I - III		
June 13, 1997	Betty Wilson Beckley, WV	Realistically speaking, choral music in an elementary school is primarily a performing group - we are supported by our parents <u>because</u> of these performances. We have precious little time to address the goals and objectives and hope, instead, to do this in the general music class.		
June 13, 1997	Kathryne Williams Beckley, WV	CI.4 - why only these two countries? CI.24 - difficult. CII.4 - why limit? CII.20 - difficult Primarily performance class where aim is to produce programs - goals contain too many unrelated objectives to this.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Dance I - IV		
June 4, 1997	John Ray Coordinator of Health and Physical Education West Virginia Department of Education	The goals and objectives are good. My only questions are; a) who will be responsible for teaching Dance, b) who will provide staff development for the teachers, and c) who will finance the necessary staff development?		
June 13, 1997	Karen K. Larry West Virginia Department of Education	The introductory section on page 73 cites 1998-99 school year as the required time to begin offering at least one level of dance. §2510 states the new graduation requirements go into effect for incoming freshmen 1999-2000. Is the year discrepancy between these two policies intentional? If yes, what is the reasoning?		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Orchestra I - IV		
June 9, 1997	Charity Manspeaker Buckhannon-Upshur Middle Buckhannon, WV	This is doable.		
June 13, 1997	Kathryne Williams Beckley, WV	SVI.14 & 15 belongs in general music class. Emphasis here should be strictly on playing and performances. Too many "history" topics.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Band - I - IV		
June 9, 1997	James C. Guerriero President, West Virginia Music Educators Assoc. Hall of Fine Arts West Liberty State College	I agree with everything listed except the last 2 categories on each level. These are more appropriate to a Music Appreciation course and could not be accomplished in a Band to the degree specified. It would take a couple of lecture periods per week to even attempt them.		
June 9, 1997	Melissa Edwards, Kim Cantley, Karen Carrico, Ellen Anderson Independence Jr. High Sch. Sophia, WV	These objectives would be much easier to achieve if there were no junior high marching band. I feel that more emphasis could be placed on the objectives if marching band was nonexistent.		
June 13, 1997	Kathryne Williams Beckley, WV	WVIII.3 and WVIII.8 are identical.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Chorus I - IV		
June 13, 1997	Mary Rush Logan, WV	Interchange CIV.4 and CV.5 and adjust appropriate references accordingly.		
June 13, 1997	Kathryne Williams Beckley, WV	CV.17 - the "D" is omitted and the "R" on refine should be struck - contains too much History; class time needs to be performance.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Piano I - IV		
June 13, 1997	Kathryne Williams Beckley, WV	1st paragraph replace treble and bass clefs with "grand staff" PII.27 - add words "such as" and list some elementary devices. PIV.16 - change musical to "piano." PII.34 - Don MURO - not A		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Folk Music I - II		
June 13, 1997	Kathryne Williams Beckley, WV	FI.34 - and use of the (Folk) Instruments... add: Finger picking styles.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Music Appreciation/History		
June 9, 1997	James C. Guerriero President, West Virginia Music Educators Assoc. Hall of Fine Arts West Liberty State College	The first 5 headings do not belong in a Music Appreciation course. The rest of the headings and underlying statements are fine.		
June 13, 1997	Kathryne Williams Beckley, WV	Much listed here belongs in theory and composition.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Music Theory/Composition		
June 13, 1997	Kathryne Williams Beckley, WV	Study of traditional theory not listed - lacks specifics See Attachment - even listing some of these is better than not having a completed list of goals.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Theatre I - IV		
June 13, 1997	Karen K. Larry West Virginia Department of Education	The introductory section on page 127, cites 1998-99 school year as the required time to begin offering at least one level of theatre. §2510 states the new graduation requirements go into effect for incoming freshmen 1999-2000. Is the year discrepancy between these two policies intentional? If yes, what is the reasoning?		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		General Art I - IV		
June 12, 1997	Ellen Kell Cheek Huntington, WV	The goals and objectives here follow National Standards, but allow counties and/or individual teachers to plan their curriculum around their own strengths. This is important for quality programs. Well done.		
June 13, 1997	Jennifer Wiley Milton, WV	Page 137 - Intro to Adolescent Visual Art Education: Studio Art section - end of paragraph - should not be stated "The selection . . . a school will offer should be determined by . . . expertise of teachers, availability of appropriate and safe equipment."		

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A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Studio Art I - II		
June 13, 1997	Jennifer Wiley Milton, WV	It should be determined by needs of the students only if not listed sequentially in document. County must be able to provide teachers and equipment. Every senior high should be required to have a working kiln.		

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Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Art History/Appreciation		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
§126-44-4. SUMMARY OF THE INSTRUCTIONAL GOALS AND OBJECTIVES				
June 4, 1997	Eileen M. Miller State Director West Virginia Thespians Magnolia High School New Martinsville, WV	It has been proven again and again that the arts enhance the over-all student achievement in a school. If we include the programs, the students will benefit!		
June 5, 1997	John L. Puffenbarger Buckhannon, WV	This is a well-written, well thought out summary.		
June 10, 1997	Cathy L. Walker Nutter Fort Intermediate Sch. Nutter Fort, WV 26301	I am happy to see standards being set. It is always wonderful to strive for the best that we can do. My worry is in the testing of these objectives. Most situations are not ideal. These are goals to strive for - but in the time allotted to the arts in most situations - these goals will be almost impossible to achieve! If testing is required, it will be so time-consuming that little opportunity will be left for the actual "making of music."		

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N =	No Response	- =	Negative
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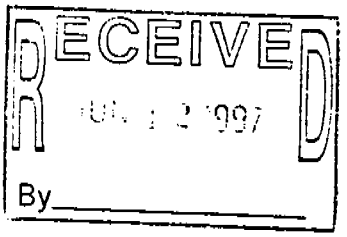
Date Received	Individual/Organization	Comment	Action/Type	Rationale
§126-44-4. SUMMARY OF THE INSTRUCTIONAL GOALS AND OBJECTIVES				
June 11, 1997	Brenda M. Joe Fairmont, WV	If music teachers had as much time as teachers of math, reading, social studies, and science have, then this curriculum could effectively be implemented. Instructional time must be increased significantly if the arts are to be truly effective in the educating of our children. More arts personnel need to be employed to service all students, especially K-4 more effectively. The curriculum for the arts is expanded but arts personnel have little time scheduled in school programs to implement it effectively. Mandated "ADEQUATE" time needs to be implemented so these goals and objectives can be successful!		
June 12, 1997	Ellen Kell Cheek Huntington, WV	The strength of this program of study is the quality of skills pursued at each level of study. Our students will be well rounded individuals with this program in place, also.		
June 13, 1997	Kathryne Williams Beckley, WV	Basically very good. Performance classes too heavy with history and research. Composition lacking.		

ARTS INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG
June 4 - June 13, 1997
ATTACHMENTS



"Montani Semper Liberi"

JERRY D. STOVER
Art Department
Clay County High School
1 Panther Dr. • Clay, WV 25043
(304) 587-4226/587-2164



June 12, 1997

Dr. Jeanne Moore, Coordinator, Fine Arts
West Virginia Department of Education
Building 6
1900 Kanawha Blvd. East
Charleston, WV 25305-0330

Dear Dr. Moore,

I believe that most educators realize the impact that the Goals 2000 legislation represents and that, as educators, it presents us with a challenge and an opportunity for change. This gives us an opportunity to provide guidance and set a direction that will affect each student in West Virginia, each program in the arts, for many years to come. Albert Shanker, President of the American Federation of Teachers, stated that Goals 2000 " is the most significant piece of educational legislation we've ever had." While " in and of itself, (Goals 2000)won't solve the problems of our education system...it provides a structure without which we can't begin to solve them...."

As the Chairman of the Visual Arts Writing Committee and a member of the WV Arts Instructional Goals and Objectives Steering Committee, I support adoption of Instructional Goals and Objectives for the Arts (Dance, Music, Theater, and the Visual Arts). I realize that the Visual Arts document is a condensed version of what the Steering Committee first approved however, it still contains pertinent information regarding what students need to know as well as what they should be capably to do in the arts.

Our writing committee was composed of outstanding art educators from many parts of our state while the Steering Committee was compassed of educators, parents, and school administrators as well as a variety of representatives from business and industry. As chairperson of the Visual Arts committee, I would like to explain how the members of the writing committee drafted the document that was reviewed by the Arts Instructional Goals and Objectives Steering Committee.

In the beginning sessions we decided what direction we wanted to follow. We looked through many art texts and publications as an attempt to get our direction. The criteria that we chose to use to meet our goals were determined by personal experience, research studies, and national literature.

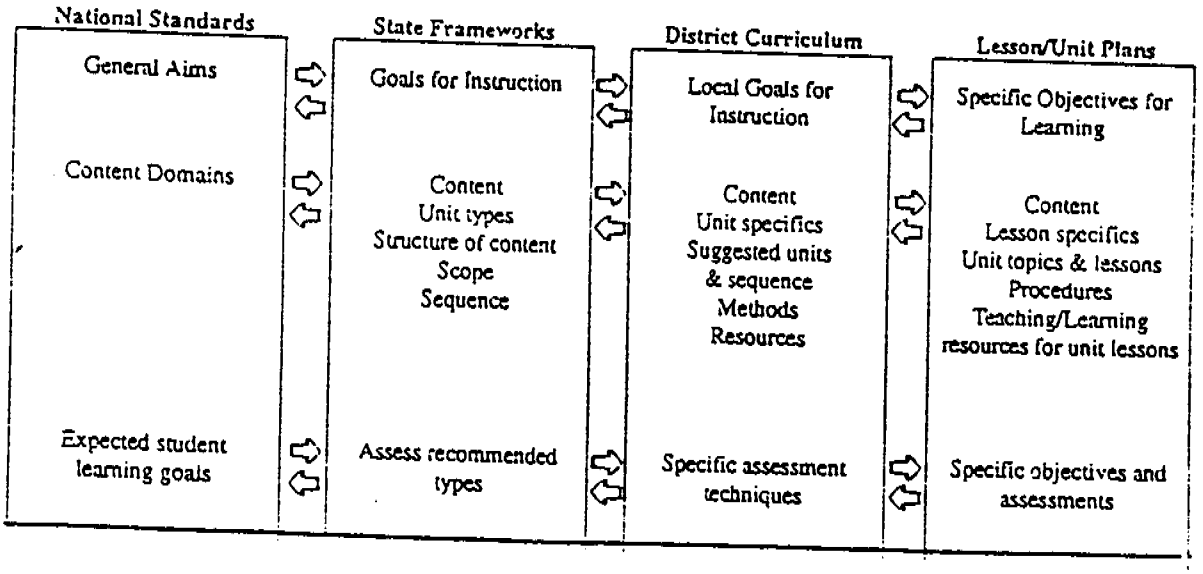
In drafting our document, we had to remember that these standards had to provide a framework for helping students learn the characteristics of the visual arts by using a wide range of subject matter, symbols, meaningful images, and visual expression, to reflect their ideas, feeling, and emotions and to

evaluate the merits of these efforts. We also had to remember that the visual arts, like all the arts, are extremely rich. The visual arts can range from drawing, painting, sculpture, and design, to architecture, film, video, and folk arts. They involve a wide variety of tools, techniques, and processes. The standards had to be structured to recognize that many elements from this broad array must be used to accomplish specific educational goals and objectives. We had to remember to meet the standards, students must learn vocabularies and concepts associated with various types of work in the visual arts and must exhibit their competence at various levels in visual, oral, and written form.

