WEST VIRGINIA
SECRETARY OF STATE

BETTY IRELAND

ADMINISTRATIVE LAW DIVISION

Form #5

Do Not Mark In This Box

FILED

2007 MAR 19 PM 3:29

OFFICE 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. Constitution, Article XII, §2, W.Va. Code §18-2-5 and §18-9A-22

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: 44P

TITLE OF RULE BEING AMENDED: Alternate Academic Achievement Standards for West Virginia Schools (2520.16)

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

TITLE OF RULE BEING PROPOSED: _____

THE ABOVE RULE IS HEREBY ADOPTED AND FILED WITH THE SECRETARY OF STATE. THE EFFECTIVE DATE OF THIS RULE IS April 18, 2007.

Jack McClanahan
Deputy State Superintendent of Schools

EXECUTIVE SUMMARY
WEST VIRGINIA BOARD OF EDUCATION POLICY 2520.16
ALTERNATE ACADEMIC STANDARDS
FOR WEST VIRGINIA SCHOOLS

Policy Number and Title:

Policy 2520.16 Alternate Academic Achievement Standards for West Virginia Schools

Background:

West Virginia Board of Education 126CSR42, Policy 2510, Assuring the Quality of Education: Regulations for Education Programs (hereinafter Policy 2510), 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. Policy 2520.16 defines the alternate academic achievement standards across grades 3 – 8 and 10 in reading/language arts and in mathematics and science for grades 3 – 8 and 10 and 11 for students with the most significant cognitive disabilities and is inclusive of existing content standards, extended standards, and performance descriptors as required by Policy 2510.

Proposals:

Policy 2520.16 is being revised to include Alternate Academic Achievement Standards (AAAS) in science. The current policy includes AAAS for reading/language arts and math. The addition of AAAS in science is required in order for the WVDE to continue to be in compliance with US Department of Education requirements. The population of students being instructed with AAAS represents the approximately 1% of students in West Virginia whose learning profiles require that they be assessed with the Alternate Assessment. No Child Left Behind requires that, for this population, the State must adopt challenging academic achievement standards that are linked to the State's grade-level academic content standards, promote access to the general curriculum, and reflect professional judgment of the highest achievement standards possible.

The AAAS provide the essence of the science standards, extended standards to be used for instruction and assessment, and performance level descriptors. The focus throughout the standards remains on keeping expectations high, acquiring mastery of skills that are essential for independent living, and offering students with significant cognitive disabilities in West Virginia rigorous and challenging instruction.

Impact:

Policy 2520.16 currently defines the alternate academic achievement standards in reading/language arts and mathematics across grades 3-8 and 10. This revision includes AAAS in science and is required in order for the WVDE to continue to be in compliance with US Department of Education requirements.

Response to Comments:

The alternate academic achievement standards in science received 3 comments. We have made revisions based on one of the comments. The comment log is attached.

TITLE 126
LEGISLATIVE RULE
BOARD OF EDUCATION

SERIES 44P
ALTERNATE ACADEMIC ACHIEVEMENT STANDARDS FOR WEST VIRGINIA SCHOOLS (2520.16)

§126-44P-1. General.

1.1. Scope. West Virginia Board of Education 126CSR42, Policy 2510, Assuring the Quality of Education: Regulations for Education Programs (hereinafter Policy 2510), 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. Policy 2520.16 defines the alternate academic achievement standards across grades 3 – 8 and 10 in reading/language arts and in mathematics and science for grades 3 – 8 and 10 and 11 for students with the most significant cognitive disabilities and is inclusive of existing content standards, extended standards, and performance descriptors as required by Policy 2510.

1.2. Authority. W. Va. Constitution, Article XII, §2, W. Va. Code §18-2-5 and §18-9A-22.

1.3. Filing Date. March 19, 2007.

1.4. Effective Date. April 18, 2007.

1.5. Repeal of former rule. This legislative rule amends W. Va. 126CSR44P, West Virginia Board Policy 2520.16, Alternate "Academic Achievement Standards for West Virginia Schools" filed November 14, 2005 and effective December 14, 2005.

§126-44P-2. Purpose.

2.1. This policy defines the alternate academic achievement standards for the program of study required by Policy 2510 for students with the most significant cognitive disabilities, i.e., those who are typically assessed with the West Virginia Alternate Assessment.

§126-44P-3. Incorporation by Reference.

3.1. *The West Virginia Extended Academic Content Standards and Performance Descriptors* in reading/language arts and in mathematics across grades 3 – 8 and 10 and science across grades 3 – 8 and 10 and 11 is attached and incorporated by reference into this policy. Copies may be obtained in the Office of the Secretary of State and in the West Virginia Department of Education.

3.2. Summary (of Alternate Academic Achievement Standards.) The West Virginia Board of Education has the responsibility for establishing high quality educational standards for all education programs (W.Va. Code §18-9A-22). The alternate academic achievement standards provide a framework for teachers of students with the most significant cognitive disabilities to teach skills and competencies

essential for independent living, employment, and postsecondary education. Policy 2520.16 links the existing content standards in reading/language arts, in math and in science with the extended standards and includes performance descriptors that are aligned with the extended standards. These performance descriptors will be the basis for setting cut scores for the Alternate Assessment. The extended standards and performance descriptors included in Policy 2520.16 are applicable for students with the most significant cognitive disabilities, i.e., students who are assessed with the West Virginia Alternate Performance Task Assessment

§126-44P-4. Severability.

4.1. If any provision of this rule or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this rule.

West Virginia Extended Academic Content Standards and Performance Descriptors
For Students with the Most Significant Cognitive Disabilities

GRADE THREE EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and/or gestures to obtain information and/or perform a task.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.1.1 recognize level appropriate sight words and content vocabulary. RLA.3.1.2 recognize level appropriate reading vocabulary (e.g., synonyms, antonyms, homonyms, multi-meaning words). RLA.3.1.5 recognize the ways in which language is used in literary text (e.g., simile; metaphor; idioms).	RLA.3.1.ES.1 identify a picture that represents a word or object.	RLA.PD.3.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Recognize sight words. EX: Play a game (e.g., Sight/Survival Word Bingo, Scrabble Jr.). EX: Concentration - matching vocabulary word with simple definition. Level III students perform the following without assistance: Student will: • Identify a picture that represents a word or object. EX: Find an object in the room that matches the word. EX: Concentration-match vocabulary word to vocabulary word or picture.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Match picture or object with letter or sound. EX: Recognize initial letter sound of object or pictured object. EX: Recognize first letter of word that represents the object. EX: Touch object that begins with specified letter/sound. Level I students attempt to perform the following with assistance: Student will: • Recognize vocabulary. EX: Point to objects that represent various nouns. EX: Show signs for various vocabulary words. EX: Point to PECS or press button on communication device for various vocabulary words.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.1.3 use reading skills and strategies to comprehend a variety of literary passages and texts (e.g., fairy tales, folk-tales; fiction; nonfiction; myths; poems; fables; fantasies; historical fiction; biographies; autobiographies; chapter books). RLA.3.1.4 use comprehension skills to understand a story (e.g., story elements; sequence; expository works; drawing conclusions; compare/contrast; predict; summarize; infer; paraphrase; main idea; story topic). RLA 3.1.6 use graphic organizers and visualization techniques to interpret information (e.g., charts, graphs, diagrams) RLA.3.1.7 use meaning clues to aid comprehension and make predictions about content across the curriculum (e.g., action; events; story topic; behaviors). RLA.3.1.8 read with accuracy and comprehension instructional level texts designed for third grade and use self-correction strategies (e.g., search for cues; identify miscues; reread).	RLA.3.1.ES.2 recall an event from a story.	RLA.PD.3.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Recall two or more events from a story. EX: Answer, "What happened first? What happened next?". EX: Locate pictures that depict events from the story (e.g.. in a magazine). Level III students perform the following without assistance: Student will: • Recall an event from a story. EX: Choose a picture that depicts an event from the story. EX: Tell about an event from the story. EX: Draw picture related to the story. Level II students perform the following with assistance: Student will: • Identify an event from a story. EX: Point to pictures that represent an event in a story.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.1.9 read familiar stories, poems and passages with fluency and expression (e.g., rhythm; flow; meter; tempo; pitch; tone; intonation) and self-select a variety of literary works. RLA.3.1.10 explain a purpose for reading (e.g., for information; for pleasure; to understand a specific viewpoint). RLA.3.1.11 recognize author's purpose (e.g., to persuade; to inform). RLA.3.1.12 compare connections between characters or simple events in a literary work in own life and other cultures (e.g., events; characters; conflicts; themes). RLA.3.1.13 use reading skills and strategies to identify a variety of informational resources to support literacy learning (e.g., environmental print; written directions; signs; captions; labels; informational books). RLA.3.1.14 increase amount of independent reading.		Level I students attempt to perform the following with assistance: Student will: • Respond to literary stimuli. EX: Nod, smile or point in response to a picture.

GRADE THREE EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:

- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.2.1 demonstrate proper manuscript and full transition to cursive writing techniques (e.g., posture; paper placement; pencil grip; letter formation; slant; letter size; spacing; rhythm; alignment).	RLA.3.2.ES.1 copy labels for pictures and objects.	RLA.PD.3.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Label pictures and objects. EX: Write the name of pictures and objects. EX: Label pictures that go with a seasonal theme. Level III students perform the following without assistance: Student will: • Copy labels for pictures and objects. EX: Given word cards and objects, student will copy the word on paper or type it on the computer. Level II students perform the following with assistance: Student will: • Copy or trace letters from models. EX: Use a template to trace letters. EX: Copy letters from models.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Use intentional movement to produce a graphics. EX: Make marks on a page. EX: Move a mouse around in Kid Pix to produce drawing.
RLA.3.2.2 use the five step writing process (e.g., graphic organizers for prewriting; descriptive words and details for drafting and revising; use of simple dictionaries for editing and publishing; conferencing to edit; punctuation; capitalization; and spelling at developmentally appropriate level). RLA.3.2.3 use paragraph format to write compositions (e.g., beginning - middle - end; main ideas with relevant details; sentence variety - declarative, interrogative; descriptive and transitional words; indentations). RLA.3.2.4 use a variety of strategies to plan simple research (e.g., identify possible topic by brainstorming; list questions; use idea webs; organize prior knowledge about a topic; develop a course of action for writing; determine how to locate necessary information).	RLA.3.2.ES.2 recognize that proper names begin with capital letters.	RLA.PD.3.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Write names using capitals. EX: Capitalize names of classmates and friends. EX: Capitalize names of school, state and town. Level III students perform the following without assistance: Student will: • Recognize that proper names begin with capital letters. EX: Given pictures of pet or family member, select capitalized name. EX: Copy first and last name information putting capitals letters where they belong.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.2.5 use a variety of sources to gather information (e.g., use dictionaries; encyclopedias; newspapers). RLA.3.2.6 alphabetize to the third letter and use simple dictionary skills (e.g., guide words, pronunciation RLA.3.2.7 use conventions of spelling in written composition (e.g., spell high frequency words form appropriate grade level list; use letter/sound relationships to spell independently; make structural changes to spell words correctly: spell irregular verbs and irregular plural nouns). RLA.3.2.8 use conventions of capitalization in written composition (e.g., greeting - heading - closing of a letter; first word of a direct quotation). RLA.3.2.9 use conventions of punctuation in written composition (e.g., commas in dates and addresses; greeting/closing of a letter; quotation marks around titles and direct quotations; apostrophes for contractions and possessive nouns).		Level II students perform the following with assistance: Student will: • Recognize objects or words that represent proper names, such as pictures of pets or family, versus objects or pictures of common nouns. EX: Sort pictures of family members and common objects. EX: Identify family names (sister or Betty). EX: Point to family member or pictures of self. • Recognize a capital letter as a "big" letter and a non-capitalized letter as a "little" letter. EX: Shown a letter, indicate whether it is "big" or "little". EX: Sort letters of the alphabet into piles representing capital and small letters. Level I students attempt to perform the following with assistance: Student will: • Touch upper case letters. EX: Given letter representation, touch capital letters (Braille letters, sandpaper, sand, finger paint, yarn letters, glue, etc).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.2.10 write a grammatically correct sentence (e.g., correct subject/verb agreement with singular and plural nouns and verbs; correct use of regular and irregular verbs). RLA.3.2.11 use specific mechanics of grammar in written composition (e.g., substitute pronouns for nouns; use pronoun agreements; adjectives; adverbs). RLA.3.2.12 write correctly formed sentences avoiding run-on sentences		

GRADE THREE EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.3.3.1 listen and respond to familiar stories and poems (e.g., summarize and paraphrase to confirm comprehension; recount personal experiences; imagine beyond the literary form). RLA.3.3.2 define different messages conveyed through visual media (e.g., main ideas and supporting details; facts and opinions; main characters; setting; sequence of events).	RLA 3.3.ES.1 respond to questions about recent experiences.	RLA.PD.3.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Tell about an event that happened at home. EX: Describe the activities that were completed at home the previous evening. Level III students perform the following without assistance: Student will: • Respond to questions about recent experiences. EX: Answers questions, such as, "What did you do in class today?" "What did you have for lunch?"

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Make a choice between two preferred activities. EX: Point to pictures between two preferred foods. EX: Select between choices of games, toys, etc. EX: Select a mood (e.g., Smiley or Frowny face; PEC pictures depicting mood). Level I students attempt to perform the following with assistance: Student will: • Recognize picture word or object cue to communicate a want. EX: Respond to pictures of food items, toys, people, etc. EX: Change behavior when presented with object from a preferred activity.