One enormous area of concern was as schools prepare for the 21st. Century, our students and teachers will be called upon to solve complex problems, to think critically, to process diverse information, and to function in a rapidly changing world. I feel that our document will prepare students for future living and will put a framework into place on which future educators can build a better educational climate for student growth.

We also had to remember that instructional goals were mandated as policy while instructional objectives are provided as suggested technical assistance for county school districts to use in preparing curriculum guides. We had to think about how the National Visual Arts Standards relate to state frameworks, district/county curriculums, and lesson plans.

We used such tables and research as the following table taken from *Visual Arts Education Reform Handbook*, National Art Education Association, Suggested Policy Perspectives on Art Content and Student Learning in Art Education, Reston, VA, 1995.



In preparing our goals and objectives we tried to keep our focus on art content, art learning, and art education. Our committee felt that the following criteria are major expectations commonly associated with an effective visual art program and that we have written goals and objectives that leaves a window of opportunity open to reach all standards.

1. Students will experience a sequential program of art instruction that will be balanced to include the study of aesthetics, art criticism, art history and art production.
2. Students will develop a sensitivity to aesthetic values, including qualitatively significant skills in organizing and expressing visually their ideas, personal feelings, experiences and aspirations.
3. Students will acquire critical, historical and aesthetic concepts in the visual arts to gain a better understanding of regional, national and world cultures.
4. Students will acquire an understanding of regional, national and world cultures.
5. Students will develop personal skills through a study of the visual arts.
6. Students will develop an awareness of the visual arts as they relate to art careers and related professions.
7. Students will develop the sensitivity, visual discrimination and judgment needed to enhance the visual environment including their personal lives, home, school and community.
8. Students will learn to become discriminate consumers of the visual arts.
9. Students' involvement in the visual art's program should be evident throughout their school.
10. Students will use the visual arts to build and enrich both private and communal environments.

It has been extremely hard writing, discussing, and rewriting our goals and objectives from the National Standards; however, we have tried to provide for West Virginia students involved in the Visual Arts the very best documents available anywhere. Therefore, I would like to recommend the adoption of Instructional Goals and Objectives for the Arts. If the document can be revised, I strongly recommend the inclusion of the K-8 goals and objectives for dance and theater and the inclusion of all the goals and objectives as originally submitted to the Department of Education.

Sincerely,

Jerry D. Stover

Jerry D.Stover

RECEIVED
By

John Ryder - Chorus
377-2256

COMMENT ON PROGRAM OF STUDY FOR CHORAL MUSIC GRADES 9-12

GENERAL THOUGHTS

Allow me to start by saying the overall ideas expressed in the goals and objectives for music are good. Developing basic singing skills, reading and notating, listening, and evaluating are all outstanding goals. I did get a kick out of the fiscal impact statement in the executive summary -- how can anyone possibly believe these goals can be accomplished without expense to local boards? Funding for the purchase of music alone will run into thousands of dollars per year at each school!

Let us assume that every choral director in the state is teaching in a decent choral facility (I hope we all realize what trouble assumptions cause). Let us also assume that the students moving into chorus in the ninth grade have successfully achieved all the music goals and objectives set forth for the first nine years of schooling. In this case singing four-part (SATB) music is indeed possible. Otherwise, as is the case at Ripley High School, most freshman choirs will sing three-part music simply because of the lack of men. I sincerely doubt that tenth grade choirs will be able to perform double-chorus music, again because of the lack of personnel. Of course, if the director combines all his forces (again assuming numbers) this might be possible. Having grade twelve students prepare an analysis of a choral score and also prepare a program is absolutely ridiculous! This is collegiate and graduate level work, even considering all the previous goals and objectives.

I have not touched on the one area that really bothers me. The area of improvising melodies, variations, and accompaniments is quite radical. I personally have received no training in this field. I sincerely doubt music students will attain even a modest ability to improvise while studying in the public schools. We must remember that in many systems general music is taught by the regular classroom teacher, not by a specialist (Kanawha County!). These teachers will have no training in improvisation and therefore the students will receive no instruction. Is improvisation going to become a skill taught at the college level and required for certification? The vast majority of choral directors in this state share my complete lack of preparation in this skill.

Finally, are we going to be held accountable to these standards, or are they going to be basically ignored by administrators as they have been in the past? If we are held accountable, will we be responsible for reteaching all the skills missed in the earlier grades and also for the new skills? What about time constraints? I teach in a block scheduling school and my choirs are double blocked (students take choir twice a year). I will have time to teach most of these skills but my peers who only teach 48 minute periods or only one block a year will not have the time. This entire document seems rather high and mighty. Maybe a more down-to-earth set of goals and objectives would be in order.

ITEM BY ITEM COMMENTS

CIV.1-4 Good
CIV.5 My freshman choir is SAB
CIV.6-8 No teacher training!
CIV.9 Good
CIV.10 Who establishes difficulty levels? Who taught the student to sightread before high school?
CIV.11-17 Outstanding!
CIV.18-20 Very good but may fall by the wayside because of time constraints.
CV.1-7 Good
CV.8-10 No teacher training!
CV.11-12 Good
CV.13 See CIV.10
CV.14 Teacher training in this area is weak.
CV.15-20 Good
CV.21 This is physics of music, an upper-level collegiate course!
CV.22 Who will pay for the recordings? This is also collegiate level stuff.
CV.23 Good
CV.24 See CIV.18-20
CVI.1 Good
CVI.2 Very difficult for an adult vocal major much less a teenager.
CVI.3-6 Good
CVI.7-8 No teacher training!
CVI.9 Good
CVI.10 Accessibility ($) and training.
CVI.11 Very lofty goal. Are we trying to make all students music majors?
CVI.13-14 Good
CVI.15 Collegiate
CVI.16 Collegiate
CVI.17-21 Good
CVII.1 WHY? This is choir not voice class!
CVII.2 Good
CVII.3 See CVI.2
CVII.4-5 Good
CVII.6 See CVI.11
CVII.7-8 No teacher training!
CVII.9 Collegiate and not necessary in high school.
CVII.10 Good
CVII.11 With what kind of accuracy?
CVII.12 Good
CVII.13 Why operas? Maybe the choruses, but not whole operas!
CVII.14 I know we are encouraging higher level thinking but this is absurd!
CVII.15 Graduate level
CVII.16 Good

CVII.17 Why?
CVII.18 Good but who supplies the materials?
CVII.19 Graduate level

I notice a general lack of public performance goals. Is the state board going to advise local boards that choirs are solely for music instruction and not for performance? Most local boards fund choirs because of their perceived entertainment value, they do not even consider the educational aspect. The joy of choral music (the reason I do what I do) is performing for an audience. It is the culmination of all the training and learning. Shouldn't this be reflected somewhere?

I hope my comments prove valuable to you. Thank you for allowing the public to be involved.

John E. Ryder
Choral Director and Chairman of the Department of Music
Ripley High School
#2 School Street
Ripley, WV 25271
372-7355

26 Pine Drive
Evans, WV 25241
372-2286

Jim Rush - Theatre

RECEIVED
JUN 13 1997
By

General Comment

These goals and objectives seem to assume that every high school has (1) a scene shop complete with all materials, tools, and safety equipment (2) a vast library of plays, critical writings, technical books, and philosophy (3) a dedicated sewing laboratory with endless materials (4) a fully-equipped television studio (5) a modern auditorium with a working light and sound system (6) instructors who are trained to use all of the above (7) students who spend all day, every day for four years doing nothing but theatre. I don't believe any of the above to be the case.

We got a real belly-laugh out of the comment the none of this new program would cost boards of education any money. I assume that that was meant humorously. Initital upgrading to these objectives here would cost well over a million dollars. Annualy expendable supplies would run four or five thousand. Hiring four new instructors (and those would have to be outside the formula) would run another eighty thousand plus benefits. Someone down there needs a stiff dose of reality.

I have never been one to criticize unless I can do better. In this case, it isn't difficult. I suggest the following as goals for Theatre One:

Students will :

(1) learn to work as part of an ensemble
(2) gain self confidence through participation in plays
(3) improve measuring skills through application
(4) progress in reading skill through oral interpretation of scripts
(5) gain knowledge of the form in which plays are written

Objectives might be as follows:

Students will:

(1) participate as actors in monologues, scenes, and a play
(2) draw a floor plan to scale for a particular play
(3) read at least one play per grading period and report on aspects of it such as number of characters, set requirements, technical difficulties, etc.

This is the freshman theatre program as it is conducted here, and it takes all of our alloted time and all the financial resources available. Even at that, only the fact that all the costumes are donated make it possible for us to do theatre here. The students know what they are doing and why and feel good about what they have done when it is finished. That's what it should be about.

Jim Bush
chair, English Department
Ripley High School

Theatre Instructional Goals

DESIGNING: This goal calls for students to create costumes. Facilities, funds, and materials for this are not available to any high school of which I am aware.

RESEARCHING: Time and facilities are not available for this at all. Also, the wording is so vague that it is almost empty.

COMPARING ART FORMS: Since all students do not have available the same, or even similar, resources, this seems impossible.

ANALYZING: This seems to be semantically null.

UNDERSTANDING CONTEXT: This is graduate school stuff.

These goals need to be reduced to a practical, achieveable leve: Students will learn to memorize lines, students will be able to act as a team with minimal friction, students will learn punctuality, students will learn to care for equipment, etc. As is, these are worthless.

Objectives:

9.1

No plays are available for this sort of literary analysis. Who will buy them. "Variety" seems to indicate that several will be done. If one play per week is covered in a class of twenty-five, that is a cost of a minimum of $1800 per class.

9.2 Asking freshmen for "psychological analysis" is ridiculous. Most have difficulty pronouncing the words, much less understanding and deep motivation in a rational way.

9.3 What does it mean? The idealism is wonderful, but after teaching theatre for ten years, I have no idea what this says.

9.4 This is the center of fifty percent of instructional time.

9.5 What does "depict" mean in this context? Why not "develop"?

9.6 What are "chemical properties" of theatre? I have no clue as to the meaning of that. We have no financial resources to examine much in technical theatre. All our funds come from ticket sales. I can see a good technical program for about $6,000 a year for expendables. Who will pay for it? Right now, we don't even have make-up because there is no money to pay for it.

9.7 Where are the texts? Who pays the bill? How will freshmen know anything about "production requirements" when a good half of them have never seen a stage play much less been involved in one?

9.8 I did this in college, as a senior. It's far beyond a high school freshman. Drawing (or even copying) a simple floor plan and understanding it is beyond the backgrounds of most.

9.9 Again, this is far too complex. My students learn what a flat is and how to turn the lights on. I consider that a major accoplishment. Also, who pays for all this? Materials to teach scene construction run about $1200 per year. The only way I can do this currently is to have the classes build sets for actual Thespian productions. There is no other money.

9.10 This is a senior project. Freshmen can make posters, but there is very little "coherent" about them. That takes time to develop.

9.11 What does that say?

9.12 Where is this research to be done, and when? Why not write in English instead of jargon?

9.13 This, I think, is done regularly. Because of the wording, I can't be sure. I only have an MA.

9.14 What does this say? Do your really think that freshmen--or their teachers--have any background for this sort of thing? I've not seen any evidence of it. It was never discussed--or alluded to--in any of my course work in theatre. I got into some of these sorts of comparison in graduate literature classes, but I don't see any hope of doing this is a freshman class.

9.15 Good. Lesson one, day one.

9.16 What does this mean?

9.17 Every production does this as a matter of course. Why does it need to be a goal?

9.18 Where and how are students to gain exposure to "a variety of cultures and and historical periods"? Certainly not in Jackson County. Video is a possiblility, but who is to bear the cost of their purchase ? When is there time do watch and discuss a "variety"?

9.19 Can this be said in plain English? It seems to me to be important that the students be able to understand their goals.

9.20 What does this say? If it says what I think it does, it should be a senior goal at very least.

9.22 The idea of "theme" should certainly be introduced, but I would be please if freshmen would grow able to recognize one. This is a bit grandious.

9.23 This requires a good library and lots of reading. Who will supply the books, the reading ability, and the time?

9.24 Theatre History is a course taught in many colleges. The resources are lacking as is the need at the freshman level. They need to learn what a script looks like and what its parts are first.

9.25 Freshmen do not recognize any "cultural experiences," especially their own. These objectives need to get in touch with reality. I fear it would be a long-distance call.

10.1 This is a reasonable goal if the plural is replaced by the singular.

10.2 Where are the "plays, films, and other media" to come from? Who will pay for classroom copies?

10.3 How does one demonstrate an historical style? What is meant by that?

10.4 Where are materials for this unit to come from? Who will pay for them? Who will train instructors in these things?

10.5 Is this presentation of monologues? What is the intent of this?

10.6 How is being able to "explain" relevant? Wouldn't actual use in production be of more value? Where are the supplies (makeup, paint, etc.) to come from? WHO PAYS THE BILLS?

10.7 Where is this "variety of texts" to come from? Who will buy them and where will they be stored?

10.8 What does that say? It seems to as a sophomore to design a prompt book for a production. If that's it, I haven't yet met one who was capable of that.

10.9 Where are these sets to be built and these costumes constructed; with what tools and from what materials? How many of the state's theatre teachers are qualified or inclined to run an OSHA approvable shop or to teach pattern making and costume sewing? This seems to require the construction of a scene shop and a sewing lab. WHERE IS THE MONEY? This would run no less, I would think, than $150,000.

10.10 It is a rare sophomore mature enough to be a stage manager. I've seen some but they are few. A promotional unit is possible, but where do the supplies come from. WHERE IS THE MONEY?

10.11 What does this say? Drop the jargon and write in English.

10. 12 What does this say?

10.13 It's still too early to ask sophomores to direct. They have been involved in, at most, four or five productions.

10.14 Where is the library? Who pays for its construction and stocking? WHERE IS THE MONEY?

10.15 What does this say? Where are students to become exposed to dance, "dramatic media" (whatever that is), and "visual art"?

10.16 What does this say?

10.17 What does this mean? How is it to be accomplished by sophomores?

10.18 Where in heaven's name would sopomores acquire this magical ability! It's been done by such as Shakespeare and Shaw, but rarely by others. Why connot objectives be connected to reality?

10.19 Restated in English instead of jargon, this might work.

10.20 Where will the students see these dramatic performances?

10.21 Why not write this in English that students can understand?

10.22 This requires a library and reading time that does not exist in the real world.

10.23 This, too, requires a library and vast reading time. WHERE'S THE MONEY?

10.24 Where are students to get a basis for this without having a library to read or the possibility of having seen a wide variety of productions?

10.25 As with the freshman class, these children have no understanding of their own "cultural experiences"; therefore, there is little possibility of their applying it to anything.

11.1 This is a good objective, but takes a great deal of class time. Is it worth three or four weeks work?

11.2 Where are the "texts"? Who is to buy them? WHERE IS THE MONEY?

11.3 Absolutely!

11.4 Too much. It is enough to say "create consistent characters in performance."

11.5 This is vague. Since when? Where is this information to be found? Who pays for the acquisition of the library?

11.6 How can every student have an opportunity to be a director's assistant? What in the world is meant by "the metaphorical nature of theatre"? What goobledygook!

11.7 Where is this to be accomplished? Who is to train the teachers and supply tools and materials? WHERE'S THE MONEY?

11.8 This does not fall within the possible realm of sophomore responsiblility, nor are there facilities available to accomplish it at any school I've seen.

11.9 For theatre, this is acceptable, but how is it to be done in "film, television, and electronic media" (whatever that is)? I suppose I could give them a list and have them memorize by rote the job descriptions, but I don't see that as worthwhile.

11.10 Where and how are these tasks to be accomplished?

11.11 This can be offered, but only to a few.

11.12 Where is the library? Where is the time? WHERE IS THE MONEY?

11.13 Where is the library? Where is the time? WHERE IS THE MONEY?

11.14 What does this say? If it implies what I think it does, it is a semester course unto itself and not part of theatre. There are no resources available--even if money were--to teach this without a great deal of teacher training and research.

11.15 What does this say? There are no art resources here to "integrate," at least not for whole classes.

11.16 What is a "nontraditional" dramatic performace? I don't have a clue.

11.17 Resources are not available for this.

*b1W

11.18 Where have sophomores acquired knowledge of Greek, classic French, or even American dramatic philosophy. In their terms, "Get real!" They need to learn to read and write first.

11.19 What are the sources from which "critical comments" may be gathered? We have none that I know of outside the *Charleston Daily Mail*. I wouldn't want to use that for a model.

11.20 What in the world is this? Where would such information come from?

11.21 What does this say? Who has been trained to teach it?

11.22 Where are the resources for this? Not in any West Virginia high school, I feel certain; a few colleges may have some of the needed materials.

12.1 "Multiple media" resources are not available. They could be made available with sufficient money--probably forty thousand per school. Then, of course, instructors trained in its use would need to be found.

12.2 What is meant by "multi-dimensional characterization"? Can't the language be written on a level that students can comprehend?

12.3 Good.

12.4 ALL students do ALL of this? When and how and under whose instruction? Theatre is an elective, not a full-day, all-consuming requirement.

12.5 Where is the information to accomplish this? I couldn't do it, much less teach it, with the resources available.

12.6 How can every student have the time to do this? One theatre instructor would be spread rather thin if he had more than two students.

12.7 Where are construction supplies, tools, and safety equipment to come from? WHERE'S THE MONEY?

12.8 These tasks cannot effectively be left to students. They haven't the authority, capacity, or time.

12.9 Where is this information to be found? Reading and rote recital of job descriptions is rather worthless.

12.10 Creating the concept is the job of the director. He must communicate it to the cast and technicians, but it really isn't a "collaboration" in the sense this seems to indicate.

12.11 While students need to cast and direct scenes, they cannot do it without supervision as this seems to indicate.

12.12 Where is this research to be done? Where are the materials to be had?

12.13 Where are the students to gain exposure to "several art forms" in any organized or uniform way?

12.14 Ridiculous! This is too jargon-laden to be meaningful and too far-fetched in materials and student/teacher background to have any validity.

12.15 Resources and facilities are not available.

12.16 What does this mean? Is it relevant to anything?

12.17 Where are these "differing critiques" to be found?

12.18 Graduate school stuff. Even with adequate library resources, this is beyond the best seniors. I have taught AP English for years and nothing at that level approaches the outskirts of this. The objective needs to make contact with reality at some point.

12.19 What does this say? Does is mean that a student should leavn to evaluate his own performance and decide how to improve himself? If it does, why not say so clearly?

12.20 Where are the resources for this? What purpose does it achieve?

12.21 Nonsense. This is graduate school philosophy class stuff.

12.22 Materials, facilities, and resources are not available.

KATHRYNE WILLIAMS

Composition

Study the grand staff and keyboard to develop correlation
Demonstrate an understanding of steps and half steps on staff and keyboard using sharps, flats, double sharps and double flats.
Show an understanding of diatonic and chromatic half step.
Construct the chromatic scale on the staff.
Construct eight measures of music in all the commonly used time signatures showing accented beats; use dotted notes, ties, sixteenth notes and rests, triplet rhythms, phrase markings to indicate a musical thought, staccato and legato passages,
Write simple chords on the grand staff showing proper stem placement.
Show an understanding of leger lines above, below and between the two staves of the grand staff.
Demonstrate a knowledge of musical markings used to show loud and soft, gradually lowder and softer, gradually slower, immediately slower, repeat signs, lst & second endings, etc.
Show by writing on the staff a knowledge of enharmonic tones
Indicate a knowledge of intervals
Show on the staff a knowledge of the structure of the major scales in all keys, marking the half steps with a slur; list the names of the tones of the scale: the tonic, supertonic, mediat, subdominant, dominant tones,sub-mediant, leading tone and upper tonic; bracket the lower and upper tetrachords.
Build the major scales by tetrachords using the circle of fifths clockwise and counter clockwise
Describe intervals by their specific names: Perfect, Major, Minor, diminished and Augmented as well as their number name.
Practice playing all the intervals and their inversions on each note of the keyboard naming the size and species of each interval.
Write triads on each tone of the major scales and label them as M, m, +, (A), - (d).
Play M, m, +, - triads on each tone of the piano for one octave.
Show an understanding of the root, third, and fifth of the triad and the inversion of the triad. Write arpeggios 2 octaves.
Practice playing what you write to improve your hearing/
Write music as it is dictated from a recording or instructor.
Show an understanding of the relative minor scales by placing the key note on a staff.
Indicate the difference between the Natural, Harmonic and Melodic minor

by constructing the scales following the circle of fifths and showing the half steps.
Show an understanding of the intervals and chords in the minor keys
Write dominant seventh chords in all the keys.
Write four voiced chords in various major and minor keys. Label them with numerals and letters.
Show an understanding of Figured Bass using Chords of the sixth and six-four chords along with accidental alterations.
Analyze the chords of a piece using Roman numerals and figured bass.
Construct the following modal scales, showing the triads on each note: Ionian (Major), Dorian (Blues), Phrygian, Lydian, Mixolydian, Aeolian (Natural Minor), Locrian, Whole tone scale, Pentatonic, Chromatic.
Make up melodies to given bass passages.
Write chords for given melodies
Write parts for soprano, alto, tenor, bass showing you understand the range of each voice.
Study the fundamental rules of elementary harmony, and show an undestanding of open and close harmony.
Write two and four part harmony showing similar, parallel, contrary and oblique voice movement and voice doubling.
Write and play on the keyboard Authentic or (Full Close) Cadences; plagal cadence (Church); Half Cadence (Half Close); and False or Deceptive cadences; extended authentic cadence; perfect and imperfect cadences; Masculine and feminine endings, the Tierce de Picardie, and the Phrygian cadencel.
Defirte consonant and dissonant chords; show resolutions of dissonances marking the direction of the active tones.
Play on the keyboard the dominant seventh chord in all keys. Write them showing the inversion using figured bass.
Show the resolutions of Dominant seventh chords
Write the dominant ninth chords, eleventh, and thirteenth in all keys showing the resolutions.
Indicate on the staff, the derivaties of the Higher Fundamental Discords.
Transpose a piece of music into several keys by position, by half step higher or lower, by whole step higher or lower, by a major third up or down and by harmonic analysis.
Indicate a knowledge of a Cadential or Permanent Modulation, a transient modulation, modulations to closely related keys; and unrelated or remote keys.