GRADE FOUR EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and/or gestures to obtain information and/or perform a task.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors

West Virginia Extended Academic Content Standards and Performance Descriptors
For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.4.1.1 identify level appropriate vocabulary (e.g., multiple meaning words; synonyms; antonyms; homonyms; content area vocabulary; context clues). RLA.4.1.2 apply structural analysis and context clues to decode and encode words. RLA.4.1.5 recognize the ways in which language is used in literary texts (e.g., simile; metaphor; idioms; analogies; and puns). RLA.4.1.6 use graphic organizers and visualization techniques to interpret information (e.g., charts; graphs; diagrams; non-verbal symbols).	RLA.4.1.ES.1 recognize descriptive vocabulary words in print.	RLA.PD.4.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Associate descriptive words with nouns to make choices. EX: Select descriptive words to convey which condiment he or she wants on a hamburger. (Catsup-the "red" one; mustard – the "yellow" one; mayonnaise – the "white" one.) Level III students perform the following without assistance: Student will: • Recognize descriptive vocabulary words in print. EX: Select color word "red" from color words when directed. EX: Select shape word to describe the shape of an object (round, square). EX: Describe the weather for today and put the corresponding word on the daily weather bulletin board. EX: Select descriptive words from word cards that contain different sounds (e.g. "mad", "sad") when directed.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Recognize oral descriptive vocabulary words. EX: Give red crayon when directed; point to the yellow square. EX: Given a "big" object and a "little" object, pick up the big object when directed Level I students attempt to perform the following with assistance: Student will: • Respond to activity demonstrating vocabulary. EX: Listen to color song; look at red balloon; touch yellow feather. EX: Use picture or object to communicate, e.g.. picture/object for swing to communicate swing.
RLA.4.1.3 recognize the defining characteristics of a variety of literary forms and genres (e.g., fairy tales; folk-tales; fiction; nonfiction; myths; poems; fables; fantasies; biographies; autobiographies; chapter books). RLA.4.1.4 use comprehension skills to understand literary works (e.g., summarize; story elements; skim and scan; define expository text; compare/contrast; imagery; paraphrase; compose personal response; infer; fact and opinion; sequence).	RLA.4.1.ES.2 recognize the sequence of events in text.	RLA.PD.4.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Sequence events from text. EX: Place picture cards in order of the events from text. Level III students perform the following without assistance: Student will: • Recognize the sequence of events in text. EX: Identify sequence of the beginning, middle and end of text. EX: Arrange picture cards to depict a sequence of events from a story or text.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.4.1.7 use meaning clues to aid comprehension and make predictions about content across the curriculum (e.g., pictures; picture captions; titles; headings; story structure; story topic; action - events - character behaviors). RLA.4.1.8 read with accuracy and comprehension instructional level texts designed for the fourth grade and use self-correction strategies (e.g., search for cues; identify miscues; reread). RLA.4.1.9 read orally with fluent expression and silently literary texts across the curriculum. RLA.4.1.10 determine a purpose for reading across the curriculum. RLA.4.1.11 summarize the author's purpose (e.g., to persuade; to inform; to determine a specific viewpoint). RLA.4.1.12 compare self to text in making connections between characters or simple events in a literary work with people and events in one's own and other cultures. RLA.4.1.13 increase amount of independent reading.		Level II students perform the following with assistance: Student will: • Follow two-step directions in a sequential order. EX: "Get the crayons and color the picture." EX: "Get your backpack and line up." EX: "Take your coat off and hang it up." Level I students attempt to perform the following with assistance: Student will: • Respond to sequential activities. EX: Participate in activities such as Simon Says, Do as I Do, and Follow the Leader. EX: Presses button on Step Talker to say "Pledge of Allegiance".

GRADE FOUR EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:

- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.4.2.1 use conventions of print (e.g., legibility; uniformity in all written work).	RLA.4.2.ES.1 copy personal information.	RLA.PD.4.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Write first name and last name. EX: Write first and last name on paper. EX: Key first and last name. Level III students perform the following without assistance: Student will: • Copy personal information. EX: Copy personal information from a model created by the teacher. EX: Assemble letter cards to form first name following a model.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Copy first letter of first name. EX: Use a picture card to represent his or her name. Level I students attempt to perform the following with assistance: Student will: • Use a picture or symbol to identify self. EX: Use a picture card to represent his or her name.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.4.2.2 use the five step writing process (e.g., focused composition; coherent and logical progression of ideas; correct page format - title - paragraphs - margins - indentations). RLA.4.2.3 use proper paragraph form in written composition (e.g., indent the first word of a paragraph; use topic sentence; recognize a paragraph as a group of sentences about one main idea; use an introductory and concluding paragraph; write at least two related paragraphs). RLA.4.2.4 use strategies to gather and record information for research topics (e.g., notes- maps - charts - graphs - tables; summarize - paraphrase - describe in narrative form; gather direct quotes). RLA.4.2.5 use reference skills to identify words (e.g., alphabetical order, guide words, pronunciation, glossary). RLA.4.2.6 use strategies to compile information into written reports or summaries (e.g., incorporate notes into a finished product; include simple facts - details - explanations - examples; draw conclusions from relationships and patterns that emerge from data of different sources; use appropriate	RLA.4.2.ES.2 create a picture/word sentence with a period at the end.	RLA.PD.4.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Add descriptive words to simple sentences. EX: Given a sentence with a blank, fill-in a descriptive word. EX: Write a simple sentence about the color, size, etc. of his/her pet. Level III students perform the following without assistance: Student will: • Create a picture/word sentence with a period at the end. EX: Write sentence pictures of class trip.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
visual aids and media). RLA.4.2.7 use conventions of spelling in written composition (e.g., spell high frequency words; spell commonly misspelled words from appropriate grade level list; use dictionary and other resources to spell words; use syllable constructions to spell words; use vowel combinations for correct spelling; use contractions - compound words - roots - suffixes - prefixes in spelling). RLA.4.2.8 use conventions of capitalization in written composition (e.g., titles of people; proper nouns such as towns - cities - counties - countries - names of streets - holidays; first word of a direct quote; heading - salutation - closing of a letter). RLA.4.2.9 use conventions of punctuation in written composition (e.g., use colons in business letter salutations; use quotation marks in the title of poems - songs - chapters; underline book titles). RLA.4.2.10 use a variety of sentence structure correctly in writing (e.g., simple - compound - complex sentences; avoid sentence run-ons and fragments).		Level II students perform the following with assistance: Student will: • Put noun and action word together to make a sentence. EX: Use words or pictures to make sentences. Level I students attempt to perform the following with assistance: Student will: • Identify people, places or things. EX: Cut out pictures of people, places or things. EX: Indicate his or her favorite person on a communication board or device (favorite food, pet, toy).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.4.2.11 use the mechanics of grammar in written composition (e.g., avoid double negatives; correct verb tenses; use conjunctions - interjections - prepositions; correct subject verb agreement with regular and irregular verbs).		

GRADE FOUR EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Objectives	Performance Descriptors
RLA.4.3.1 listen and respond to different literary forms (e.g., summarize and paraphrase to confirm understanding; recount personal experiences; listen to information and exhibit comprehension; provide reasons in support of opinions; respond to others' ideas). RLA.4.3.2 define a variety of messages conveyed through visual media (e.g., provide information by observing main concept - details - themes or lessons - viewpoints; recognize intended audience).	RLA.4.3.ES.1 listen to and restate information.	RLA.PD.4.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Listen to and respond to information. EX: Listen to multi-step directions for getting ready for lunch and follows steps. EX: Listen to story and state opinion about story.

Grade Level Objectives	Extended Grade Level Objectives	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Listen to and restate information. EX: Listen and restate a one-step direction, such as "Get out your math book." EX: Listen to a short paragraph and restate in own words. Level II students perform the following with assistance: Student will: • Indicate choice between preferred and non-preferred items. EX: Shown two pictures, choose an item to make a choice. EX: When told it is time to get ready for lunch, pick the lunch symbol on his/her communication device. Level I students attempt to perform the following with assistance: Student will: • Recognize words, pictures, gestures and/or objects to make a request. EX: Gesture for teacher to come over. EX: Uses a communication device to request "more" of an item or activity.

GRADE FIVE EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and gestures to obtain information and/or perform a task.

Grade Level Objectives	Extended Grade Level Objectives	Performance Descriptors
RLA.5.1.11 use resource materials (e.g., dictionary; glossary) to determine the meaning of unknown words or multiple meaning words. RLA.5.1.12 use denotation to understand meaning. RLA.5.1.13 use root words, prefixes and suffixes to spell words, change word meanings and generate new words appropriate to grade level. RLA.5.1.14 spell correctly commonly misspelled and easily confused words from appropriate grade level list.	RLA.5.1.ES.1 use the root word to identify a new word.	RLA.PD.5.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Modify root words to produce new words. EX: Produce plural forms of words. EX: Add prefix or suffix to a root word. Level III students perform the following without assistance: Student will: • Use the root word to identify a new word. EX: Identify word(s) as singular or plural. EX: Match words with the same root word (unlock/lock, do/redo). EX: Match verbally presented word to printed word with the same root.

Grade Level Objectives	Extended Grade Level Objectives	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Identify whether picture card is singular or plural. EX: Group picture cards by whether representations are singular or plural. EX: Use cards with pictures and words to distinguish between singular and plural. Level I students attempt to perform the following with assistance: Student will: • Respond to sets of objects/pictures that are more than one. EX: Point to the picture that has more than one of an item. EX: Give choice at lunch or snack, choose to have one chip or cracker or more than one.
RLA.5.1.6 determine the elements of literature (e.g., characterization; conflict; plot) to construct meaning and recognize author's and/or reader's purpose. RLA.5.1.7 identify figurative language in text (e.g., hyperbole; alliteration). RLA.5.1.8 make text connections to self, to other text and to the world. RLA.5.1.9 identify literary techniques used to interpret literature (e.g., compare/contrast; cause/effect).	RLA.5.1.ES.2 identify main character from text or story.	RLA.PD.5.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify characteristics of character in a text or story. EX: Respond correctly to questions about the main character, such as "What does the bunny do?" EX: Draw a picture of the main character, (based on text description) and create a sentence about him/her/it. EX: Answer, "Are you and the main character alike or not alike?"

Grade Level Objectives	Extended Grade Level Objectives	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Identify main character from text or story. EX: After listening to a story or viewing a story with pictures and words, tell who the story was about. EX: Select correct choice to tell who the story was about. Level II students perform the following with assistance: Student will: • Select picture card representing a character in text. EX: After listening to a story, pick out the bunny from the cat, dog and bunny pictures. Level I students attempt to perform the following with assistance: Student will: • Respond to the story/text. EX: Point to the picture of the bunny as the story is being read. EX: Demonstrate a level of alertness by reacting to the story or event in the story (reacting to the sound of the ghost during a Halloween story). EX: Press a switch to say, "Turn the page please."

Grade Level Objectives	Extended Grade Level Objectives	Performance Descriptors
RLA.5.1.1 identify defining characteristics, build background knowledge and develop reading skills to understand a variety of literary passages and texts by West Virginia, national and international authors (e.g., fiction; nonfiction; myth; poems; fantasies; biographies; autobiographies; science fiction; tall tales; supernatural tales). RLA.5.1.2 increase amount of independent reading. RLA.5.1.3 determine main idea and locate supporting details in a literary passage and across the curriculum. RLA.5.1.4 analyze text to determine time and sequence. RLA.5.1.5 use comprehension skills (e.g., draw conclusions; predict; use context clues; summarize). RLA.5.1.10 read types of poetry that use inversion, rhyme and rhythm (e.g., diamante; shape; haiku; limerick; name poems; bio poems; cinquain; and quatrain).	RLA.5.1.ES.3 retell a simple story.	RLA.PD.5.1.ES.3 Level IV students perform the following complex task without assistance: Student will: • Retell a simple story and identify the main idea of the story. EX: Read a simple story and retell it in his or her own words, identifying the main idea. Level III students perform the following without assistance: Student will: • Retell a simple story. EX: Listen to a simple story and then retell the story in his/her own words. EX: Retell the story while someone transcribes it. EX: Draw a picture that describes what happened in the story. Level II students perform the following with assistance: Student will: • Select picture card(s) representing the story. EX: After listening to a story, choose pictures from examples and non-examples that go with the story. Level I students attempt to perform the following with assistance: Student will: • Identify a picture/object related to the story. EX: When asked to point to an object from the story, select "hat" (object) to represent "Cat in the Hat".

GRADE FIVE EXPANDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:
- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.5.2.1 use pre-writing and drafting strategies to generate topics and plan approaches to writing tasks. RLA.5.2.2 use the writing process to develop a composition that contains specific, relevant details. RLA.5.2.3 use editing strategies to correct errors in organization, content, usage, capitalization, punctuation and spelling. RLA.5.2.4 use strategies to write for a specific purpose (e.g., creative; narrative; informative; persuasive). RLA.5.2.5 use strategies to address specific types of writing (e.g., journal; friendly letter; business letter). RLA.5.2.6 develop a 3-5 paragraph composition with an introductory paragraph, supporting details paragraph(s) and concluding paragraph.	RLA.5.2.ES.1 write a simple sentence using initial capitalization and ending punctuation.	RLA.PD.5.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Write two related sentences using capitalization and ending punctuation. EX: After attending an event, write two sentences about the event. EX: Write two sentences after listening to a story or watching a movie. Level III students perform the following without assistance: Student will: • Write a simple sentence using initial capitalization and ending punctuation. EX: Identify correct punctuation for "asking" and "telling" sentences. EX: Given two sentences, pick the sentence that begins with a capital letter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.5.2.7 use a variety of sentence types (e.g., simple; compound; declarative; exclamatory; imperative; interrogative) avoiding run-on sentences and sentence fragments. RLA.5.2.8 apply capitalization rules (e.g., abbreviations; titles of people; initials). RLA.5.2.11 identify correct pronoun case and pronoun/antecedent agreement. RLA.5.2.12 identify action, helping and linking verbs while using correct verb tense and subject/verb agreement. RLA.5.2.13 identify adjectives and adverbs in their comparative and superlative forms. RLA.5.2.14 organize information by correctly combining subjects, predicates, modifiers and phrases in sentences.		Level II students perform the following with assistance: Student will: • Group capital letters together. EX: Given upper case and lower case letters, pick all capital letters. EX: Use magnetic letters to group capital letters on a board. Level I students attempt to perform the following with assistance: Student will: • Focus on letters. EX: Visually focus on presented letter. EX: Trace presented letter. EX: Lace capital letters using lacing cards. EX: Using different materials to trace, such as website programs and software programs. EX: Use sand, sandpaper, finger paint, shaving cream, pudding, macaroni, yarn, glue, etc. to trace.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.5.2.15 identify the parts of a book, know their purposes and locate information (e.g., table of contents; index; glossary). RLA.5.2.16 identify and use traditional reference sources for different types of information (e.g., dictionary; thesaurus; newspaper; telephone directory; recipes; menus; schedules; advertisements; order forms). RLA.5.2.17 use card catalog, either hard copy or computer database, to locate sources for research/report topics by title, author and/or subject. RLA.5.2.18 identify and interpret graphic aids (e.g., maps; charts; graphs; tables; timelines).	RLA.5.2.ES.2 identify basic reference materials.	RLA.PD.5.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify and use reference resources. EX: When asked the definition of a word, get a dictionary, find the word and either state the definition or write it down. EX: Look up information on the Internet. EX: Locate a chapter using the Table of Contents. Level III students perform the following without assistance: Student will: • Identify basic reference materials. EX: Tell what you would use to look up a word that you did not know how to write. Level II students perform the following with assistance: Student will: • Identify a reference resource from a non-reference book. EX: When asked, point to dictionary when shown a dictionary and a storybook. Level I students attempt to perform the following with assistance: Student will: • Identify a reference resource from an unrelated object. EX: Given a dictionary and an unrelated object, select the dictionary.

GRADE FIVE EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.5.3.1 recognize and exhibit oral communication skills (e.g., rate, audience etiquette). RLA.5.3.2 identify and correct usage errors in oral communication (e.g., word choice; grammar - I have seen, not I have saw). RLA.5.3.3 deliver recitations. RLA.5.3.4 relate personal experiences to oral/visual information. RLA.5.3.5 listen to understand a topic (e.g., of a guest speaker; informational video; televised interview; radio news program). RLA.5.3.6 contribute to group discussions by exhibiting active listening skills.	RLA.5.3.ES.1 engage in a conversation with a familiar person.	RLA.PD.5.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Respond to group discussion with classmates. EX: During morning opening, participate in discussion with classmates regarding daily events. EX: Engage in conversation that involves more than two people. EX: Follow discussion and respond appropriately (wait turn, answer questions, provide related response).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Engage a in a conversation with a familiar person. EX: Initiate morning greeting. EX: Talk to a peer about common activity. EX: Role-play scripted conversations, engage in turn-taking and maintain personal space. Level II students perform the following with assistance: Student will: • Answer conversational questions from familiar people. EX: "How are you doing?"; "Have you seen the movie?"; "What did you do in class today?" Level I students attempt to perform the following with assistance: Student will: • Respond to conversation. EX: Focus on speaker-eyes on speaker EX: Track speaker-follow speaker movement EX: Respond to speaker: eye gaze, hand wave, clapping, pressing a button.

GRADE SIX EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and/or gestures to obtain information and perform a task.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.6.1.10 use resource materials (e.g., dictionary; glossary; thesaurus) to determine the meaning of unknown words or multiple meaning words. RLA.6.1.11 use connotation and denotation to understand meaning. RLA.6.1.12 use root words, prefixes and suffixes to spell words, change word meanings and generate new words appropriate to grade level. RLA.6.1.13 spell correctly commonly misspelled words, easily confused words and words with irregular endings across the curriculum.	RLA.6.1.ES.1 identify vocabulary words from a variety of sources.	RLA.PD.6.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Apply vocabulary from a variety of sources. EX: Select the correct vocabulary word/picture to complete a sentence. EX: Order food from a menu. Level III students perform the following without assistance: Student will: • Identify vocabulary words from a variety of sources. EX: Look up meaning of word in a picture dictionary. EX: Identify vocabulary words on a menu.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Match word/picture to vocabulary words. EX: Select current activity from schedule and go to correct area. EX: Locate one item on a picture menu. EX: Identify his or her name from a choice of three. Level I students attempt to perform the following with assistance: Student will: • Point to items representing vocabulary words related to text. EX: Select the picture in a story that represents a vocabulary word from the text when directed.
RLA.6.1.1 know the defining characteristics, build background knowledge and use reading skills to understand a variety of West Virginia, national and international authors (e.g., fiction; nonfiction; myths; poems; fantasies; biographies; autobiographies; science fiction; tall tales; supernatural tales). RLA.6.1.2 increase amount of independent reading. RLA.6.1.3 determine theme and locate supporting details in a literary passage and across the curriculum. RLA.6.1.4 analyze text to determine transitional words/language. RLA.6.1.5 use comprehension skills (e.g., draw conclusions; interpret meaning).	RLA.6.1.ES.2 answer questions related to the main idea of a text.	RLA.PD.6.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify specific details related to the main idea of a text. EX. After reading a simple passage, identify the main idea and two supporting details. EX: Read a poster and state main idea and two supporting details. EX: Read Weekly Reader type magazine and answer questions about the main idea and supply supporting details.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.6.1.6 determine the elements of literature (e.g., external conflict; mood) to construct meaning and recognize author's and/or reader's purpose. RLA.6.1.7 identify figurative language in text (e.g., simile; metaphor; personification). RLA.6.1.8 explain text connections to self, to other text and to the world for understanding a literary passage. RLA.6.1.9 identify and classify types of poetry that use inversion, rhyme and rhythm (e.g., diamante; shape; haiku; limerick; name poems; bio poems; cinquain; and quantrain).		Level III students perform the following without assistance: Student will: • Answer questions related to the main idea of a text. EX. After reading a simple passage in text or pictures and text, answer questions related to the main idea. EX: Read a poster and answer questions about the main idea. EX: Read Weekly Reader type magazine story and answer questions about the main idea. (News – 2 – You.com is a weekly newsletter that uses picture symbols for it's text) Level II students perform the following with assistance: Student will: • Use pictures/symbols/ objects from text to represent the main idea of the story. EX: Given three pictures, point to the one that represents the main idea of the story. EX: After listening to a paragraph on tape, draw a picture describing the paragraph. Level I students attempt to perform the following with assistance: Student will: • Match pictures related to the main idea of the text. EX: After the teacher presents pictures/symbols/objects from the story, match objects with pictures or like objects that relate to the story. EX: Select an object from a set of two objects that relate to the story.

GRADE SIX EXPANDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:

- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
RLA.6.2.1	use pre-writing and drafting strategies (e.g., drawing; clustering; brainstorming; discussion) to generate topics and plan approaches to writing tasks.	RLA.6.2.ES.1 extend a sentence using descriptive words and correct capitalization and punctuation.	RLA.PD.6.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Compose sentence (s) using specific details. EX: Journal writing from a prompt. Level III students perform the following without assistance: Student will: • Extend a sentence using descriptive words and correct capitalization and punctuation. EX: Given a sentence that contains a blank space, fill it in with a descriptor. Level II students perform the following with assistance: Student will: • Identify picture/object to indicate choice of descriptor. EX: Select a card with the word "red" to go with a black and white picture of a catsup bottle.
RLA.6.2.2	from a prompt, use the writing process to develop a composition that contains specific, relevant details and transitions.		
RLA.6.2.3	use writing strategies to address specific writing purposes (e.g., creative; journalistic; essay; narrative; informative; persuasive) and address various audiences (e.g., peers; teachers; employers).		
RLA.6.2.4	edit own writing as well as the writing of others to correct errors in organization, content, usage, mechanics and spelling.		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Match descriptive words. EX: Match color cards and other descriptive cards. EX: Match items of the same colors (yellow banana and yellow ball). EX: Given a yellow block, pick out the yellow block from red, green and blue blocks.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.6.2.15 use the parts of a book, know their purposes and locate information (e.g., table of contents; index; glossary). RLA.6.2.16 identify and use traditional reference sources for different types of information (e.g., dictionary; thesaurus; atlas; almanac, encyclopedia; newspaper; telephone directory; recipes; menus; schedules; advertisements; order forms; audiovisual resources). RLA.6.2.17 begin to demonstrate the ability to identify the source, location, media type, relevancy and content validity of available resource information. RLA.6.2.18 identify title, author, subject, call number, publisher and copyright of resources using the card catalog, either hard copy or computer database. RLA.6.2.19 use traditional organizers to create, read, interpret and organize information in the form of tables, graphs, diagrams and charts. RLA.6.2.20 organize information into an outline by being able to categorize information into topic, subtopic and detail. RLA.6.2.21 identify and use correct note taking skills.	RLA.6.2.ES.2 identify the use of different types of resource materials.	RLA.PD.6.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Utilize resource material to complete a task. EX: Indicate the need of a cookbook to locate a recipe when cooking. EX: Look up a number in a phone book to order flowers. Level III students perform the following without assistance: Student will: • Identify the use of different types of resource materials. EX: Identify use of different resource materials during a BINGO game. EX: Given a choice of two resources, identify the correct resource for a specified task. EX: Tell where to find a cookie recipe. Level II students perform the following with assistance: Student will: • Match information found in resource to the correct resource. EX: Given a choice between a dictionary and phonebook, identify the resource where a phone number will be found. Level I students attempt to perform the following with assistance: Student will: • Identify a resource. EX: Identify a cookbook as a place to find food. EX: Select desired grooming items from newspaper advertisement.

GRADE SIX EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.6.3.1 recognize and exhibit oral communication skills (e.g., volume; rate; audience etiquette). RLA.6.3.2 retell simple and detailed stories sequentially. RLA.6.3.3 listen in order to comprehend topic and purpose (e.g., of a guest speaker; informational video; televised interview; radio news program). RLA.6.3.4 reach consensus in group discussions or settings.	RLA.6.3.ES.1 engage in communication with familiar and unfamiliar people.	RLA.PD.6.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Initiate communication in order to obtain information or perform a task. EX: Ask teacher or peers a question. EX: Ask a waitress where the restroom is. EX: E-mail a friend to meet after school. Level III students perform the following without assistance: Student will: • Engage in communication with familiar and unfamiliar people. EX: Respond to situational questions being asked in unfamiliar settings (fast food restaurant). EX: Answer questions from a unfamiliar person. EX: Use different means of communication (phone, e-mail).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Communicate needs and wants with familiar and unfamiliar people. EX: Ask for silverware from cafeteria helper. EX: Request break time from substitute teacher. EX: Respond appropriately to a greeting from school staff. Level I students attempt to perform the following with assistance: Student will: • Attend to a variety of communication attempts. EX: Respond to speaker with head turn or eye contact. EX: Focus attention on variety of media. EX: Attend to radio. EX: Listen to principal announcements.

GRADE SEVEN EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and gestures to obtain information and/or perform a task.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.7.1.10 recognize and understand clipped or shortened words and their meaning (e.g., bio for biography; auto for automobile). RLA.7.1.11 compare/contrast connotation and denotation to understand and enhance meaning of words, sentences and passages. RLA.7.1.12 use resource materials (e.g., dictionary; glossary; thesaurus) to determine the meaning of unknown words or multiple meaning words. RLA.7.1.13 use root words, prefixes and suffixes to spell words, change word meanings and generate new words appropriate to grade level.	RLA.7.1.ES.1 recognize and comprehend frequently used sight or common words.	RLA.PD.7.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Apply frequently used sight/common words. EX: Follow a daily schedule. EX: Given a set of word cards, find the item in school (Library, gym, cafeteria) Level III students perform the following without assistance: Student will: • Recognize and comprehend frequently used sight or common words. EX: Select correct vocabulary to answer questions or complete a task. EX: Fill in sentence blanks using choices supplied.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Match frequently used sight/common words with verbal or picture representations. EX: Match sight word to picture or object. EX: Hand the teacher the correct sight word from two or more choices. EX: Play Concentration with two pairs of words. EX: Play Bingo using sight words. Level I students attempt to perform the following with assistance: Student will: • Select object/picture of a given vocabulary word. EX: Hand the teacher the PEC symbol that corresponds to word. EX: Use object cues for school routines.
RLA.7.1.1 classify the defining characteristics, build background knowledge and apply reading skills to understand a variety of literary passages and texts by West Virginia, national and international authors (e.g., fiction; nonfiction; myths; poems; fantasies; biographies; autobiographies; science fiction; tall tales; supernatural tales). RLA.7.1.2 increase amount of independent reading. RLA.7.1.3 relate common themes across a variety of literature.	RLA.7.1.ES.2 identify three elements of a story (characters, main idea, setting).	RLA.PD.7.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify four elements of a story or text, EX: Answer questions regarding the characters, main idea, setting and problem. EX: Complete a graphic organizer of the story. Level III students perform the following without assistance: Student will: • Identify three elements of a story (characters, main idea, setting) EX: Answer who, what, where questions related to the text.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.7.1.4 use comprehension strategies (e.g., generalize; evaluate; infer; paraphrase). RLA.7.1.5 determine the elements of literature (e.g., internal conflict; point of view) to construct meaning and recognize author's and/or reader's purpose. RLA.7.1.6 identify figurative language in text (e.g., jargon; idioms). RLA.7.1.7 make text connections to self, to other text and to the real world. RLA.7.1.8 identify literary techniques used to interpret literature (e.g., flashback; stereotype; foreshadowing; propaganda). RLA.7.1.9 read types of poetry and the use of inversion, rhyme and rhythm in narrative poems, ballads and lyrics.		EX: Draw picture of who, what, where from story. Level II students perform the following with assistance: Student will: • Identify two elements of a story (character, main idea). EX: Given three pictures, point to the one that shows the character doing an activity from the story. EX: Select two objects from an object bag, one that represents the character and one that represents the main idea. Level I students attempt to perform the following with assistance: Student will: • Identify one element of a story. EX: Press a Big Mac switch whenever a certain character is mentioned in the story. EX: Point to a picture that shows the story's setting.