TO: Dr. Marockie and Members of the West Virginia State Board of Education

My comments concern the addition of the arts curriculum to core instructional goals and objectives in Policy 2520:

I have had the privilege of working on the steering committee, under the leadership of Dr. Jeannne Moore, for the development of the arts curriculum for West Virginia. Never have I seen such enthusiasm or dedication to the task shown by Dr. Moore and members of the writing committees and steering committee. When concerns about various items were expressed, they were taken back to the committees for re-wording, re-defining or deleting. Through it all, the guiding hand of Dr. Moore was there to maintain the integrity and high standards of the arts curriculum.

I, also, had the opportunity to work with the music and dance committees as the goals and objectives were correlated with core curriculum in K-12. Each section of the arts curriculum was gone over item by item to make sure it correlated with the core goals and objectives. In the document presented for adoption, the K-6 music and visual art objectives have been correlated with those objectives in the K-6 core curriculum. This correlation lends itself to an across the curriculum approach in teaching students – making and strengthening connections to the real world. The objectives were, not only, correlated in the 7-12 curriculum but the process/workplace skills were, also, indentified for teachers.

I noted that the K-8 dance and theatre correlated objectives have not been presented for adoption. If there is a problem, I hope it is not a serious one because these sections are just as important to young children as it is to the older students.

I have taught for twenty-six years and know that these areas lend themselves to enhancement and better understanding of lessons. I have seen first hand how the arts can increase and improve language skills, how it provides opportunities to develop artistic talents to communicate in ways other than language and bring cultural awareness and understanding in our students. Our school, Hinton Area Elementary, has organized a drama club and I am amazed (not surprised) at the increase in the self-confidence and self-esteem in the students who participate in the drama presentations.

The local art council has been revived and is focusing on recognizing children and adult artistic talents and is sponsoring presentations to enhance and educate the local communities. This is just a beginning for our county.

Now, it is your turn – to actually bring the curriculum alive for the children of West Virginia. Please support the arts addition to the core curriculum.

RECEIVED

By_____

Thank you for your consideration,
Rose Mary Irwin
Elementary teacher

ARTS INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG
June 13 - 25, 1997

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

- = Negative
+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
		GENERAL		
June 18, 1997	Carolyn Hill Art Instructor 6-7-8 Washington Irving Middle Clarksburg, WV	It is obvious that a great deal of work has gone into the arts document. Thank you.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS				
		Dance		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Music		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Theatre		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL GOALS (continued)				
		Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 7 - I agree with instructional goals with the exception of paragraph six where it says "assessing.....merits of.....the work of others." Many teachers would fulfill that goal by lining everyone's work up on the chalk tray and letting other students take verbal pot shots! Even if classmates were kind, it still creates an atmosphere of comparison that does not help the students stay focused on what would be most helpful - developing skills using various mediums along the line of his or her own personal style!		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
DOCUMENT GUIDE				

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

- = Negative
+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Music		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Kindergarten: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 13 - Paragraph 2. I agree with "creative work is preferred over prepared models." However until qualified, yes certified, teachers are used in elementary schools, you are going to have desperate teachers handing out phono copies of pilgrims, flowers, and Christmas trees saying, "Here, color this, and I'll take it up at the end of the class!"		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Music		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		First Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 17 - Grade one seems fine except there should be more opportunity for interpretive drawing, e.g., draw what James looked like after hearing the story *James and the Giant Peach* or whatever is appropriate to the children's reading level.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

- = Negative
+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Second Grade: Music		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Second Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 21 - Grade two - OK but more drawing advised.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Music		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Third Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 25 - Grade three - OK but more drawing advised.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Music		

ACTION		TYPE	
N =	No Response	- =	Negative
NA =	Not Accepted	+ =	Positive
A =	Accepted	0 =	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fourth Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 29 - Grade four OK. Page 30 - Item 4.19 - Teachers must not be doing that because every time I do flip book style 2-frame cartoons, most of the children are amazed like they had never heard of them -- and that's an assignment I do with 7th graders.		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Music		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Fifth Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 33 - Grade 5 - OK.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Music		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Sixth Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Item 6.10. I teach 5 ways to shade but encourage my students to keep their minds open - that there may be more ways to shade!		
June 18, 1997	Carolyn Hill Art Instructor 6-7-8 Washington Irving Middle Clarksburg, WV	These are concise, specific objectives, but they allow teacher flexibility in choosing student projects to fulfill the objectives. Thank you.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Seventh Grade: Music		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Seventh Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	OK. More drawing is provided in these it seems - that's good! A little late in a person's development, but good!		
June 18, 1997	Carolyn Hill Art Instructor 6-7-8 Washington Irving Middle Clarksburg, WV	Objectives 7.1 through 7.13 are reasonable and "do" able. If you have ever taught seventh graders, you know they want to create art, not discuss except for limited periods. Objective 7.21 is best held for eighth grade, however, when fine motor skills are more developed.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Eighth Grade: Music		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES K-8				
		Eighth Grade: Visual Art		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	OK. More drawing is provided in these it seems - that's good! A little late in a person's development, but good!		
June 18, 1997	Carolyn Hill Art Instructor 6-7-8 Washington Irving Middle Clarksburg, WV	These objectives are vague at best and will require a text, a 200 slide set, and an hour per day for a year to achieve. These objectives require too much talk and not enough work. Currently, I have each eighth grade student one six week period. The entire course is devoted to West Virginia heritage arts projects except for one adventure into French Impressionist pointillism. Coordination with the social studies and foreign language has had a positive effect on the students and between the three departments.		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

- = Negative
+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Instrumental Music - Strings I - V		

ACTION

N = No Response
NA = Not Accepted
A = Accepted

TYPE

- = Negative
+ = Positive
0 = Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Instrumental Music - Wind and Percussion I - IV		

ACTION			TYPE	
N	=	No Response	-	= Negative
NA	=	Not Accepted	+	= Positive
A	=	Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
MIDDLE CHILDHOOD MUSIC EDUCATION ELECTIVES				
		Choral Music I - III		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Dance I - IV		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Orchestra I - IV		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Band - I - IV		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Chorus I - IV		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Piano I - IV		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Folk Music I - II		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Music Appreciation/History		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Music Theory/Composition		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Theatre I - IV		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		General Art I - IV		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 137 - Fine, Page 139 - OK, Page 141 - Good, Page 143 - Developing a personal portfolio is good.		
June 24, 1997	Terry Rotruck Keyser High School	Allow some flexibility in number and level at which a concept, dimensional project, or number of required projects are set forth. Specifying a specific number, level, and time may actually lower the quality of work and the level of student understanding if all students are put on a pre-programmed schedule. Allow solid programs to assess student readiness to achieve maximum results in a media process or dimensional work.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Studio Art I - II		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Pages 147-148 - Very good but typically done in college. Page 149 - Good.		
June 24, 1997	Terry Rotruck Keyser High School	It is unclear as to the number of courses you might expect to have offered under the title "studio art." Who or what determines which courses and how many could run within some instructional time frame. Caution, an extreme variety may not be realistic within a one person department. Proficient and craftsmanship level of development require more hands on time with materials and equipment. If you are serious about this, a "significant" boost in funding will be essential. "You can't make a silk purse out of a sow's ear!" This is an old quote, but it hits the nail on the head. The fiscal impact statement of no cost will result in a ploy or a smoke screen to have the policy adopted. When you call for more broad experiences, more courses, more depth in courses, then it is obvious the materials, texts, equipment and space must be provided to meet the requirements. To think otherwise is pure folly. Why not say this is the policy we want in effect and this is what the state is prepared to provide in order to make sure it can actually be implemented in a successful manner.		

ACTION		TYPE	
N	= No Response	-	= Negative
NA	= Not Accepted	+	= Positive
A	= Accepted	0	= Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
INSTRUCTIONAL OBJECTIVES GRADES 9-12				
		Art History/Appreciation		
June 18, 1997	M. Robert Hattman Principal Parkersburg Catholic High	Page 151 - Good.		
June 24, 1997	Terry Rotruck Keyser High School	Re-program college to educate future teaches about art history other than western cultures.		

ACTION			TYPE		
N	=	No Response	-	=	Negative
NA	=	Not Accepted	+	=	Positive
A	=	Accepted	0	=	Neutral

Date Received	Individual/Organization	Comment	Action/Type	Rationale
§126-44-4. SUMMARY OF THE INSTRUCTIONAL GOALS AND OBJECTIVES				

Policy 2520 Instructional Goals and Objectives - Geography

Public Comment Analysis

The public comment period ended June 13, 1997.
Ten respondents made a total of 10 comments on the Geography instructional goals and objectives.
Three of the comments, (30%) were positive and supportive.
Five of the comments, (50%) were negative.
Two of the comments, (20%) were neither supportive or negative.

No changes were made as a result of the public comment.

GEOGRAPHY (ADOLESCENT EDUCATION) INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG

Date Received	Individual/Organization	Comment
		GENERAL
May 19, 1997	Linda Smith Barboursville Elementary Barboursville, WV	I don't see how this will be of no cost to the counties. G.11 calls for computer mapping skills. We have no programs for this and the cost is prohibitive. Could courses be offered with mini grants offered for purchase of geography software?
May 21, 1997	No Name	6.8, 6.10, and part of 6.14 could be cross listed with arts instructional objectives. They reinforce each other and if a student needs reteaching in geography, it could be more easily mastered by addressing it from the art or cultural viewpoint. These items are also covered as part of the arts curriculum. Overall - looks pretty comprehensive and adaptable to local resources and programs. It is consistent through all the document that no punctuation is used or "sentences" written? Is this the "role model" we want to project?

GEOGRAPHY (ADOLESCENT EDUCATION) INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG

Date Received	Individual/Organization	Comment
		GENERAL
May 23, 1997	Patrick Fenimore South Charleston Jr. High South Charleston, WV	It appears that we are placing great importance on ourselves. The learner outcomes seem to deal with current time and the future. By not studying the past (i.e., why did Japan have a closed society and how does it impact their view of today's world), we do our students a disservice. To learn and understand new things, I must first know some facts about the past. Present discussions are based on future predictions balanced against historical fact. Let's not forget the facts.
June 2, 1997	Rema White Jane Lew, WV	What are we to omit to make time to teach this? That is a decision each teacher will have to make unless you choose to omit some equally time consuming items from the required curriculum.
June 4, 1997	Vicki Wood Kanawha County Schools	I do not believe the state curriculum should include a second "required" geography class. There is some overlap between the objectives for the adolescent and middle level courses. I believe geography is important and support the adolescent offering as an elective. I do not support it as a required offering. There are many social studies courses that are needed to support the various career clusters. Requiring another geography class may make it difficult for students to take psychology, sociology, anthropology, etc. - courses that may be more relevant for careers in human service, for example.