GRADE SEVEN EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:
- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
RLA.7.2.1	from a prompt, use the writing process to develop a focused composition that contains specific, relevant details and transition.	RLA.7.2.ES.1 write two related sentences.	RLA.PD.7.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Write three or more related sentences. EX: After talking about a movie or field trip, write three sentences. EX: Write three sentences describing events in a story he/she has listened to. EX: Write sentences in a card to give someone for a Thank you, birthday or holiday. Level III students perform the following without assistance: Student will: • Write two related sentences. EX: Given a prompt, write two sentences. EX: Using word cards, combine to make two sentences.
RLA.7.2.2	use editing and revision techniques to vary sentence length, change sentence order, use vivid and concise words and eliminate organizational errors.		
RLA.7.2.3	use the writing process to compose various types of writing (e.g., creative; informative; expository; persuasive; articles; essays; journals; letters; poetry; research/reports).		
RLA.7.2.4	apply capitalization rules (e.g., languages; school subjects; regions of the U.S.; dialogue; lines of poetry).		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.7.2.5 apply punctuation rules (e.g., commas; apostrophes in possessives and contractions; colons; semicolons; hyphens; dashes; parentheses). RLA.7.2.6 use pronouns, pronoun cases and antecedents in correct form. RLA.7.2.7 use and apply correct forms of adjectives and adverbs and/or complex sentence. RLA.7.2.8 recognize and avoid use of double negatives. RLA.7.2.9 compose and punctuate simple, compound and complex sentences with and without conjunctions. RLA.7.2.10 organize information by combining subjects, predicates, modifiers and appositives in a sentence. RLA.7.2.11 use correct verb tense and subject verb agreement (e.g., irregular verbs; compound subjects; indefinite pronouns; intervening phrases). RLA.7.2.12 edit to eliminate run-on sentences, sentence fragments, redundant words/sentences and misplaced modifiers.		Level II students perform the following with assistance: Student will: • Arrange subject and action word to form sentence. EX: Given two parts of sentences with matching pictures, put the two halves together correctly. EX: Match word cards to corresponding picture to form a simple sentence, e.g., Sally runs. Level I students attempt to perform the following with assistance: Student will: • Manipulate preferred writing instrument with proper positioning. EX: Write name on paper.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.7.2.13 use title page, copyright page, table of contents, appendix, bibliography, glossary and index to locate specified information. RLA.7.2.14 identify and use traditional reference sources for different types of information (e.g., *Reader's Guide; Books In Print;* newspapers; schedules; advertisements; audiovisual resources). RLA.7.2.15 recognize copyright laws/issues, ethical acquisition and use of digital information in citing sources for research/report. RLA.7.2.16 identify the source, location, media type, relevancy and content validity of available information. RLA.7.2.17 demonstrate the ability to use the card catalog in hard copy or database to identify title, author, subject, call number, publisher and copyright resources. RLA.7.2.18 develop an outline using prepared notes to write a paragraph	RLA.7.2.ES.2 use resource media to obtain information.	RLA.PD.7.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Produce written text based on research information. EX: After researching "horses" on the Internet, produce a story. Level III students perform the following without assistance: Student will: • Use resource media to obtain information. EX: Find and use "Google" to obtain information on a topic. EX: Take digital pictures of places in the community. EX: Create a picture collection of horses from Internet. Level II students perform the following with assistance: Student will: • Identify information found in resource media. EX: Given a choice, identify the correct resource for the subject (telephone numbers from personal phonebook). EX: Identify friend found in photo book. Level I students attempt to perform the following with assistance: Student will: • Use a media tool to complete an activity. EX: Use adapted mouse to start media presentation on selected topic. EX: Activate switch to advance to next PowerPoint slide.

GRADE SEVEN EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.7.3.1 recognize and exhibit oral communication skills (e.g., tone; volume; rate; audience etiquette). RLA.7.3.2 perform dramatizations. RLA.7.3.3 use oral/visual information to foster exploration, questioning and imagining of a topic. RLA.7.3.4 listen in order to comprehend topic, purpose and perspective in spoken texts (e.g., of a guest speaker; informational video; televised interview; radio news program). RLA.7.3.5 play a variety of roles in group discussions including active listener and discussion leader. RLA.7.3.6 distinguish between private and public information in research and reporting.	RLA.7.3.ES.1 listen and communicate in order to obtain information or perform a task.	RLA.PD.7.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Seek clarification of information. EX: Raise hand to ask for help with a task. EX: Ask nurse to reshow how to check blood sugar levels. EX: Ask a peer to review the assignment. Level III students perform the following without assistance: Student will: • Listen and communicate in order to obtain information or perform a task. EX: Listen to directions for completing craft project and restate steps. EX: Ask for directions for the local store.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Respond to spoken communication to perform part of a task. EX: Follow a one-step direction. EX: Pick lunch from choices stated during morning routine. Level I students attempt to perform the following with assistance: Student will: • Attend to a variety of communication with familiar and unfamiliar people. EX: Focus attention to a variety of speakers.

GRADE EIGHT EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and gestures to obtain information and/or perform a task.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.8.1.9 recognize and understand acronyms. RLA.8.1.10 use resource materials (e.g., dictionary; glossary; thesaurus) to determine the meaning of unknown words or multiple meaning words. RLA.8.1.11 use root words, prefixes and suffixes to spell words, change word meanings and generate new words appropriate to grade level.	RLA.8.1.ES.1 use a variety of resources to identify meaning of vocabulary words.	RLA.PD.8.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Identify more than one meaning of vocabulary words. EX: Given more than one meaning of vocabulary words, select the one that best matches the reading passage. EX: Use a dictionary to find more than one meaning of vocabulary words. Level III students perform the following without assistance: Student will: • Use a variety of resources to identify meaning of vocabulary words. EX: Use a picture dictionary to look up word. EX: Use the computer to find word meaning.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Use resources to ask for items. EX: Point to item on picture menu to order in restaurant. EX: Use CheapTalk to make a choice. Level I students attempt to perform the following with assistance: Student will: • Use picture/object to represent words. EX: Use object or picture cue to request item or activity.
RLA.8.1.1 analyze the defining characteristics, build background knowledge and apply reading skills to understand a variety of literary passages and texts by West Virginia, national and international authors (e.g., fiction; nonfiction; myths; poems; fantasies; biographies; autobiographies; science fiction; tall tales; supernatural tales). RLA.8.1.2 relate literary theme to global situations. RLA.8.1.3 use comprehension strategies (e.g., make judgments; hypothesize; critique; analyze). RLA.8.1.4 determine the elements of literature (e.g., internal/external conflict; point of view) to construct meaning and recognize author's and/or reader's purpose. RLA.8.1.5 identify figurative language in text (e.g., onomatopoeia; pun).	RLA.8.1.ES.2 identify details from text needed to make decisions.	RLA.PD.8.1.ES.2 Level IV students perform the following complex tasks without assistance: Student will: • Identify two supporting details the character used to make a decision. EX: Given several details from a story, select two that relate to a decision made by the character. • Use details from text to perform a task. EX: Read daily schedule to determine activity. EX: Use details such as first and last name and street name in a phone book to locate a phone number.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.8.1.6 make text connections to self, to other text and to the real world. RLA.8.1.7 identify literary technique used to interpret literature (e.g., irony; satire; persuasive language; analogies). RLA.8.1.8 read and identify types of poetry and the use of inversion, rhyme and rhythm (e.g., narrative poem; ballad; lyric; epic). RLA.8.1.12 increase amount of independent reading.		Level III students perform the following without assistance: Student will: • Identify details the character used to make a decision. EX: Agree or disagree with a character's actions. • Identify details from informational text to make decisions. EX: Follow rules of a game. EX: Use weather forecast to decide clothing to wear that day. Level II students perform the following with assistance: Student will: • Given two choices, indicate which happened in the story. EX: Shown two objects/pictures, one that represents the story and one that does not, choose the correct object/picture. Level I students attempt to perform the following with assistance: Student will: • Demonstrate focused attention to pictures/symbols/objects from the text. EX: Orient toward speaker. EX: Respond to story (touch item/picture related to the story).

GRADE EIGHT EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:
- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
RLA.8.2.1	use the writing process to demonstrate the ability to compose a variety of written work (e.g., creative; informative; expository; persuasive; chronological explanatory; compare/contrast; cause/effect; article; essay; journal; letters; reports; poetry).	RLA.8.2.ES.1 using a resource, compose a paragraph with three related sentences.	RLA.PD.8.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Using a variety of resources, compose a paragraph and self-correct capitalization and punctuation EX: Publish written piece by editing. EX: Write a paragraph about NASCAR using information found on the Internet. EX: Write about dinosaurs using information from encyclopedia or picture book. Level III students perform the following without assistance: Student will: • Using a resource, compose a paragraph with three related sentences. EX: Given topic choices, select a topic and create a paragraph.
RLA.8.2.2	from a prompt, develop a focused composition that contains specific, relevant details, smooth transition and vivid, precise words.		
RLA.8.2.3	use revision and editing strategies to correct errors in organization, content, usage, capitalization, punctuation and spelling.		
RLA.8.2.4	recognize and write a simple thesis statement.		
RLA.8.2.5	apply all capitalization rules in writing.		
RLA.8.2.6	apply punctuation rules in writing (e.g., appositives; phrases; clauses).		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.8.2.7 compose and punctuate grammatically correct simple, compound and complex sentences. RLA.8.2.8 identify and correct faulty parallel sentence structure such as phrases and clauses. RLA.8.2.9 edit and revise to eliminate run-on sentences, sentence fragments, redundant words/sentences and misplaced modifiers. RLA.8.2.10 conduct research using parts of a book to gather, evaluate and synthesize data from a variety of sources (e.g., print; non-print; people). RLA.8.2.11 identify and use traditional reference sources for different types of information. RLA.8.2.13 demonstrate the ability to identify the source, location, media type, relevancy and content validity of available information. RLA.8.2.15 use an outline to develop a written and/or oral presentation using graphic representation.		Level II students perform the following with assistance: Student will: • Copy provided text. EX: Dictate a story to the teacher who would transcribe it, then give it back to the student to copy. EX: Copy name, address, telephone number and other identifying information. EX: Copy a short paragraph, including capitals and punctuation. EX: Use word cards to copy sentence written by teacher. Level I students attempt to perform the following with assistance: Student will: • Select preferred writing instrument. EX: Choose a pencil with a pencil grip over a standard pencil to participate in a writing activity.
RLA.8.2.12 independently resolve information conflicts and validate information through assessing, researching and comparing data. RLA.8.2.14 apply use of card catalog and/or computer databases to identify title, author, subject, call number, publisher and copyright resources to gather information for a presentation.	(These objectives are not developmentally appropriate for this population.)	

GRADE EIGHT EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.8.3.1 recognize and exhibit oral communication skills (e.g., tone; volume; rate; speaking etiquette; audience etiquette). RLA.8.3.2 present an oral report with graphic aids (e.g., tables; graphs; diagrams; charts). RLA.8.3.3 think critically about oral/visual information presented; relate personal experiences and apply the information to global situations. RLA.8.3.4 listen in order to analyze and critique information received in spoken texts (e.g., of a guest speaker; informational video; televised interview; radio news program). RLA.8.3.5 play a variety of roles in group discussions including active listener, discussion leader and/or facilitator. RLA.8.3.6 Properly use private and public information.	RLA.8.3.ES.1 listen to and communicate with a variety of speakers in order to answer questions regarding the content.	RLA.PD.8.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Actively participate in group discussion to explore, question, and present information. EX: Ask and answer questions related to a topic. EX: Tell purpose of conversation/story. EX: Tell a short story. EX: Tell a joke. Level III students perform the following without assistance: Student will: • Listen to and communicate with a variety of speakers in order to answer questions regarding the content. EX: After attending an assembly, answer multiple-choice questions. EX: During a presentation by a police officer, discuss the duties of a police officer.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Respond to information presented by unfamiliar person. EX: Complete simple task provided directions. EX: Follow directions from intercom during fire drill. Level I students attempt to perform the following with assistance: Student will: • Follow class rules for behavior during presentation. EX: Clap hands when speaker is finished talking. EX: Move head to follow speaker when he/she moves around during presentation.

GRADE TEN EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 1: Reading (RLA.S.1)
Students will use skills to read for literacy experiences, read to inform and read to perform a task by:

- identifying and using the dimensions of reading (phonemic awareness, phonics, background knowledge/vocabulary, high frequency words/fluency, comprehension, writing and motivation to read); and
- employing a wide variety of literature in developing independent readers.

Essence of Standard: The student will use listening skills, words, symbols, pictures, objects and gestures to obtain information and/or perform a task.

Grade Level Objective	Extended Grade Level Standards	Performance Descriptors
10.1.5 continue to use context clues to establish word meaning (e.g., including words with multiple meanings) 10.1.10 expand vocabulary through reading classic literature. 10.1.11 apply knowledge of word etymologies to determine meaning of words. 10.1.12 explain word etymologies to determine word meaning	RLA.10.1.ES.1 determine word meaning through a variety of strategies.	RLA.PD.10.1.ES.1 Level IV students perform the following complex task without assistance: Student will: • Generalize the meaning of a word through various activities. EX: Use the word correctly in a sentence. EX: Use homonyms correctly (two, too, to). EX: Use the word correctly in oral language. EX: Use the words to complete a crossword puzzle/word search.