GEOGRAPHY (ADOLESCENT EDUCATION) INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG

Date Received	Individual/Organization	Comment
		GENERAL
June 11, 1997	Faye Milhoan	Having reviewed the instructional goals I feel that these goals are much more suited for the study of World Geography at the 7th grade level rather than the high school level.
June 16,1997	No Name	I am pleased to find a geography component in our instructional goals and objectives. It's a subject that has been neglected too often. Very good.
June 16, 1997	Karen Larry West Virginia Department of Education	I should have noticed this concern when reviewing the first section of Policy 2520 this past summer, but I did not. These comments, therefore apply to both that first section of IGOs for the core academic areas as well as to this section on Geography (Adolescent Education). The ◊ reference to process/workplace goals and skills is a general reference. Why is the reference not to a specific goal or skill? There is no sure way of determining if the content objective is related to problem solving, or to communication, or to working with others, or to... I am not sure this lack of specificity is a good idea. The introductory remarks on page 203 do not explain the symbol ◊. Should not an explanatory sentence be added for the reader?

GEOGRAPHY (ADOLESCENT EDUCATION) INSTRUCTIONAL GOALS AND OBJECTIVES
POLICY 2520
COMMENT LOG

Date Received	Individual/Organization	Comment
		GENERAL
June 16, 1997	Jackie McDaniels	I whole-heartedly approve the proposed policy additions. The geography goals and objectives reflect the desire to make our students aware of our world and be well informed citizens. These goals will also enhance the students math, science and English skills!
June 16, 1997	Beth Burdette Faculty Senate President Bridge Elementary School Elkview, WV	Assuming G.1 means grade 1, these goals seem realistic and attainable.

INSTRUCTIONAL GOALS AND OBJECTIVES FOR WEST VIRGINIA SCHOOLS (2520)

HEALTH EDUCATION COMMENT LOG

March 14, 1997 - June 13, 1997

Date Received	Individual/Organization	Comment
	INSTRUCTIONAL GOALS	
4/3/97	Jeanne Moore, WVDE 558-7805	These do not match the format I have been directed to use for the arts. Why? Your pp. 2 and 3 belong in a supplementary volume if we have both been given the same instructions. If we have not, why not? Also you have more than 30 objectives for each grade level 1-8. You have not used your Instructional Goals as they are used in the "core" book. I thought we all were required to use the format established by "the Group." Your Instructional Goals page does not match the "core" book format.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	Page 1, Last Paragraph: No ":" after education.
4/18/97	Joanne Smith Vinson High School 3851 Piedmont Road Huntington, WV 25704 429-1641	Students will demonstrate a knowledge of disease prevention, good health behaviors, interpersonal communication skills and goal setting.
4/21/97	Paul E. Ackerman c/o Paw Paw Schools 432 Moser Avenue Paw Paw, WV 25434 947-7425	Great.
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	The Health Education Goals are thorough and clearly correlated to the six components of West Virginia Comprehensive School Health Education as well as other curricular subjects. The interdisciplinary correlation is very helpful and encourages the integration of health into all curricular areas.
5/5/97	Carol Mullenbach, RN, B.S.N. Council of School Nurses Rep. RESA 6 Brooke High School RD 3, Bruin Drive Wellsburg, WV 26070 527-1410	Excellent draft, goals realistic, attainable, action oriented.

Date Received	Individual/Organization	Comment
5/6/97	The Regional Education Service Agency II 2001 McCoy Road Huntington, WV 25701 529-6205	Should correlate with the Metropolitan and Stanford Tests.
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	The goals set standards to integrate and master aspects presented in the objectives.
5/9/97	Robert H. Anderson Prevention Research Center Robert C. Byrd Health Sciences Center of West Virginia University 3820 Health Sciences South PO Box 9005 Morgantown, WV 26506-9005	Re TAD: only "preventing the use of . . ." is discussed. It seems like there should be room for discussing the consequences of using these drugs. Doing is not necessarily part of preventing the use of them.
5/15/97	Diane Case Route 1, Box 15 Petroleum, WV 26161 628-3790	This policy includes unfunded health service mandates. It also sets up secular humanism as the state religion in West Virginia. The Oregon State Board of Education is currently in federal court over the issues in this policy. The legal organizations handling this case have asked for laws ans policies from WV concerning the same issues. Is it responsible to spend time and money on unconstitutional reforms?
5/15/97	Sarah L. Yeater HC 60, Box 96A New Martinsville, WV 26155-9731 455-6529	Under the section listing the six components of WV Comprehensive School Health Education it lists one of the categories as RELATIONSHIPS. The description of this component raises a "red flag" with me. Public schools are not for addressing behaviors and attitudes that relate to establishing and maintaining lifelong healthy relationships. This is the role of mom and dad. A teacher may not have the same values as the parent and should not be teaching and assessing the students on his/her opinion on what constitutes a lifelong healthy relationship.
5/16/97	Larry L. Conn Mann Jr. High School: 600 Main Street Man, WV 25635 583-7441 Home: P.O. Box 111 Kistler, WV 25628 583-2385	To follow state and county guidelines.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Goals are realistic and obtainable. Linked with other ed. goals.

Date Received	Individual/Organization	Comment
5/16/97	Debbie Lore, Lead Teacher Kanawha County Elementary Physical Ed. Assoc. 261 Staunton Avenue South Charleston, WV 25303 348-1926	We feel these are sound goals and objectives. Many of these objectives are currently incorporated in our program of studies for Elementary Physical Education that was recently revised (Summer 1995). We will continue to support and reinforce these goals and objectives as we teach day to day. However, we would like to suggest that we feel to properly implement this program of Health and Wellness, a full time certified Health instructor be employed in each school. Each Physical Education Specialist in Kanawha County teaches anywhere from six to thirteen class periods per day and also many do lunch room duty as well. It would be unfair to attempt to implement a program of this caliber when the teachers are stretched as thin as they are now.
5/21/97	Kathaleen C. Perkins, MD Section Chief, Adolescent Medicine West Virginia University Pediatrics P.O. Box 9214 Morgantown, WV 26506-9214 293-7331	I would like to compliment you on consolidating major goals into the seven overriding concepts. I think this is very helpful in prioritizing educational services, especially so for the adolescent period when mortalities and morbidities can be prevented. 8th Grade & Secondary - I think the emphasis you have placed on injury prevention and violence is very significant. It is noteworthy that you have also emphasized self-perception and self-esteem as being important to other risk-taking behaviors and as particularly important in its relationship t sexual activity. All the goals which you have outlined certainly can be supported. The indirect approach to abstinence education is very desirable. Your emphasis on nutrition and appropriate weight control is very much needed in West Virginia at this time. I commend you for excellent results on a very difficult job.
6/3/97	N.A. Parsons RN School Nurse Work - Frankfort Middle Rt 3 Box 170 Home - Po Box 627 Ridgeley, WV 26753 Ft Ashby, WV 26719 726-4339 298-3680	School Nurses area natural, available resource to all health related areas but no where are they included or even mentioned. The school nurse is an educated, involved school staff member available as needed.
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	These are - Very Appropriate goals that would reinforce "everything" we are doing in the "WOW" and Healthy Schools Program
6/16/97	Darlene Thieman (home) Omar Elem Box 274 Omar, WV 25638 Henlawson, WV 25624 946-2660 752-0453	Will "access" of valid health information come from computer technology? and how young will the students be when they begin? Where will the software be provided /stored?

Date Received	Individual/Organization	Comment
INSTRUCTIONAL OBJECTIVES **Kindergarten**		
4/3/97	Jeanne, Moore, WVDE 558-7805	K.8 "manners" needs an adjective: "good" or "appropriate" to distinguish it from "bad manners"
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	K.5, K.10, & K.19 Is "Recognize" acceptable? Is it behavioral? How is it measured? K.20 No Tobacco Use
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	These objectives can be easily incorporated into the current Kindergarten curriculum.
4/30/97	Anonymous Nutter Fort School 1302 Buckhannon Pike Nutter Fort, WV 26301 624-3275	Very good assortment of skills and objectives, particularly K.7, K.8, K.11.
4/30/97	Anonymous Nutter Fort Primary K,1,2 46 Saint James Drive Clarksburg, WV 26301 624-3275	Very good.
4/30/97	Anonymous Nutter Fort Primary 1302 Buckhannon Pike Nutter Fort, WV 26301 624-3275	Too many objectives to cover. In favor of generalized, broad-range objectives that can be more specific when the situation warrants so.
5/2/97	Boone Co. Kindergarten Academy Faculty Senate P.O. Box 730 Uneeda, WV 25205 369-0558	If Computer and Technology section is to be incorporated we need software and a hard drive big enough to accommodate the software.
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	K.6 Possible treatment procedures should only be taught if they would not cause more harm by providing the proper procedure. They should stress more on how to acquire the proper help. K.13 In teaching the digestive and muscular system, the lessons need to be basic. K.24 We are unaware of what materials are available in this field.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	K.21 Children in this age group should be given the opportunity to understand what variety of foods are beneficial to their bodies. Information should be based upon the Food Guide Pyramid concept.

Date Received	Individual/Organization	Comment
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Builds foundation in positive approach. Developmental skills good.
5/16/97	Middle Creek Elementary School Route 1, Box 386 Triadelphia, WV 26059 243-0369	The goals for Kindergarten are compatible with our Character Education and Project Charlie goals and our Merrell Health "Focus on You" curriculum guide.
6/3/97	N.A. Parsons RN School Nurse Work - Frankfort Middle Rt 3 Box 170 Home - Po Box 627 Ridgeley, WV 26753 Ft Ashby, WV 26719 726-4339 298-3680	Examples as listed but applicable in most all grade areas K.6, K.11, K.19
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	I felt that the objectives for Computers and Technology K-3 were somewhat impractical. The resouces for such programming is not available to many of the health curriculum programs in the state.
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Nutrition and Physical Activity 3 Critera only 1 Physical

Date Received	Individual/Organization	Comment
	First Grade	
4/3/97	Jeanne, Moore, WVDE 558-7805	1.9 "manners" needs an adjective 1.22 "Identify individuals..." Do you really want them to list all the health-care lobbyists in the legislature? There are 46 objectives. I was told that 30 is maximum allowed for K-8. Why do you have 16 above the limit?
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	1.13, 1.18, & 1.20 "Recognize"?!
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	The concepts are progressive and easily integrated.
4/30/97	Anne Montgomery Nutter Fort Primary School 1302 Buckhannon Pike Nutter Fort, WV 26301 624-3275	1.13 Some body systems too involved for First Grade to understand workings. 1.22 I'm not sure who you're talking about 1.31 Sidestream smoke? 1.40, 1.44, 1.45, 1.46 State must provide funding to make appropriate software and calculators available for these objectives and computers capable of running software.
4/30/97	Anonymous Nutter Fort Primary K,1,2 46 Saint James Drive Clarksburg, WV 26301 624-3275	Good.
4/30/97	Anonymous Nutter Fort Primary 1302 Buckhannon Pike Nutter Fort, WV 26301 624-3275	Many items are addressed briefly through concepts during the school year, but there are too many for First Grade. Also, some are too advanced for this level.
4/30/97	S. Wilcox Nutter Fort Primary 1302 Buckhannon Pike Nutter Fort, WV 26301 624-3275	Too many concepts are asked to be covered at this level and, also, many items suggested are too advanced for this level. I strongly believe that the subject of child protection against abuse needs to be addressed. We need to help teach children how to use their judgement and common sense and how to get themselves out of difficult and unsafe situations, especially in today's world.
4/30/97	Anonymous Nutter Fort Primary 1302 Buckhannon Pike Nutter Fort, WV 26301 624-3275	Many items listed in goals and objectives are too advanced for First Grade. Most of our day is spent teaching, reading, writing, spelling and math. I do not feel there is enough time in our day to cover all objectives. I feel these goals should be eliminated: 1.13, 1.19, 1.20, 1.21, 1.34, 1.35, 1.37, 1.40, 1.41, 1.43, 1.44, 1.45, 1.46