Grade Level Objective	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Determine word meaning through a variety of strategies. EX: Identify the definition of the word. EX: Select correct definition of the word given three choices. EX: Fill in the blank in a sentence with the correct word. Level II students perform the following with assistance: Student will: • Associate word with meaning. EX: Match a word with its picture. EX: Match corresponding picture/words to the intended purpose (e.g., sock to shoe; hat to head; mitten to hand. Level I students attempt to perform the following with assistance: Student will: • Identify the word. EX: Point to the word or picture of the word when presented. EX: Touch an actual item that represents the word.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objective	Extended Grade Level Standards	Performance Descriptors
RLA. 10.1.1 analyze and research historical, cultural and biographical influences of literary works. RLA. 10. 1.2 compare and contrast literary styles according to genre. RLA. 10.1.3 increase the amount of independent reading with emphasis on American, British and World literature. RLA. 10.1.6 recognize characteristics of author's style, purpose and tone. RLA. 10.1.7 form supportable predictions, opinions, inferences and conclusions based on a text and/or implicit ideas. RLA 10.1.8 recognize and interpret the author's choice of literary devices (e.g., personification; symbolism; imagery; metaphor; simile; humor; rhythm; rhyme; meter; alliteration; assonance)	RLA.10.1.ES.2 comprehend and infer meaning from literary materials to make predictions and answer questions.	RLA.PD.10.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Apply meaning of the story to real life. EX: Determine whether the character's action could happen in real life. EX: Determine whether character's action is right or wrong/good or bad. EX: Find ways a character in the story is the same or different from himself/herself. Level III students perform the following without assistance: Student will: • Comprehend meaning from literary materials to make predications and answer questions. EX: Answer who, what, where, when questions from the text. EX: Predict what will happen next. Level II students perform the following with assistance: Student will: • Distinguish fact from fiction. EX: Compare a newspaper to a fairy tale. EX: Distinguish real people from fictional characters. EX: Distinguish real from fantasy actions in the story (i.e., "Peter Pan is flying, can you fly?" "Joey is running in the story, can you run?").

Grade Level Objective	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Distinguish actual and representational items. EX: Identify real items. EX: Identify representational items. EX: Identify from a group of items - real and representations. EX: Watch grade appropriate literature depicted in visual media (i.e., video, movie, DVD).
RLA.10.1.4 employ reading strategies necessary for various reading purposes (e.g., literary experience; information; and task. RLA.10.1.9 recognize persuasive language and techniques (e.g., advertisements; junk mail; news stories).	RLA.10.1.ES.3 apply information from a variety of sources.	RLA.PD.10.1.ES.3 Level IV students perform the following complex task without assistance: Student will: • Locate and use information from a variety of sources. EX: Locate site and find information on the Internet on how to change the oil in a car. EX: Find information on health and beauty from magazines. EX: Locate information on a map (school map, town, state). EX: Complete job application. EX: Use personal information for its intended purpose. EX: Identify two differences between a Mexican and Italian restaurant.

Grade Level Objective	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Apply information from a variety of sources. EX: Follow high school rules. EX: Look up friends phone number in school directory. EX: Select from school menu. EX: Select information from personal resources. Level II students perform the following with assistance: Student will: • Use materials to complete a task. EX: Locate and use material(s) to prepare a food item. EX: Locate and use material(s) to complete a task. EX: Locate personal information. Level I students attempt to perform the following with assistance: Student will: • Identify material for intended purpose. EX: broom to sweep EX: marker on paper EX: cup to drink

GRADE TEN EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 2: Writing (RLA.S.2)
Students will employ a wide range of writing strategies to communicate effectively for different purposes by:

- developing the writing process;
- applying grammatical and mechanical properties in writing; and
- gathering and using information for research purposes.

Essence of Standard: Students will communicate effectively using a variety of writing strategies.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
RLA.10.2.1	employ writing strategies to address specific audiences (e.g., narrative; expository; descriptive; persuasive).	RLA.10.2.ES.1 produce writing for practical uses with correct punctuation and capitalization.	RLA.PD.10.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Produce multiple types of writing, apply proper conventions of writing and self-correct. EX: Consistently punctuate sentences correctly (i.e., comma in dates; comma after greetings; question marks and periods).
RLA.10.2.2	use pre-writing strategies to generate topics and plan approaches to writing by using timed writing tasks.		
RLA.10.2.3	use various points of view (e.g., omniscient or limited) to create a well-developed composition from a writing prompt.		
RLA 10.2.4	use a clearly worded and correctly placed thesis statement which is supported by relevant details to develop a composition that addresses the topic.		
RLA 10.2.5	develop timed and untimed writing that is focused and coherent and has a clear, logical progression of ideas		

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.10.2.6 use different transitional devices (e.g., introductory and internal transitional phrases/conjunctions). RLA 10.2.7 develop a composition that contains sentence variety. RLA 10.2.8 develop a composition where word choice is vivid, precise and economical. RLA 10.2.9 correct errors in timed and untimed writing correct errors in organization, content usage, mechanics (e.g., capitalization; punctuation) and spelling using revision and editing strategies. RLA. 10.2.10 access and evaluate a variety of sources (e.g., *Reader's Guide*, card catalog, electronic media, newspapers). RLA 10.2.11 apply note-taking skills to process and organize information (e.g., paraphrase; summary, quote). RLA 10.2.12 explain the concept of intellectual property and plagiarism in all media (e.g., media copyright laws; public/private domain).		Level III students perform the following without assistance: Student will: • Produce writing for practical uses with correct punctuation and capitalization. EX: Write paragraphs with correct punctuation and capitalization. (handwritten, communication devices, IntelliKeys, *Writing with Symbols 2000).* EX: Using correct capitalization and punctuation, complete a job application. EX: Compose a letter using correct capitalization and punctuation. Level II students perform the following with assistance: Student will: • Arrange words to make phrases or simple sentences. EX: Arrange words to make phrases (i.e., word cards)

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.10.2.13 organize text and composition information in outline by selecting main points and supporting details. RLA 10.2.14 practice correct use of bibliographic format in research documentation (e.g., MLA; APA). RLA.10.2.15 compare and contrast pronunciation of words and different spelling (e.g., dictionary; spell check; thesaurus). RLA.10.2.16 classify the parts of speech within a sentence. RLA.10.2.17 recognize the parts of a sentence (e.g., direct object; predicate adjective; gerund; infinitive; word usage variations). RLA.10.2.18 recognize and correct errors in subject/verb agreement with emphasis on indefinite pronouns. RLA 10.2.19 use correct verb tense by recognizing appropriate situations for tense shifts. RLA 10.2.20 recognize and correct errors in sentence structure (e.g., parallelism; redundancy; misplaced modifiers; subordination).		Level I students attempt to perform the following with assistance: Student will: • Write name or other personal information. EX: Arrange letters to make name. EX: Use alternate modes of writing name (stamp). EX: Use adapted pencil/pen to write information.

GRADE TEN EXTENDED READING
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Reading and English Language Arts Content Standards and Objectives

Standard 3: Listening, Speaking and Viewing (RLA.S.3)
Students will apply their use of spoken, written and/or visual language to communicate
- with a variety of audiences and
- for different purposes.

Essence of Standard: Students will communicate in different ways and for different purposes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
RLA.10.3.1 communicate and follow intricate directions. RLA.10.3.2 employ appropriate classroom communication skills (e.g., asking and answering questions to foster comprehension and communication in appropriate tone and at the appropriate time). RLA.10.3.3 listen to a speech (e.g., funeral orations from Shakespeare's *Julius Caesar*) to identify specific examples of central idea, fact versus opinion and persuasive devices). RLA.10.3.4 recognize and correct usage errors in oral language (e.g., distinguishing colloquial - dialectical - slang - formal versus informal). RLA.10.3.5 practice and master listening, speaking and viewing by using a variety of techniques (e.g., videos, power point presentations; audiotape; web pages).	RLA.10.3.ES.1 listen in order to communicate effectively in different ways and for different purposes.	RLA.PD.10.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Listen in order to communicate effectively in different ways and different purposes within school and community. EX: Develop a short presentation (i.e., through pictures, speaking, computers). EX: Interact with non-typical peers and other adults in a variety of settings (other school settings and community settings) EX: Ask a grocery store clerk where the flour is located. EX: Send an invitation to a party to friends and family. EX: Send an email to Internet source to request information.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Listen in order to communicate effectively in different ways and for different purposes. EX: Communicate directions (i.e., orally, pictorially, etc.). EX: Listen to and follow directional commands (i.e., going to another room in the school, leaving the building during a fire drill, gathering materials for completing a task). EX: Send a friend an e-mail. Level II students perform the following with assistance: Student will: • Communicate with a variety of people through different means. EX: Call someone on the telephone. EX: Use personal communication system to engage in conversation with multiple people. EX: Send a personal note, made using a model from the teacher (words, pictures, drawing). Level I students attempt to perform the following with assistance: Student will: • Communicate a response through communication system. EX: Use object or communication system to answer questions and make requests. EX: Turn head to indicate "yes" or "no". EX: Smile.

GRADE THREE EXTENDED MATHEMATICS
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- demonstrate meaning of operations and how they relate to one another; and
- compute fluently and make reasonable estimates through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: Students will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.1.1 read, write, order, and compare numbers to 10,000. MA.3.1.2 read, write, order, and compare decimals to hundredths with models. MA.3.1.3 identify place value of each digit utilizing standard and extended form to 10,000. MA.3.1.4 estimate to nearer 10,000 and 1,000 using rounding, benchmarks, and compatible numbers to determine reasonableness of an answer. MA.3.1.5 identify fractions as part of a whole/one and as part of a group using models and pictorial representations.	MA.3.1.ES.1 count and recognize whole numbers to nine.	MA.PD.3.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Recognize whole numbers to 20. EX: Identify correct numbers in a Bingo game with numbers to 20. • Count to 20. EX: Count fingers and toes (20).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.1.6 compare and order fractions with like and unlike denominators using concrete models. MA.3.1.8 recognize and model equivalent fractions using concrete materials. MA.3.1.9 recognize and model proper and improper fractions and mixed numbers.		Level III students perform the following without assistance: Student will: • Recognize whole numbers to nine. EX: Identify numbers on a telephone. EX: Identify whole numbers using pictures cards that show objects represented. • Count to nine. EX: Draw number of objects indicated (draws five circles, two balls, eight stars, etc. and count the objects). Level II students perform the following with assistance: Student will: • Recognize whole numbers to five. EX: Identify numbers one through five on a clock. • Count to five. EX: Match counters to pictures (i.e., picture of four balls place a counter on top of each ball). Level I students attempt to perform the following with assistance: Student will: • Demonstrate the concept of one. EX: Hit the switch one time; give me one, etc.
MA.3.1.7 add and subtract fractions with like denominators using concrete models and pictorial representations. MA.3.1.10 add and subtract 2- and 3-digit whole numbers and money without and with regrouping. MA.3.1.11 understand multiplication as repeated addition and division as repeated subtraction.	MA.3.1.ES.2 solve single-digit addition problems with sums to nine.	MA.PD.3.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Translate written number to a set of objects and then combine sets of objects. EX: Identify written numbers of two separate groups by showing them with objects and adding them together.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.1.12 understand meanings of operations and the relationship between multiplication and division (e.g., identity element of multiplication, commutative property, property of zero, fact families, associative property). MA.3.1.13 memorize basic multiplication facts 0-5 and the corresponding division facts. MA.3.1.14 model multiplication of 2- and 3-digit numbers by a 1-digit number. MA.3.1.15 model division of 2- and 3-digit numbers by a 1-digit number. MA.3.1.16 solve grade level appropriate story problems using multiple strategies.		Level III students perform the following without assistance: Student will: • Solve single-digit addition problems with sums to nine. EX: Count two sets of objects with a sum of less than ten. Level II students perform the following with assistance:: Student will: • Demonstrate an understanding of addition as combining collections/counting on things. EX: Given two separate sets of objects, count both sets as one. Level I students attempt to perform the following with assistance: Student will: • Demonstrate one-to-one correspondence between sets of objects. EX: Match similar sets of objects.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.2.1 analyze and complete a geometric pattern. MA.3.2.3 identify and write number patterns of three's and four's. MA.3.2.4 identify and write the rule of a given pattern. MA.3.2.5 write equivalent numerical expressions. MA.3.2.6 represent the idea of a variable as an unknown quantity using a symbol.	MA.3.2.ES.1 recognize and complete a two-object pattern.	MA.PD.3.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Find a missing part of a pattern. EX: In a repeated two-object pattern, find the missing element. Level III students perform the following without assistance: Student will: • Recognize and complete a two-object pattern. EX: Using a calendar, continue a pattern using shapes and / or colors. Level II students perform the following with assistance: Student will: • Copy a pattern. EX: Given a set of beads on a card, match beads to card.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Identify a repeated event. EX: Put book-bag in appropriate place each day.
MA.3.2.2 use input/output model with grade appropriate functions.	(This objective is not developmentally appropriate for this population.)	