Date Received	Individual/Organization	Comment
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	Objectives are clear and precise to successfully administer an effective health curriculum.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	1.32 Children in this age group should be given the opportunity to understand what variety of foods are beneficial to their bodies and why.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Positive attitude toward health. Computer & Tech - Who will provide software?
5/16/97	Middle Creek Elementary School Route 1, Box 386 Triadelphia, WV 26059 243-0369	Many of the objectives are very compatible with the first grade curriculum and are also areas that we discuss in day to day guidance of students.
6/3/97	N.A. Parsons RN School Nurse Work - Frankfort Middle Rt 3 Box 170 Home - Po Box 627 Ridgeley, WV 26753 Ft Ashby, WV 26719 726-4339 298-3680	1.16, 1.17, 1.28
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	If the State Dept. of Ed. endorsed such a program, it is possible that some of the funds, presently awarded to other curriculum areas for computer software - could be integrated into "health."
6/16/97	Darlene Thieman (home) Omar Elem Box 274 Omar, WV 25638 Henlawson, WV 25624 946-2660 752-0453	Stress management and resisting peer pressure is extremely important. We need to stress about heart disease and obesity. (1.46) use of a calculator?
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Out of critera under Nutrition and Physical Activity only 2 deal with physical - none teaching why it is important to begin young and continue throughout life.
	Second Grade	
4/3/97	Jeanne, Moore, WVDE 558-7805	2.9 "manners" needs an adjective 2.18 It would be more accurate to say "Discuss resources for locating..." The use of "places" is misleading. There are 33 objectives; only 30 are allowed in other non-core subjects

Date Received	Individual/Organization	Comment
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	2.3, 2.5, 2.24, & 2.26 "Recognize"?
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	The concepts further develop those at the earlier level and are also easily integrated into numerous curricular areas.
4/30/97	Gale Leroy Nutter Fort Primary School 1302 Buckhannon Pike Nutter Fort , WV 26301 624-3275	I already cover most of these objectives through integrated curriculum. Anything not taught through integrated curriculum will be taught during the Health time-slot.
4/30/97	Anonymous Nutter Fort Primary K,1,2 46 Saint James Drive Clarksburg, WV 26301 624-3275	Good.
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	Objectives seem to be fine, but under nutrition might add tasting parties for students to try food never tasted. More on students developing meals using food groups with proper proportions.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	2.28 Add to K, 1 & 2: show with age appropriate pictures the effects of a healthy diet on personal health.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Builds on K-1 curr.
6/3/97	N.A. Parsons RN School Nurse Work - Frankfort Middle Rt 3 Box 170 Ridgeley, WV 26753 726-4339 Home - Po Box 627 Ft Ashby, WV 26719 298-3680	2.14, 2.18
6/16/97	Darlene Thieman Omar Elem Omar, WV 25638 946-2660 (home) Box 274 Henlawson, WV 25624 752-0453	(2.4) Discuss ways goals are influenced by others and accidents/occurances. Why has the "seatbelt" not been mentioned before this grade? (2.32) At the present time, I am inaware of a health program to be run on the Jostens computers.

Date Received	Individual/Organization	Comment
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - one PE out of three
	Third Grade	
4/3/97	Jeanne, Moore, WVDE 558-7805	There are 37 objectives; only 30 are allowed for other non-core subjects. The correlation notes are very difficult to read when all subjects are on a single line. Also margins do not match the "core" document.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	Intro. paragraph, second sentence is awkward, wordy, confusing! 3.10 systems;
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	The concepts further develop those at the earlier level and are also easily integrated into numerous curricular areas.
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	3.5 We feel we need trained professionals to teach these types of techniques. Make children more aware of signs and symptoms that might not be easily visible to teachers or parents. Have a professional talk about types of abuse.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	3.31 This may begin in Kindergarten and progress to this grade. Beginning in third grade may be too late to change habits.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Cause and effect (effect may be far in the future). Distinguishes between poor and positive health habits. This unit answers with a lot of "why" questions in health.
6/16/97	Darlene Thieman Omar Elem Omar, WV 25638 946-2660 (home) Box 274 Henlawson, WV 25624 752-0453	(3.3) Conflict resolution? (3.4) including the disabled/ physically challanged individual? Need to identify constructive criticism andd how to handle criticism in a positive way. (3.16) add "Drug Free Zone"
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - 2 PE out of 6
	Fourth Grade	

Date Received	Individual/Organization	Comment
4/3/97	Jeanne, Moore, WVDE 558-7805	There are 31 objectives; only 30 are allowed for other non-core subjects.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	4.2 Comma splice after decision: change to ";" 4.10 Experience the responses of systems to tobacco? 4.11 Change "or" to "and" 4.16 Change to: Using acc. health info, develop strategies to handle... 4.23 Research by experiencing food and recreational...?
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	Appropriate, logical skill progression.
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	We agree that the goals and policies set forth in Policy 2520 are attainable and appropriate for fourth grade.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	4.24 Begin this practice in 2nd grade. It is a concept they can share with their parents.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Investigate world around them. Crucial - Tobacco Nonuse!!
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	Would it be practical to assume that learning activities will be developed to assist in implementing all grade levels.
6/6/97	Mary Kay Harrison WVDE Office of Child Nutrition Building 6, Room 248 558-2709	4.24 Move to Grade 5 and combine with 5.27 (students are being required to locate nutrient information before learning what a nutrient is.)
6/16/97	Darlene Thieman Omar Elem Omar, WV 25638 946-2660 (home) Box 274 Henlawson, WV 25624 752-0453	(4.22) "Wellness"

Date Received	Individual/Organization	Comment
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - 1 PE out of 3
	Fifth Grade	
4/3/97	Jeanne, Moore, WVDE 558-7805	5.11 Charleston does not have a Better Business Bureau; we use the Attorney General's Consumer Protection Office. Some cities do not have local consumer protection offices. There are 36 objectives; only 30 are allowed.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine; moreover, I am impressed by your proper use of the copulative verb "to become" in the 3rd line of this part's introductory paragraph (i.e., to be, to seem, to become, & to appear!).
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	5.28 Standards? 5.29 Standards?
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	The instructional goals are strong and require students to consider the important role of decision making and health.
5/8/97	Don Smith Wayne County Schools c/o Fort Gay Elementary PO Box 427, Park Street Fort Gay, WV 25514 648-5488	To bring in professionals (dentists and doctors) to show first hand effects of tobacco, alcohol and other drugs. To bring in professional (fire department and health department) to show certain emergency procedures. Appropriate, but text needs to be updated.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	5.28 Start this in 2nd grade.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Growing & being still at grade 6? Body changes, puberty. Making important decisions that will effect the adults they become and society in which they live. Drug-free benefits.
6/6/97	Mary Kay Harrison WVDE Office of Child Nutrition Building 6, Room 248 558-2709	5.24 Move this objective to Grade 4 since it relates to prior concepts. Some knowledge of nutrients and calories is essential to nutrition objectives in Grade 4.
6/16/97	Darlene Thieman Omar Elem Omar, WV 25638 946-2660 (home) Box 274 Henlawson, WV 25624 752-0453	(5.17) What about the different types of family? (5.31) Being "physically fit"

Date Received	Individual/Organization	Comment
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - 2 PE out of 9

Date Received	Individual/Organization	Comment
	Sixth Grade	
4/1/97	John Ray P.O. Box 5486 Charleston, WV 25361	Coordinates the proper impact areas.
4/3/97	Jeanne, Moore, WVDE 558-7805	6.20, 6.21, 6.22 Correlated items are difficult to read in this format. There are 39 objectives; only 30 allowed for other non-core subjects.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	6.24 Standards? 6.26 Teens? Sixth graders aren't "teens."
4/21/97	Cindy Reed Fort Gay Middle School P.O. Box 460 Fort Gay, WV 25514 648-5404	The objectives for this age group are well though out. Decision making skills are a necessity with this age group. We cover most of the stated objectives.
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	Decision making and applying healthy living choices are stressed.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	6.27, 6.28, 6.29 Excellent - much needed information for this age group.
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Fad diets and media pressure. Social, emotional and phys. changes of adolescents. Reproduction, fertilization, sexual abstinence best choice to avoid HIV/STD's and pregnancy. Responsible dating, safe & risky behaviors in dating. Use of resistance when pressured.
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	Ex.: 6.11 Ideas on implementing parent involvement to achieve "family" decision making for healthier decisions?
6/6/97	Mary Kay Harrison WVDE Office of Child Nutrition Building 6, Room 248 558-2709	Add to Computer Technology 6.40 Explain the effects of technology on the food supply (e.g. food safety, processing, agriculture, transportation.)
6/16/97	Darlene Thieman Omar Elem Omar, WV 25638 946-2660 (home) Box 274 Henlawson, WV 25624 752-0453	(6.6) violent vs non-violent means fo/for self protection Need to review the "gateway" drugs and street drugs (6.10) Extremely important

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6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - 1 PE out of 8

Date Received	Individual/Organization	Comment
	Seventh Grade	
4/3/97	Jeanne, Moore, WVDE 558-7805	7.5 There needs to be an "s" on "relationship." The word "among" implying 3 or more requires the plural of "relationships." There are 31 objectives; other non-core subjects only allowed 30.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine; at this grade it would seem a good idea for students to compose a portfolio of Life-fostering Information.
4/9/97	Carolyn Turner Preston High School 400 Preston Drive Kingwood, WV (304)329-0400 Home: 307 Seemont Drive Kingwood, WV 26537 (304)329-1673	7.3 "Recognize"?
4/21/97	Cindy Reed Fort Gay Middle School P.O. Box 460 Fort Gay, WV 25514 648-5404	We do not spend the time on computers that we should. As an instructor, it is more beneficial for the students I deal with to concentrate on tobacco prevention, HIV/AIDS, teenage pregnancy, skill development and injury prevention.
4/21/97	Paul E. Ackerman c/o Paw Paw Schools 432 Moser Avenue Paw Paw, WV 25434 947-7425	O.K.
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	Well done. Age appropriate. The instructional goal stresses substance abuse prevention and positive choices.
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	Excellent.
5/19/97	Jennifer Crespo, Coordinator Rape Crisis Counseling Team CONTACT Huntington P.O. Box 2963 Huntington, WV 25728-2963 523-3447	Relationships - 7.15 Date rape awareness & prevention could be added. Awareness of sexual harassment could be included here or in 7.13.
6/16/97	Darlene Thieman Omar Elem Omar, WV 25638 946-2660 (home) Box 274 Henlawson, WV 25624 752-0453	Need to have a "self evaluation" checklist or survey to recognize the various stressors and how well each individual deals with those stressors. (7.7) What about "gangs" and their influence
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - 1 PE out of 6