GRADE THREE EXTENDED MATHEMATICS CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.3.1 identify basic polygons and their components through decagon. MA.3.3.2 identify and describe a cube, rectangular solid, cylinder, cone and pyramid according to the number of faces, edges and vertices. MA.3.3.3 from a plane drawing, construct and identify the solid figure. MA.3.3.4 identify, determine and draw lines of symmetry. MA.3.3.5 model and describe lines and rays. MA.3.3.6 identify and draw right, obtuse and acute angles. MA.3.3.7 given a model, draw an example of a flip, slide and turn (reflection, translation, and rotation).	MA.3.3.ES.1 identify basic plane geometric shapes and spatial relationships, including square, circle, triangle.	MA.PD.3.3.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Label a circle, square, triangle. EX: When name of shape is verbally given, pick the shape that is said. • Describe spatial relationships of over, under, left and right. EX: While going through an obstacle course, student will say which relationship he/she is doing. • Recognition of a rectangle. EX: Identify rectangle in the classroom.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Name a square, circle, triangle. EX: Point to the shape named. • Perform spatial relationships, over under, left, right. EX: Using felt board, place circles, squares and triangles in relative position named (e.g. square above circle, triangle below square). Level II students perform the following with assistance: Student will: • Recognize that shapes are similar and different. EX: Sort the shapes by attributes. • Describe in and out. EX: Indicate that they are putting a shape toy (circle, square, triangle) in or out of box. Level I students attempt to perform the following with assistance: Student will: • Manipulate concrete geometric shapes. EX: Touch and/or look at circle, square, triangle, rectangle. • Perform in and out relationships. EX: Put objects in box when directed.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.3.8 name the location of a point on a one-quadrant grid.	(This objective is not developmentally appropriate for this population.	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.4.1 estimate, measure, compare, order and draw lengths using inches (to the nearest ½ inch), feet, yards, centimeters and meters. MA.3.4.2 estimate and count the number of cubes in a rectangular solid to determine volume. MA.3.4.3 discover through modeling the formula for determining the area of a rectangle. MA.3.4.4 understand appropriate grade level conversions within a system of measure. MA.3.4.5 estimate and measure results of mass/weight in ounces, pounds, grams, and kilograms. MA.3.4.6 read time to 5-minute intervals using analog and digital clocks.	MA.3.4.ES.1 recognize measurement devices (ruler, scale, thermometer, and clock) and identify what they measure.	MA.PD.3.4.ES.1 Level IV students perform the following complex task without assistance: Student will: • Determine which measurement tool will be used in certain circumstances. EX: When shown picture of winter weather, determine which measurement tool would be used to find out temperature. EX: When it is time to change classes, which measurement tool would be used to determine this?

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.4.7 calculate elapsed time to quarter-hour. MA.3.4.10 estimate, read, and recognize common temperatures of Celsius and Fahrenheit.		Level III students perform the following without assistance: Student will: • Recognize a ruler, scale, thermometer, and clock. EX: Take picture cards of a ruler, scale, thermometer, and clock, and place them beside correct device. • Given a measurement task (telling time), identify the correct measurement device (clock). EX: when asked when it is time to go home, select picture of a clock as opposed to unrelated item. Level II students perform the following with assistance: Student will: • Match a ruler, scale, thermometer, and clock. EX: Point to or pick up a ruler on command. Level I students attempt to perform the following with assistance: Student will: • Manipulate a ruler, scale, thermometer, and clock. EX: When shown a ruler, pick up a ruler.
MA.3.4.8 read and write amounts of money to $100.00. MA.3.4.9 role-play making change up to $10.00.	MA.3.4.ES.2 identify coins as a penny, nickel, dime and quarter.	MA.PD.3.4.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify value of a coin. EX: When shown a penny, say "one cent." EX: When directed "Give me one cent," offer a penny from a group of coins.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Identify coins as a penny, nickel, dime and quarter. EX: When shown a penny, nickel, dime or quarter, indicate their name. EX: Draw coin from brown bag and be able to name each one correctly. Level II students perform the following with assistance: Student will: • Discriminate between a penny, nickel, dime and quarter. EX: Sort the change into 4 different piles. (Pennies, nickels, dimes, and quarters). Level I students attempt to perform the following with assistance: Student will: • Determine if object is a coin. EX: Given a coin and a block, point to the coin.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.3.5.1 collect data from observation, surveys, and experiments, and construct and label a graph. MA.3.5.2 use a timeline to determine a sequence of events. MA.3.5.4 analyze data represented on a graph using grade level appropriate questions.	MA.3.5.ES.1 use interviews and observations to collect data.	MA.PD.3.5.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Develop a graph. EX: From data collected build a graph to represent information. • Identify patterns in a graph. EX: Given a graph, respond to questions "Which one is more?"

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Use interviews to collect data. EX: Given picture of dog/cat, student will ask peer which one he/she likes. • Use observation to collect data. EX: Observe daily weather. EX: Record daily weather using picture symbols. Level II students perform the following with assistance: Student will: • Given objects, sort into categories. EX: Given weather symbols, sort into categories. Level I students attempt to perform the following with assistance: Student will: • Add an object to similar collection. EX: From choice of two objects, eye gaze / touch the object that belongs to the collection on the desk.
MA.3.5.3 experiment and describe concepts of probability and chance and list possible outcomes from a sampling.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- demonstrate meanings of operations and how they relate to one another; and
- compute fluently and make reasonable estimates
- through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.1.1 read, write, order, and compare numbers to the millions place. MA.4.1.2 read, write, order, and compare decimals to thousandths with and without models and pictorial representations. MA.4.1.3 identify place value of each digit utilizing standard and expanded form through 1,000,000.	MA.4.1.ES.1 count and recognize two-digit whole numbers to twenty and halves as two equal parts.	MA.PD.4.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Recognize whole numbers greater than 20. EX: Looking through a book, identify the page numbers one to 20. • Identify two equal parts as the fractional part ½. EX: Given a piece of paper, fold and cut in ½ and label each piece as ½.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.1.4 estimate to nearer 10,000 using rounding, benchmarks, and compatible numbers and identify over and under estimates to determine reasonableness of an answer. MA.4.1.5 compare and order fractions with like and unlike denominators using pictorial representations. MA.4.1.7 recognize and model equivalent fractions using pictorial representations. MA.4.1.9 understand the relationship of fractions to decimals using concrete objects and pictorial representations. MA.4.1.10 round decimals to the nearest whole, 10^{th}, or 100^{th}.		Level III students perform the following without assistance: Student will: • Recognize two-digit whole numbers to 20. EX: Give corresponding card for the number. • Identify two equal parts as a whole. EX: Divide an object into two equal parts. EX: Color half a circle red and half green. Level II students perform the following with assistance: Student will: • Recognize whole numbers to ten. EX: Place the number of beans on the paper that corresponds to that number. • Recognize equal parts. EX: Given a group of manipulatives, divide into two equal groups. Level I students attempt to perform the following with assistance: Student will: • Identify a number from a non-number. EX: Shown an apple and a foam number, student will identify the number.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
MA.4.1.6	add and subtract fractions with like and unlike denominators using pictorial representations.	MA.4.1.ES.2 solve addition problems with sums to 19 and model subtraction.	MA.PD.4.1.ES.2 Level IV students perform the following complex tasks without assistance: Student will: • Solve addition problems with sums greater than twenty independently. EX: Correctly solve written addition problems. • Solve basic single-digit subtraction independently. EX: Correctly solve subtraction problems. Level III students perform the following without assistance: Student will: • Solve addition problems with sums to nineteen. EX: Shown addition flash cards, give answer. • Model subtraction problems with or without manipulatives. EX: Choose two gummy bears from a group of eight. State how many are left. Level II students perform the following with assistance: Student will: • Solve addition problems with sum of nine using manipulatives. EX: Given two groups of counters, add the two groups. • Compare two quantities as more or less. EX: Given two separate quantities, determine which is more or less.
MA.4.1.8	model addition and subtraction of mixed numbers without and with regrouping.		
MA.4.1.11	add and subtract decimals to the 1000^{th} place.		
MA.4.1.12	apply the distributive property of multiplication over addition.		
MA.4.1.13	memorize basic multiplication facts and corresponding division facts.		
MA.4.1.14	multiply 2-and 3-digit numbers by 1- and 2-digit numbers.		
MA.4.1.15	divide 2-and 3-digit numbers by 1-and 2-digit numbers.		
MA.4.1.16	apply the order of operations in solving problems.		
MA.4.1.17	solve grade level appropriate story problems using multiple strategies.		
MA.4.1.18	develop fluency in addition and subtraction of all whole numbers.		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Recognize one-to-one correspondence. EX: Given cards with two dots, place an object on each dot. • Give objects away as directed. EX: Hand pencil to teacher when asked.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.2.1 solve problems involving patterns. MA.4.2.3 understand the relationship between number patterns and multiples. MA.4.2.4 use patterns to predict the nth term. MA.4.2.5 represent the idea of a variable as an unknown quantity using a letter.	MA.4.2.ES.1 recognize and complete a three-object / item pattern.	MA.PD.4.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Predict and extend a pattern. EX: Predict next three objects in a continuing pattern. Level III students perform the following without assistance: Student will: • Recognize and complete a three-object / item pattern. EX: Using three colored blocks, extend pattern to the next 3 places. EX: Follow a daily lunch routine, by picking up fork, napkin, straw on a daily basis.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Duplicate a pattern. EX: Given a word card, match individual letters to copy word. EX: Given pre-printed shape pattern and shape cards, match individual shape in pattern – circle, square, circle, square, etc. EX: For a Mother's Day present make a necklace with beads as demonstrated by teacher. Level I students attempt to perform the following with assistance: Student will: • Identify items in a pattern. EX: Touch objects as teacher identifies them.
MA.4.2.2 use input/output model with grade appropriate functions.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.3.1 identify plane figures and their components. MA.4.3.2 compare and contrast quadrilateral shapes. MA.4.3.3 describe three-dimensional objects from different perspectives. MA.4.3.4 identify and draw intersecting, parallel, and perpendicular lines. MA.4.3.5 draw, label, compare, and classify acute, right, and obtuse angles. MA.4.3.6 draw a design with one line of symmetry. MA.4.3.8 draw and identify parts of a circle: center point, diameter, and radius.	MA.4.3.ES.1 identify and replicate basic geometric shapes including square, circle, triangle, and rectangle.	MA.PD.4.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Identify similarities and differences between geometric shapes. EX: When given two different shapes, determine how are they alike and different. EX: When given two different size of same shape, determine attributes that are the same (i.e., two rectangles that are different colors, size, but same shape).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Identify and replicate circle, square, rectangle, triangle. EX: Correctly name shape when shown an object, such as a quarter. EX: Participate in playing shape bingo by covering correct shape when called. EX: Given the shape, draw the shape. Level II students perform the following with assistance: Student will: • Recognize shapes circle, square, rectangle and triangle. EX: Name shapes on gym floor- circle, square. EX: Students will build a shape by pressing clay into a mold. EX: Show me the circle, square, etc. from two choices. Level I students attempt to perform the following with assistance: Student will: • Matching identical shapes of circle, square or triangle. EX: When given a shadow of a shape, put matching item over shadow. EX: Sort and trace shapes.
MA.4.3.7 graph/plot ordered pairs on a one-quadrant grid.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.4.1 estimate, measure, compare, order and draw lengths using customary and metric units. MA.4.4.4 understand appropriate grade level conversions within a system of measure. MA.4.4.5 read scales of weight, capacity, and temperature and select appropriate unit. MA.4.4.2 determine and compare areas of rectangles and squares by multiplying length and width.	MA.4.4.ES.1 recognize length as long/short, weight as heavy/light, and temperature as hot /cold.	MA.PD.4.4.ES.1 Level IV students perform the following complex task without assistance: Student will: • Compare length, mass temperature of objects. EX: Determine which object is the longest, i.e., ruler/yardstick. EX: Determine which object weighs more, i.e., apple/pumpkin. EX: Determine which object is the coldest, i.e., ice/coffee.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Recognize length as long/short, weight as heavy/light, and temperature as hot/cold. EX: Pick up piece if paper and indicate if it is heavy or light. EX: Look at a piece of yarn and indicate if it short or long. EX: Look at a picture of ice cream and indicate if it is hot or cold. Level II students perform the following with assistance: Student will: • Sort items by their length, and temperature. EX: Place all pictures of items that are hot in a pile. EX: Place all short items in a pile. Level I students attempt to perform the following with assistance: Student will: • Touch the picture of the item that is short, long, hot, cold. EX: Use object board, touch the picture of the cold item, etc.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.4.6 read time to the minute. MA.4.4.7 determine elapsed time in hours/ minutes within a 24-hour period.	MA.4.4.ES.2 recognize time in relationship to a daily schedule.	MA.PD.4.4.ES.2 Level IV students perform the following complex tasks without assistance: Student will: • Indicate time to the hour when presented with two clocks. EX: When shown two clocks, touch the clock that reads five o'clock, etc. • When shown a digital or analog clock, indicate time to the hour. Ex: Complete paper and pencil activities filling in time or drawing hands on clock. Level III students perform the following without assistance: Student will: • Recognize time in relationship to a daily schedule. EX: When asked what five o'clock is, indicate dinnertime. EX: When asked what three o' clock is, indicate time to go home. Level II students perform the following with assistance: Student will: • Show appropriate action at a specific time, when associated with a timer. EX: Change learning station when timer goes off.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Associate an object with a scheduled activity. EX: Given a spoon and a ball, indicate which means gym. EX: Place object in "Finish" box when completed.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.4.8 count coins and bills and determine correct change.	MA.4.4.ES.3 identify values of coins.	MA.PD.4.4.ES.3 Level IV students perform the following complex task without assistance: Student will: • Identify mixed coins by values. EX: Given pile of mixed coins, find the coins said by picking it up and then indicate its value. Level III students perform the following without assistance: Student will: • Identify values of coins. EX: When shown a penny, indicate it is worth one cent; nickel /five cents. Level II students perform the following with assistance: Student will: • Match coin to its value. EX: Given a value cards, place the correct coin on its card. Level I students attempt to perform the following with assistance: Student will: • Place coins into correct value container. EX: Pick up penny and drop into the one-cent can, etc.
MA.4.4.3 discover through modeling the formula for volume of a rectangular prism.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.4.5.1 understand and reason about the use and misuse of statistics in our society. MA.4.5.2 read and interpret information represented on a circle graph. MA.4.5.3 collect, organize, display, read and interpret data from a problem solving situation in line graphs, bar graphs, tally charts and tables with scale increments greater than one. MA.4.5.4 list all possible outcomes for an experiment using a tree diagram. MA.4.5.5 determine mean, median, mode and range from collected data.	MA.4.5.ES.1 develop and interpret picture or object graphs.	MA.PD.4.5.ES.1 Level IV students perform the following complex task without assistance: Student will: • Develop and interpret graphs using words and numbers. EX: Record daily temperature on a chart. EX: Record data from interview questions, answer questions about graph, complete fill-in statement about graph (more girls or boys like to eat ice cream). Level III students perform the following without assistance: Student will: • Develop and interpret graphs using objects or pictures. Ex: Track daily weather using pictures and identify weather patterns. EX: Answer simple questions about graphs. (How many sunny days?).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Fill in appropriate areas of graph. EX: Place picture, sticker, or color in area of graph. Ex: Place picture of cold weather in cold weather column. EX: Color in appropriate square to indicate today's weather. Level I students attempt to perform the following with assistance: Student will: • Identify items to be graphed. Ex: Select dictated picture to complete graph.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- Demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- Demonstrate meaning of operations and how they relate to one another; and
- Compute fluently and make reasonable estimates through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: Students will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.1.1 read, write, order and compare all whole numbers. MA.5.1.2 read, write, order and compare all decimals. MA.5.1.3 identify place value of each digit utilizing standard and expanded form in any whole number. MA.5.1.4 estimate with whole numbers and decimals, including money, to determine reasonableness of an answer. MA.5.1.6 compare and order fractions, improper fractions and mixed numbers with like and unlike denominators (e.g., greatest common factor, lowest common multiple).	MA.5.1.ES.1 recognize two-digit whole numbers to 40 and the fractional part ½.	MA.PD.5.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Identify fractional parts ⅓ and ¼. EX: Color a fractional part of a diagram. • Recognize two-digit numbers to 50. EX: Read numbers from computer. Level III students perform the following without assistance: Student will: • Recognize two-digit whole numbers to 40. EX: Use flashcards to read numbers. • Identify the fractional part ½. EX: Cover one-half of a whole using manipulatives.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.1.7 model and write equivalencies of fractions, decimals, percents, and ratios. MA.5.1.8 add and subtract fractions and mixed numbers.		Level II students perform the following with assistance: Student will: • Recognize two-digit numbers to 30. EX: Point to number on a calendar. • Identify that two equal parts make a whole. EX: Given two half circles, when put together, it makes a whole. Level I students attempt to perform the following with assistance: Student will: • Match single-digit numbers to five. EX: Given a number, find its match located in the room. • Identify a picture as complete. EX: Point to the picture that is a whole.
MA.5.1.5 identify and use the divisibility rules of 2, 3, 5, 9 and 10. MA.5.1.9 model multiplication and division of fractions to solve the algorithm. MA.5.1.10 model multiplication of decimals and division of decimals by a whole number divisor. MA.5.1.11 develop fluency in addition, subtraction, multiplication and division of whole numbers. MA.5.1.12 solve grade level appropriate story problems using multiple strategies.	MA.5.1.ES.2 solve double-digit addition without regrouping and single-digit subtraction.	MA.PD.5.1.ES.2 Level IV students perform the following complex tasks without assistance: Student will: • Solve double-digit addition with regrouping. EX: Use paper and pencil calculations. • Subtract two-digit numbers. EX: Use a calculator to solve two-digit subtraction. Level III students perform the following without assistance: Student will: • Solve double-digit addition without regrouping. EX: Use paper and pencil calculations • Subtract single-digit numbers. EX: Use an abacus to subtract three from eight.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Solve single-digit addition without regrouping EX: Using manipulatives solve one-digit addition problems. • Model single-digit subtraction. EX: Take one object away from a set. Level I students attempt to perform the following with assistance: Student will: • Model one more and one less. EX: Add one more to a set of objects; take one away from a set of objects.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.
-

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.2.1 explore a variety of patterns with missing elements (e.g., square numbers, powers, triangular numbers, arithmetic sequences). MA.5.2.3 write an equation using a variable to solve problems. MA.5.2.4 evaluate an expression given a value for the variable.	MA.5.2.ES.1 recognize and complete a four-object/step pattern.	MA.PD.5.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Extend a pattern. EX: Given a pattern, add an item to enlarge the pattern. EX: Use M&M's (candy) and put in rows of four colors.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Complete a four-step pattern. EX: Following pattern of music, clap, stomp, jump, tap as directed. • Describe a four-object / step pattern. EX: Verbally identify each object in a continuing pattern by its attributes. EX: Using a communication talker, push matching pattern. Level II students perform the following with assistance: Student will: • Follow a pictorial pattern. EX: Follow daily routine by using pictures of everyday schedule. Level I students attempt to perform the following with assistance: Student will: • Continue a pattern based on a single attribute such as color, shape or rhythm. EX: Given an object on table, lay down matching object from choice of two.
MA.5.2.2 use input/output model with grade appropriate functions.	(This objective is not developmentally appropriate for this population.)	

GRADE FIVE EXTENTED MATHEMATICS
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.3.1 classify and compare polygons. MA.5.3.2 construct a 3-dimensional figure from different views (orthogonal drawings). MA.5.3.3 measure angles using a protractor. MA.5.3.5 recognize the images of figures after reflections, translations and rotations. MA.5.3.6 draw a similar figure using a scale.	MA.5.3.ES.1 match three-dimensional objects (cube, sphere, pyramid) to their corresponding plane shapes (square, circle, triangle).	MA.PD.5.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Describe the attributes of plane and three-dimensional shapes. EX: Count the number of points on a given shape. Level III students perform the following without assistance: Student will: • Match three-dimensional shapes to their corresponding plane shape. EX: Shown a square, place cube with it. EX: Given a circle, pick out sphere.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Sort three-dimensional plane shapes. EX: Given a pile of three-dimensional and plane shapes, sort plane from three-dimensional. EX: Put shapes in brown bag. Reach in and name shape being pulled out as three-dimensional or plane. Level I students attempt to perform the following with assistance: Student will: • Recognize geometric shapes as plane or three-dimensional. EX: Teacher will ask to show me the three-dimensional shapes.
MA.5.3.4 draw a design with more than one line of symmetry.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.4.1 estimate, measure, compare, order and draw lengths of real objects in parts of an inch up to 1/8 of an inch and millimeters. MA.5.4.2 determine and compare area of triangles and parallelograms using appropriate formula solving situations. MA.5.4.5 understand appropriate grade level conversions within a system of measure and apply to problem MA.5.4.6 evaluate and/or measure the weight/mass of real objects in ounces, pounds, tons, grams, and kilograms. MA.5.4.8 select appropriate customary and metric units and the tools for measuring to desired degree of precision.	MA.5.4.ES.1 measure length and weight using nonstandard forms of measurement (i.e. paperclips, counting bears).	MA.PD.5.4.ES.1 Level IV students perform the following complex task without assistance: Student will: • Use actual device to measure given items. EX: Use a ruler to measure the length of an object to an inch. EX: Use a scale to measure the weight in pounds. Level III students perform the following without assistance: Student will: • Measure length and weight using nonstandard forms of measurement (paperclips, counting bears, etc.). EX: Use paperclips to measure the length of a book and then count number of paperclips. EX: Use a scale/balance to determine which is heavier.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.4.9 determine actual measurement from scale drawings. MA.5.4.4 understand the relationship between area and perimeter of a plane figure.		Level II students perform the following with assistance: Student will: • Determine longer/shorter or heavier/lighter using nonstandard forms of measurement. EX: Using teddy bear counters, place in a straight line to cover the length of two pieces of paper. Select the longer one. EX: Pick up the heavier object from the choice of two. Level I students attempt to perform the following with assistance: Student will: • Position items for measurement. EX: Place objects in a line on a felt board.
MA.5.4.7 calculate elapsed time.	MA.5.4.ES.2 identify time to the hour.	MA.PD.5.4.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify time to the half hour. EX: Given a clock place the hands to read a specified half hour time. Level III students perform the following without assistance: Student will: • Identify time to the hour. EX: Given an hour time card, move the clock hands to the specified hour. EX: Given a clock face draw the hour said.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Match the clock to the hour. EX: Match clock picture to the hour card. Level I students attempt to perform the following with assistance: Student will: • Manipulate a clock. EX: Move the clock hands to different positions.
MA.5.4.3 solve problems using the formulas for determining volume of a rectangular prism.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.5.5.1 collect, organize, display, read and interpret data from a problem-solving situation in a stem and leaf plot. MA.5.5.2 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. MA.5.5.3 construct, read, and interpret tables, charts, and graphs to draw reasonable inferences or verify predictions. MA.5.5.5 construct a circle graph.	MA.5.5.ES.1 develop bar graphs and interpret data.	MA.PD.5.5.ES.1 Level IV students perform the following complex task without assistance: Student will: • Interpret data from a bar graph containing multiple bars. EX: Use a bar graph and determine which graph is the most and least, out of three or more bars. Level III students perform the following without assistance: Student will: • Develop bar graphs and interpret data. EX: Given data, color in a bar graph. EX: Given a completed bar graph, compare value of data.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Copy a bar graph. EX: Using manipulatives (M&M, post-it-notes), replicate a model of a bar graph. Level I students attempt to perform the following with assistance: Student will: • Recognize a paper graph from two items. EX: Given two pieces of paper, select the one showing the graph.
MA.5.5.4 carry out experiments to determine probability.	(This objective is not developmentally appropriate for this population).	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- Demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- Demonstrate meaning of operations and how they relate to one another; and
- Compute fluently and make reasonable estimates through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: Students will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.1.1 read, write, order, and compare numbers using scientific notation. MA.6.1.2 identify prime and composite numbers up to 100. MA.6.1.4 identify and represent integers on a number line	MA.6.1.ES.1 recognize whole numbers to 60 and fractional parts ¼ and ⅓.	MA.PD.6.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Connect numerals to number words. EX: Write (stamp) numbers 1 – 10 under the word for the same number. • Recognize that ⅓ is more than ¼. EX: Given a diagram representing ⅓ and ¼, identify which is more.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Recognize numbers one – 60. EX: Using flashcards, recognize number displayed. • Assign numbers one – 60 to corresponding set of objects. EX: Show a set of objects, label with corresponding numbers. • Identify the fractional part ¼ and ⅓. EX: Cover one-forth of a whole and one-third of a whole using manipulatives. Level II students perform the following with assistance: Student will: • Compare two quantities of objects. EX: Given two sets of objects determine which is more or less or if they are equal. • Identify that ¼ and ⅓ are less than a whole. EX: Given one cup of milk, pour into four ¼ and/or three ⅓ measuring cups. Level I students attempt to perform the following with assistance: Student will: • Count with one-to-one correspondence. EX: Pass out materials for class. • Identify ¼ of a whole. EX: Given a picture of a pizza divided into fourths, select ¼ as directed.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.1.3 use prime factorization to determine the greatest common factor and least common multiple. MA.6.1.5 use estimation to solve problems with whole numbers, fractions, and decimals. MA.6.1.6 solve problems in context involving addition, subtraction, multiplication, and division of whole numbers, fractions, mixed numbers and decimals. MA.6.1.8 convert between fractions, mixed numbers, decimals and percents. MA.6.1.9 find the percent of a number.	MA.6.1.ES.2 solve two-digit numbers addition with and without regrouping and two-digit subtraction without regrouping.	MA.PD.6.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Apply addition and subtraction to solve real world problems. EX: Determine total cost of snacks from a vending machine. EX: Given a specific amount of money, determine which snacks that can be purchased. Level III students perform the following without assistance: Student will: • Add two-digit numbers with and without regrouping. EX: Work problems on a worksheet. • Subtract two-digit numbers without regrouping. EX: Solve problems on a worksheet. Level II students perform the following with assistance: Student will: • Model addition and subtraction problems using single-digit numbers. EX: Use manipulatives to model basic addition and subtraction facts using single-digit numbers. Level I students attempt to perform the following with assistance: Student will: • Identify the number from a set of unrelated objects. EX: Given three objects and a foam numeral, identify the number from among other choices.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.1.7 identify, demonstrate, and apply the distributive, commutative, associative and identity properties.	(This objective is not developmentally appropriate for this population.)	