Date Received	Individual/Organization	Comment
	Eighth Grade	
4/3/97	Jeanne, Moore, WVDE 558-7805	8.15 "Among" should be used in place of "between." The one-line format for correlations is unclear and hard to read. There are 42 objectives; but 30 is the absolute limit according to "the group" for non-core subjects.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine.
4/21/97	Cindy Reed Fort Gay Middle School P.O. Box 460 Fort Gay, WV 25514 648-5404	These objectives are very thorough. Some of the injury prevention I do with 6th grade so there is more time to concentrate on the other objectives.
4/21/97	Paul E. Ackerman c/o Paw Paw Schools 432 Moser Avenue Paw Paw, WV 25434 947-7425	O.K.
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	Communication activities, goal-setting and role play encourage the application of concepts.
5/9/97	Robert H. Anderson Prevention Research Center Robert C. Byrd Health Sciences Center of West Virginia University 3820 Health Sciences South PO Box 9005 Morgantown, WV 26506-9005	I did not see any direct mention of eating disorders. Weight becomes a big issue for girls at this stage of life. I would think there is benefit to making some mention of this in 8.33; that is, the accent on slimness put on by the media, and the pressure many girls feel to be thin even if that means they should purge, smoke, etc. I suggest the following addition after "inadequate nutrition" - ... and eating disorders... 8.35 Include something abut learning how to select healthful foods when eating out?
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	8.34 Excellent needed information.
5/19/97	Chris Merritt, AHS RESA VIII Box 100 Franklin, WV 26807 358-7230	Good Job! on relationship section.
5/19/97	Jennifer Crespo, Coordinator Rape Crisis Counseling Team CONTACT Huntington P.O. Box 2963 Huntington, WV 25728-2963 523-3447	Date rape & prevention could be included in 8.3 &/or 8.24, 8.21 Sexual harassment awareness could be added to 8.21.

Date Received	Individual/Organization	Comment
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	7th and 8th fits well into WOW model programs
6/6/97	Mary Kay Harrison WVDE Office of Child Nutrition Building 6, Room 248 558-2709	Add: Computer and Technology 8.43 Use appropriate software to analyze personal diet.
6/16/97	Darlene Thieman (home) Omar Elem Box 274 Omar, WV 25638 Henlawson, WV 25624 946-2660 752-0453	(8.14) Need to add about the "status" symbol of possessing such items and the possible consequences when someone does not have such items (8.33) need to add with performance "sports"
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	Under N & PE - 0 PE out of 5

Date Received	Individual/Organization	Comment
	Secondary	
3/27/97	Peggy Campbell Cabell County Schools PO Box 446 Huntington, WV 25709 (304) 528-5082	There are not enough (only 1) objectives relating to teen sexual activity, prevention of pregnancy and STD's, decision making and practice of skills to avoid pregnancy & STD's. If it isn't more specific, many teachers will not include in the curriculum. The 8th grade objectives could be consolidated into fewer objectives for secondary repeats/reviews/analysis, etc. Also, issues of violence in HE.35 need example: (incest, date rape & abuse). Would like to see an objective about the relationship of personality, styles, control factors, etc. in relation to characteristics to look for in a marriage partner of love interest.
4/4/97	William A. Toussaint, WVDE 558-3667	Fine; it appears that you all intend for students to compose several collections of information anyway.
4/10/97	Reta Rose Pocahontas County High School RR 1, Box 133 Dunmore, WV 24934 799-6565	I would like to see increased emphasis on mental health as this is the only place in the school system where it is addressed.
4/10/97	Eddie Hill Pocahontas County High School RR 1, Box 133 Dunmore, WV 24934 799-6565	I would like to see increased emphasis on first aid. Every student be certified in a basic first aid course and also in CPR.
4/17/97	Judy Fortner, Brian Eddy & Ann Meredith Nitro High School 1300 Park Avenue Nitro, WV 25143 755-4321	HE.61, HE.62, HE.63 Use of computers in the future, but as of now I don't think many schools would have the set up for the use by Health classes as the major subjects cannot be accommodated at this time. We have for years included a unit on Death & Dying (topics: suicide, hospice & terms related to a funeral) Where else in school would this be covered but Health?
4/18/97	Ballard Sloan & Sharon Gillespie Sherman High School PO Box AB Seth, WV 25181 837-3301	HE.10 Students who take Driver's Ed classes are taught about motor vehicle accidents. It might be touched upon during units on Alcohol and Drugs. HE.61 Neither Sloan nor Gillespie have training to demonstrate skills used in word processing, data bases, etc. HE.62, We do not have computers available to comply with this objective. HE.63 We do not have an adequate number of computers in the health classroom to carry out this objective. Computers will need to be placed in each classroom to make this concept worthwhile.

Date Received	Individual/Organization	Comment
4/18/97	Joanne Smith Vinson High School 3851 Piedmont Road Huntington, WV 25704 429-1641	Students should have an understanding of community health, personal health and have the skills to make wise choices in their lives.
4/21/97	Paul E. Ackerman c/o Paw Paw Schools 432 Moser Avenue Paw Paw, WV 25434 947-7425	O.K.
4/25/97	Liberty High School Health Teachers Route 3, Box 800 Clarksburg, WV 26301 624-3264	Our staff does not have the computers available to teach. Neither is our school on the Internet at this time. Since we are on the ninety minute block, we only have one semester classes. We have included a simplified state goals and objectives plan: *Section 5. Adolescent Education* *The goal of the Health Education Program of Study in Adolescent Education is to assure that students master the skills necessary to make healthful decisions throughout the life span in the following areas: growth, development and personal health, safety mental health and relationships, consumer and environmental health, drug use prevention, disease prevention, nutrition and fitness. The local school district shall, therefore, provide multiple opportunities for students to:* • *Gain knowledge and skills that lead to an understanding of self and relationships with others across the life span, including demonstration of the ability to express emotions appropriately and show respect for others.* • *Understand health care costs and use this information to select appropriate health care providers and health care resources.* • *Demonstrate peer pressure reversal skills to avoid risk behaviors that endanger current and future health status; including avoidance of drug, tobacco and alcohol use, and sexual activity that can result in disease transmission or pregnancy, as well as skills to avoid injury.* • *Practice a healthy balance between activity, rest and nutrition intake.* • *Demonstrate an understanding of the causes and methods for prevention of diseases and premature morbidity and mortality from illnesses such as AIDS, other sexually transmitted diseases, cardiovascular diseases, diabetes, cancer, etc.* • *Demonstrate the ability to apply and understanding of basic first aid and cardiopulmonary resuscitation principles.* • *Recognize the responsibilities of parenthood and demonstrate an understanding of factors to be considered in planning for parenthood, while demonstrating knowledge of available resources for parenting education and counseling..*
4/28/97	Ohio County Schools 2203 National Road Wheeling, WV 26003 243-0300	Instructional goals at this level are thorough.

Date Received	Individual/Organization	Comment
5/5/97	Carol Mullenbach, RN, BSN Council of School Nurses Rep. RESA 6 Brooke High School RD 3, Bruin Drive Wellsburg, WV 26070 527-1410	I feel that an instructional objective on CPR should be a mandatory part of Secondary Health Education: "Demonstrate skill in the use of CPR in the appropriate setting. Passes CPR certification for Basic Life Support."
5/9/97	Robert H. Anderson Prevention Research Center Robert C. Byrd Health Sciences Center of West Virginia University 3820 Health Sciences South PO Box 9005 Morgantown, WV 26506-9005	HE.25 By "impact on personal health" does this include negative impact (e.g., overuse of laxatives and antacids heavily promoted in magazines and on TV)? HE.22 Where is there discussion of the role (good and bad) of external influences on behavior? HE.26 Fix the typo: patients HE.47 Could this be generic so they could look at other drugs? HE.50 Delete "your" HE.60 Doesn't this belong somewhere else? Where is sex discussed? I think it needs more attention than what is noted in HE.40. I presume it is covered somewhere in here, but where?
5/14/97	Janet D. Yost P.O. Box 1764 Huntington, WV 25718-1764 558-2708	HE.50 This would necessitate a highly trained, specialized professional to administer and interpret. Most school systems do no employ exercise physiologists or physicians specializing in adolescent health. This sounds dangerous.
5/15/97	Sarah L. Yeater HC 60, Box 96A New Martinsville, WV 26155-9731 455-6529	Page 34, objective HE.37 Maslow is a humanist who's hierarchy of needs is a prime example of the psychology used to mold students into politically correct ways. His hierarchy has no place in any level of public schools. (Humanist is an euphemism for atheist).

Date Received	Individual/Organization	Comment
5/15/97	Nancy Hillen, R.D. Kanawha Valley Nutrition Council Dairy Council Mideast Charleston, WV 346-5908	HE.50 This objective should not be included. It is beyond the understanding of this age group and may actually do more harm than good. HE.51 Focus more on the acceptance of your own body image and how to keep it healthy. HE.53 This should be combined with HE.56 and focus on the use of the dietary guidelines. HE.54 Omit the second half of this statement: Encourage "all foods fit" theme. HE.55 Stress the importance of physical activity and healthy eating patterns. HE.57 Not appropriate for the classroom unless health care professionals were involved in the actual teaching. HE.58 Focus on eating foods from the Food Guide Pyramid to obtain the necessary vitamins and minerals.
5/15/97	Cathy Shaw, R.D. Charleston District Dietetic Association 918 Geary Road South Charleston, WV 25303 348-7428	HE.50 This objective is not appropriate for this age/grade. This objective should not be included and be eliminated. HE.51 This objective should focus on a healthy outlook regarding body image as well as acceptance of their own body. The focus should be on keeping the body healthy. HE.53 This objective should be combined with HE.56. It should state: "Review the dietary guidelines and compare to some of the popular fad diets." HE.54 Omit the second half of the statement beginning with "develop..." The concept of "all foods fit" would be an excellent education tool to teach there are no bad foods. HE.55 Evaluate personal health and the importance of physical activity AND HEALTHY EATING PATTERNS instead of the rest of the statement. HE.57 This objective is too in-depth and would require trained health professionals to present the information in this topic. HE.58 This objective should focus on the benefits of eating foods from the Food Guide Pyramid to obtain the necessary vitamins and minerals.

Date Received	Individual/Organization	Comment
5/15/97	Celeste Peggs, M.S., R.D. 840 Stover Street St. Albans, WV 25177 727-9884	HE.50 This is not an appropriate objective for the age/grade. This would promote dieting for weight loss instead of allowing a child to grow into an appropriate weight for height. This may also promote an eating disorder. This objective should be eliminated. HE.51 This should focus more on healthy outlook regarding body image as well as acceptance of their own body. This focus should be on keeping the body healthy. HE.53 & HE.56 Should be combined using the dietary guidelines. They could review the dietary guidelines and compare to some of the popular fad diets. HE.54 Omit the end part of the sentence "develop a personal diet plan, etc." HE.55 Focus on the benefits of physical activity and healthy eating. "All foods fit" - there are no bad foods but balance, moderation and variety. HE.57 Too in-depth an objective - out of the scope for education in elementary education. HE.58 Focus on eating foods from the Food Guide Pyramid and their benefits to obtain vitamins and minerals.
5/15/97	Marsha Duke, R.D. West Virginia Dietetic Association 1500 Bridge Road, Apt. 210 Charleston, WV 25314 526-2036	HE.50 Not appropriate for age - may do more harm than good by promoting eating disorders or dieting for weight loss. HE.51 This needs to focus more on accepting their present body image and how to keep it healthy. HE.53 Focus on the use of the dietary guidelines. HE.54 The second half of this statement could be omitted. Encourage "all foods fit" - national nutrition month theme. HE.55 Stress how important balance is through physical activity and healthy eating patterns. HE.56 The dietary guidelines can be used to focus on healthy lifestyles and compare these to some of the more popular fad diets. HE.57 Too involved for this age and for a classroom topic. HE.58 The benefits from eating foods from the Food Guide Pyramid should be stressed t obtain the vitamins and minerals.

Date Received	Individual/Organization	Comment
5/16/97	Larry L. Conn Mann Jr. High School: 600 Main Street Man, WV 25635 583-7441 Home: P.O. Box 111 Kistler, WV 25628 583-2385	Through lessons and activities that are
5/19/97	Jennifer Crespo, Coordinator Rape Crisis Counseling Team CONTACT Huntington P.O. Box 2963 Huntington, WV 25728-2963 523-3447	HE.35 Could include rape, date rape, sexual harassment information. HE.38 Please include CONTACT's 24-hr crisis hotline/Rape Crisis Counseling Team as a community resource!
6/5/97	Faculty Senate - Hedgesville High School Rt 1 Box 89 Hedgesville, WV 25427 754-3355	HE.39 Makes no sense HE.47 Add "Tobacco problem and illegal drug (marajuana, pills, inhallents etc.)" to "Alcohol problem" HE.60 smallpox is one word HE.61,62,63 Not possible without providing computer access to health teachers/students. HE.61 & 62 has no direct connection to health education Any objectives deeling with sleep deprivation problems/ determination of appropriate amount of sleep needed by individuals Any stress management objectives at high school level Any mental health issues/ objectives
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	Excellent - resouces already available
6/6/97	Mary Kay Harrison WVDE Office of Child Nutrition Building 6, Room 248 558-2709	I strongly recommend removing HE 50 for the following reasons: A. potential risk of adversely affecting student health exists. B. the fear of fat prevalent among teens accounts for high rates of dieting, distorted body image and eating disorders. C. varying methods of calculating body fat yield inconsistent and often unreliable results. D. many methods of measuring fat require trained health professionals E. body fat and weight are sensative personal issues, especially for teens
6/16/97	Darlene Thieman (home) Omar Elem Box 274 Omar, WV 25638 Henlawson, WV 25624 946-2660 752-0453	(HE.15) need to include "handicapped accessible" (HE.47) or other easily accessible drugs "marijuana", "crack

Date Received	Individual/Organization	Comment
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	PE & N - 3 PE out of 9 HE.40 - very little mentioned on STD's/AIDS - Birth Control

Date Received	Individual/Organization	Comment
	General	
3/27/97	Peggy Campbell Cabell County Schools PO Box 446 Huntington, WV 25709 (304) 528-5082	The Instructional Goals and Objectives are great. There was only one weakness from my point of view which I wrote about on the enclosed form.
4/3/97	Jeanne, Moore, WVDE 558-7805	Left & right margins 1", top & bottom margins .750", 2 column
4/18/97	Karen K. Larry, WVDE 558-2702	I read the Health Education document after rereading *Turning Points*, the definitive document from the Carnegie Council on Adolescent Development that makes recommendations for transforming middle grade schools. The grades 5-8 Instructional Objectives mirror what the national task force report tells the American education and public community about children in middle grades. I hope the West Virginia schools do implement this curriculum in a systems approach!! Good job! (I do not feel qualified to react to the content as I am not schooled in this area.)
4/18/97	Joanne Smith Vinson High School 3851 Piedmont Road Huntington, WV 25704 429-1641	All of the subject matter can not be covered in one course. The technology alone would take most of a term. Students do not have the knowledge of computers needed. Teachers also need further education.
4/21/97	Cindy Reed Fort Gay Middle School P.O. Box 460 Fort Gay, WV 25514 648-5404	Health is an extremely important subject. It is very difficult as a teacher to cover all of these objectives in just a 9-week period. Health should be taught on a yearly basis. I was on the committee to develop middle school instructional goals for Wayne County. Many of these instructional goals are very similar.
5/5/97	Carol Mullenbach, RN, B.S.N. Council of School Nurses Rep. RESA 6 Brooke High School RD 3, Bruin Drive Wellsburg, WV 26070 527-1410	I feel the objectives for health education are very good, well thought out, goal oriented, action based, build from year to year. May want to discuss sports injuries in upper grades 6, 7, 8, Secondary.

Date Received	Individual/Organization	Comment
5/7/97	Mrs. Ann L. Wilson R.D. #4, Box 82 Moundsville, WV 26041	Reading over the policies to be considered I especially notice a lot of "psych" talk in the goals for Health Ed. in Policy 2520. As I listened t the President's radio speech on Saturday April 25th I noticed that he said that 40% of 4th graders couldn't read at a basic level. No wonder! We are wasting so much of our children's time (and our money) with this junk - brainpicking, actually and prying into their private thoughts - that we're not even teaching them to read. It is becoming more important to mold our children's minds to be politically correct thinking robots than to make sure they can read, spell and calculate. Frankly, it deeply saddens me to see West Virginia going down the Goals 2000 path following after temporary dollar signs and sacrificing our children in the process. What's it going to take to get off this path? Perhaps people leaving the state to keep the freedom to educate their children as they see fit. I hope you reject Policy 2520 and any other Goals 2000 - School-To-Work programs and let's get back to educating our children. Reject socialistic work force training please!
5/9/97	Robert H. Anderson Prevention Research Center Robert C. Byrd Health Sciences Center of West Virginia University 3820 Health Sciences South PO Box 9005 Morgantown, WV 26506-9005	Thank you for sending me the CSHE for review and comment. I am impressed with the results of this challenging undertaking. I am doubtful about my ability to have anything constructive to say about the goals that pertain to K-7. I did read the goals for Grade 8 and for secondary school health education, and have included my comments about them in the attached material. There is little I feel needs to be added. I certainly would not want to see anything removed. The points I have made may be based more on not knowing the details of how these goals are going to be carried out (i.e., it may very well be that some of my points address things that are going to be taught, but are not obvious to a non-school health person from the way they were written).
5/16/97	Shoals Elementary Faculty Senate 100 Dutch Road Charleston, WV 25302 348-1900	Strengths - 1. Conflict resolution (skill development) 2. Nutrition strand! Concerns - 1. Computer software - Where will it come from?

Date Received	Individual/Organization	Comment
5/19/97	Brenda Donnellan 605 Bridge Street Parkersburg, WV 26101	Although my copies of the policies are covered with comments, questions and objections, I don't feel that it would be worth my time to put those into this letter. I just do not feel that it would make any difference. However, I could not let the opportunity pass to tell you how deplorable I think the proposed health goals and objectives are. There is certainly no rigorous academics. There is not much teaching of facts; there is mostly discussion of opinions. **Whose** opinions is not clear. I assume the teacher/facilitator will be using **approved** books and programs. Many topics of discussion are controversial and many suggested discussions appear to get very nosy about the child's home life. What provisions will be made for parents to opt their children out of objectionable activities? This becomes more difficult when "instruction" is integrated into language arts activities, etc. I'm wondering if the health-related software, required in virtually every grade, is something that the schools already have, or if it will have to be purchased? It is my opinion that these goals and objectives have a minimum of health-related instruction and a huge amount of training for the global workforce, including behavior modification, multi-culturalism, relativism and a stressing of community over family. I recommend that these goals and objectives be rejected and some **real** health oriented goals be written.
5/19/97	Jennifer Crespo, Coordinator Rape Crisis Counseling Team CONTACT Huntington P.O. Box 2963 Huntington, WV 25728-2963 523-3447	CONTACT's Rape Crisis Counseling Team already gives date rape presentations in Cabell & Wayne County Middle & High schools. We are a member of the WV Foundation for Rape Information & Services (FRIS). Thank you for the opportunity to comment on these health ed. goals.

Date Received	Individual/Organization	Comment
5/20/97	Diane Case Route 1, Box 15 Petroleum, WV 26101 628-3790	My concerns address Policy 2520. They are as follows: 1) This policy mandates "comprehensive school health education." Such health education has been implemented in Ritchie County through a school-based clinic. Our local BOE agreed to "provide staff and/or financing for provision of services... to the extent that such is available within the school budget." Since this clinic has opened, our BOE has gotten 400,000 in debt. Might this become an unfunded mandate? 2) The phrases "health enhancing behaviors," "reduced health risks" and "access to health promoting products and services" are used in this policy. Does this mean zero-tolerance for high risk behaviors or does it mean making our schools a market place for special-interest groups to exploit our children. 3) Will Family Life and Mental/Emotional Health programs meet the standards of WV's large religious community or will they be discriminated against in programs and activities? This is not a far-fetched concern. I have been harassed and cursed publicly for refusing to support a school counseling program that violated our church doctrine. 4) There is much junk science and radical political activism on environmental issues. Who will be accountable to screen these out of programs? 5) Mandating that children become "community health advocates" sounds like it has the potential to become state mandated social activism or political correctness. 6) This policy contains much repetitive Goals 2000 jargon. All state hearings on Goals 2000 related education changes showed W.Virginians overwhelmingly opposed (98%!) to such programs. What part of NO do our state educrats not understand? Policy 2520 contains much of what currently has the Oregon State Board of Education in Federal Court. Should we spend our time and tax dollars to mandate and implement what may prove to be illegal?
6/3/97	Sue Peros, RN, MS Boone County Schools 69 Ave B Madison, WV 25130 837-7868 369-3131 836-8106	Very impressed with the collaborative manner this curriculum could be utilized with the Prevention Skills Model

Date Received	Individual/Organization	Comment
6/16/97	Sue Julian, Team Coordinator WVCADV PO Box 85 Sutton, WV 26601 765-2250	One general comments for consideration in finalizing WV health Education Instructional Goals and Objectives: In meeting Instructional Goals 3-7, WVCADV recommends that the Department of Education be specific about including age appropriate objectives regarding domestic violence. e.g. K.17: include in this section information on good touch bad touch; How to tell a trusted adult about bad touches; saying "no"; what to do when adults in the household are fighting. e.g. Grade six: Begin to introduce dating violence, gender role stereotyping, etc. e.g. Grade Eight: Begin to introduce domestic violence, laws, etc. The Coalition Against Domestic Violence is willing to work more closely with you to develop curriculum and materials. We anticipate a very hectic June and July and hopefully a calmer August.
6/23/97	B. Orr Logan County Schools P.O. Box 477 Logan, WV 25601-0477	Weak add more Include more connections to other disciplines (LA, SS) -Letter writing campaigns (Advocate groups, companies, etc.) -Capitalization -Punctuation -Spelling -etc. Historical Aspects of Health Ed. -diseases -cures -People of the Future Explores health related occupational opportunities: Diagnostic, Therapeutic, Environmental Support, and Informational Services. Senate Bill 30d! Examine fields of studies, curriculums, for health/medical career choices.
6/23/97	Trina L. Melody, School Nurse 375 Hill top Ave. Keyser, WV 26726 788-4213 (work) 7881161 (home)	No wonder our kids are obese and sedentary. They have not been taught how important to their life that physical activity really is.