GRADE SIX EXTENDED MATHEMATICS
CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.2.1 simplify numerical expressions using order of operations. MA.6.2.2 identify missing elements in arithmetic and geometric patterns. MA.6.2.3 explore a variety of patterns, including perfect squares, square roots and exponents. MA.6.2.4 use input/output models and spreadsheets to evaluate functions. MA.6.2.5 solve a proportion using cross multiplication. MA.6.2.6 identify like terms and monomials. MA.6.2.7 model addition, subtraction, multiplication and division of integers.	MA.6.2.ES.1 recognize and complete a pattern.	MA.PD.6.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Complete patterns by shapes/colors/numbers, more than 1 item in a pattern. EX: Use colors to create pattern. EX: Use shapes (circle, square, triangle) to create pattern. Level III students perform the following without assistance: Student will: • Recognize and complete a pattern. EX: Count by rote by ten's. EX: Group objects by ten's. EX: Complete a pattern by shapes and color.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.2.9 use variables to represent and solve real world problems appropriate for the 6th grade using multiple strategies.		Level II students perform the following with assistance: Student will: • Follow a pictorial/geometric pattern. EX: Using parquetry blocks, imitate a pattern provided by the teacher. • Continue a pattern. EX: Given an arrangement of manipulatives continue the pattern. Level I students attempt to perform the following with assistance: Student will: • Given a pattern, replicate/copy the pattern. EX: Match objects to a given pattern.
MA.6.2.8 locate and plot points within the four quadrants.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.3.1 classify lines as parallel, intersecting, perpendicular or skew. MA.6.3.2 determine the sum of measures of angles in polygons. MA.6.3.3 bisect a line segment using a compass and straightedge MA.6.3.4 draw an angle of a given measure. MA.6.3.6 define and sketch similar and congruent plane geometric figures.	MA.6.3.ES.1 recognize and replicate right angles.	MA.PD.6.3.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Select pictorial representations of objects with right angles. EX: Find pictures in a magazine that have right angles. • Draw a right angle. EX: Given draft paper, draw a right angle. Level III students perform the following without assistance: Student will: • Recognize and replicate right angles. EX: Identify right angles in the environment. EX: When given a set of objects, sort into right angles and non-right angles. EX: Replicate a right angle by using a piece of string.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Given two items, select the one with a angle. EX: Given a ball and a book, identify the book as having angles. • Trace a right angle. EX: Given a model of a right angle, trace the angle with a finger, crayon, or other writing tool. Level I students attempt to perform the following with assistance: Student will: • Match three-dimensional shapes. EX: Given a set of blocks match similar shapes.
MA.6.3.5 identify line symmetry and rotational symmetry in plane figures.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.4.2 apply formulas to determine perimeter, circumference and/or area of plane figures including compound figures. MA.6.4.4 investigate and model volume and surface area.	MA.6.4.ES.1 determine perimeter or area of an object.	MA.PD.6.4.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Find the area of a figure by multiplying its length by its width. EX: Measure the length and width of a table and multiply to find the area. • Determine and measure the perimeter of a rectangle. EX: Measure length and width of classroom and find perimeter. Level III students perform the following without assistance: Student will: • Find the perimeter or area for an object using nonstandard measurements. EX: Using graph paper, sketch polygon around word, count # of squares around figure, count squares inside figure.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Given a object with squares, count the squares for area or perimeter. EX: Count the floor tiles in a given area. Level I students attempt to perform the following with assistance: Student will: • Color within the lines of a polygon. EX: The student will color in various polygon shapes.
MA.6.4.5 select appropriate units and determine length, weight/mass and capacity/volume using metric and customary systems. MA.6.4.6 construct scale drawings.	MA.6.4.ES.2 use a ruler to measure length in inches.	MA.PD.6.4.ES.2 Level IV students perform the following complex task without assistance: Student will: • Measure real world objects with an inch ruler. EX: Use a ruler to measure objects in the environment. Level III students perform the following without assistance: Student will: • Use a ruler to measure length in inches. EX: Arrange 1 inch blocks in a row. Then measure with an inch ruler to determine length. Level II students perform the following with assistance: Student will: • Sort by length. EX: Arrange classmates in order from shortest to tallest.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Identify a ruler from a non-ruler. EX: Given two objects, choose the ruler.
MA.6.4.3 understand the appropriate grade level conversions. MA.6.4.5 select appropriate units and determine length, weight/mass and capacity/volume using metric and customary systems.	MA.6.4.ES.3 tell time to the half hour.	MA.PD.6.4.ES.3 Level IV students perform the following complex task without assistance: Student will: • Tell time to five-minute intervals. EX: Read a clock to 5 minutes intervals. Level III students perform the following without assistance: Student will: • Tell time to the half hour. EX: Read a clock to 30 minutes intervals. Level II students perform the following with assistance: Student will: • Tell time to the hour. EX: Read a clock to the hour. Level I students attempt to perform the following with assistance: Student will: • Identify a clock. EX: Given a clock and another item student will point, touch, or name a clock.
MA.6.4.1 derive approximation for pi using actual measurements.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.6.5.1 collect, organize, display, and read data using appropriate graphs and tables. MA.6.5.2 interpret data using mean, median, mode, and range. MA.6.5.3 determine the probability of a given event and express that probability as a ratio, decimal or percent.	MA.6.5.ES.1 collect, display and read data using appropriate graphs (pictorial, bar and line graphs).	MA.PD.6.5.ES.1 Level IV students perform the following complex task without assistance: Student will: • Interpret graphs. EX: Given a graph from a newspaper or magazine interpret information. Level III students perform the following without assistance: Student will: • Collect, display and read data using appropriate graphs (pictorial, bar and line graphs). EX: Conduct a simple survey. (What is your favorite candy?) Record data. Create a bar graph. Compare findings-most, least, equal.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Fill in bars on a graph. EX: Given a piece of one inch grid paper, color in a specified number of squares. Level I students attempt to perform the following with assistance: Student will: • Identify a bar graph. EX: When given a choice between two objects, choose a graph.
MA.6.5.4 determine combinations, permutations and probability using sample spaces (by listing and tree diagrams).	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- Demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- Demonstrate meaning of operations and how they relate to one another; and
- Compute fluently and make reasonable estimates through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: Students will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.1.1 compare and order integers, decimals, and fractions using symbols (<,>,=) manipulatives and graphing on a number line. MA.7.1.4 recognize and write rational numbers in the form a/b. MA.7.1.7 solve application problems with whole numbers, decimals, fractions and percents.	MA.7.1.ES.1 recognize whole numbers to 100 and the difference among ½, ¼, and ⅓.	MA.PD.7.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Write numbers up to 20. EX: Using pencil and paper or stamps "write" the numbers 1 – 20. • Recognize ½ as greater than ⅓ and ⅓ as greater than ¼. EX: Given three flashcards with ½, ⅓, and ¼, place in order from greatest to smallest.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Recognize numbers up to 100. Recognize whole numbers 1 to 100 and the difference among ½, ¼, and ⅓. EX: Using flash cards, recognize the number. • Assign a number 1 – 100 to a correct value. EX: Count number of erasers in a container and select correct number. EX: Use number line to plot whole numbers. EX: Given the number, place point on number line. • Match fractions (½, ⅓, and ¼) with corresponding picture or object. EX: Given diagrams depicting ½, ⅓, and ¼, match with corresponding flashcards. Level II students perform the following with assistance: Student will: • Recognize numbers to 20. EX: Given a number, identify using flashcards. • Identify whole numbers on a number line EX: Identify where a particular point is located. • Identify ½ as one of two parts, ⅓ as one of three parts and ¼ as one of four parts. EX: Using manipulatives, separate an object into two equal parts, three equal parts and four equal parts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Point to a given point on a number line. EX: Match number cards to number on the number line and point to the number. • Select ½ of a picture or object representation EX: Given a picture or object depicting ½, select the fractional part as directed.
MA.7.1.2 find powers, squares, and square roots using manipulatives, models, calculators, tables and mental math. MA.7.1.3 define absolute value and determine its effect on a number or expression. MA.7.1.5 perform operations with integers (e.g., addition, subtraction, multiplication, division). MA.7.1.6 apply the commutative, associative, distributive, identity and inverse properties. MA.7.1.8 use appropriate estimation strategies in problem situations including evaluating the reasonableness of a solution.	MA.7.1.ES.2 solve two-digit addition and subtract with and without regrouping and single-digit multiplication.	MA.PD.7.1.ES.2 Level IV students perform the following complex tasks without assistance: Student will: • Demonstrate the concept of multiplication. EX: 4 x 4 = 4 + 4+ 4+ 4. • Use more that one operation (add, subtract, multiply) to solve practical problems. EX: If you purchase two drinks at 2 drinks at $1.00 each and 3 chips at $.70 each, what is your change, if you pay with a $5.00. Level III students perform the following without assistance: Student will: • Multiply single-digit numbers. EX: 3 x 5 = 15. EX: Using blocks, grid paper, build rectangular by arranging blocks. EX: Complete worksheets. • Use addition and subtraction to solve an application problem. EX: "If you have $10 and you buy item for $6, what is the change?" EX: Use blocks or objects to represent the problem or solution.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Multiply single-digits up to 5. EX: Using blocks, grid paper, build rectangle by arranging blocks (4 x 2). • Recognize and indicate whether items are added or subtracted from group. EX: Given four items, remove two items when instructed. EX: Given eight items, add 3 items when instructed. Level I students attempt to perform the following with assistance: Student will: • Multiply 1 and 2. EX: Using blocks, show 1 x 2 and 2 x 2. • Recognize that when items are added to or subtracted from the results is more or less. EX: Given four items, indicate whether the result is more or less after two are removed. EX: Given two items, indicate whether the result is more or less when one item is added.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.2.1 find missing elements in a variety of arithmetic and geometric patterns including algebraic sequences and series. MA.7.2.2 simplify and evaluate numerical and algebraic expressions with whole numbers, integers, absolute value and exponents using the order of operations and exponential rules. MA.7.2.3 add, subtract, multiply and divide monomials with no more than two variables and no exponent greater than two.	MA.7.2.ES.1 recognize and complete a counting pattern.	MA.PD.7.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Predict a pattern. EX: Given a specific day, predict the next day in a month. EX: Given a schedule, predict what activity comes next. Level III students perform the following without assistance: Student will: • Recognize and complete a counting pattern. EX: Count by two's, five's and ten's. EX: Use manipulatives to model counting by two's, five's or ten's.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.2.4 find and use the Greatest Common Factor (GCF) and Least Common Multiple (LCM) of a set of monomials or algebraic fractions using prime factorization and exponent rules. MA.7.2.5 input data into a spreadsheet to create input/output function tables.		Level II students perform the following with assistance: Student will: • Sort, manipulate, and group by number values. EX: Place items in groups of two's, five's ten's. Level I students attempt to perform the following with assistance: Student will: • Group like colors and shapes. EX: Use blocks, color cards, squares, circles, etc.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.2.6 use ratios and proportions to represent and solve application problems. MA.7.2.7 write and evaluate complex algebraic expressions for word phrases. MA.7.2.8 use and apply scientific notation containing positive and negative exponents. MA.7.2.9 solve one-step linear equations containing whole numbers, fractions, decimals and integers with integer solutions. MA.7.2.10 solve basic inequalities using inverse operations and graph solutions. MA.7.2.13 represent and solve real world problems appropriate for 7th grade using multiple strategies.	MA.7.2.ES.2 given two whole numbers identify which is greater than/less than.	MA.PD.7.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Represent an inequality. EX: Represent five is greater than three using blocks, grid paper, objects and worksheets. Level III students perform the following without assistance: Student will: • Given two whole numbers which is greater or less than. EX: Given two partial items (glass that is ½ , ⅓ full), indicate which is greater or less. Level II students perform the following with assistance: Student will: • Given groups of items, indicate which is more. EX: Using two blocks and three blocks, indicate which is greater. EX: Using four pretzels and one pretzel, indicate which is greater. Level I students attempt to perform the following with assistance: Student will: • Given a whole item and a partial item, indicate which is bigger. EX: Use whole cookie, partial cookie, whole paper, partial paper, etc.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.2.11 plot lines within the Cartesian coordinate plane from a table of values. MA.7.2.12 determine the slope of a line from its graphical representation.	(These objectives are not developmentally appropriate for this population.)	

CONTENT STANDARDS AN PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.3.1 identify and construct angle-pairs (e.g., adjacent, complementary, supplementary, vertical). MA.7.3.2 use a formula to determine the sum of the measures of the interior angles of a polygon. MA.7.3.3 use 2-dimensional representations of 3-dimensional objects to visualize and solve problems. MA.7.3.4 identify and construct congruent segments and angles, perpendicular bisectors of segments and angle-bisectors. MA.7.3.5 apply and demonstrate line symmetry. MA.7.3.6 apply transformations (rotations, reflections, translations) to plane figures using graph paper.	MA.7.3.ES.1 recognize and replicate angles: right, acute, obtuse.	MA.PD.7.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • Identify and locate different angles in this classroom. EX: Find and name the different angles in the classroom (corner blocks, doorframes, tables, windows). Level III students perform the following without assistance: Student will: • Recognize and replicate different types of angles: right, acute, and obtuse. EX: Use manipulation to represent the angles (e.g., Geoboard, sand, shaving cream, grid paper).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.3.7 solve ratio and proportion problems including scale drawings and similar polygons.		Level II students perform the following with assistance: Student will: • Identify a specified angle on a familiar object. EX: Trace the angle on tangible items: corner of book/angle copied on paper. Level I students attempt to perform the following with assistance: Student will: • Duplicate an angle. EX: Complete shapes, trace angles.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.4.1 use and apply formulas in problem solving situations involving perimeter, circumference, area, surface area, distance and temperature (Celsius, Fahrenheit). MA.7.4.2 use the concept of volume for prisms, pyramids, and cylinders as the relationship between the area of the base and height. MA.7.4.3 use the Pythagorean Theorem to find the length of any side of a right triangle.	MA.7.4.ES.1 determine the volume of an object using non-standard measurement.	MA.PD.7.4.ES.1 Level IV students perform the following complex task without assistance: Student will: • Predict volume. EX: Predict the number of objects that can fit in a given container and test. Level III students perform the following without assistance: Student will: • Determine the volume of a given object using non-standard measurement. EX: Given a set of blocks and 2 containers of differing sizes, select the appropriate container. EX: Given a rectangular box, determine how many blocks it can hold. EX: How many cups does it take to fill a bucket?

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Determine capacity: more or less. EX: Given two containers, determine which will hold more. Level I students attempt to perform the following with assistance: Student will: • Place objects in containers. EX: Manipulate objects to fill containers of varying sizes.
MA.7.4.4 convert units of measurement within and between customary and metric systems.	MA.7.4.ES.2 measure length with a customary ruler and yardstick.	MA.PD.7.4.ES.2 Level IV students perform the following complex task without assistance: Student will: • Select which item for measuring is more appropriate when measuring an object. EX: Given an object student will state whether a ruler or yardstick would be used to measure object. Level III students perform the following without assistance: Student will: • Use a ruler or yardstick to measure length. EX: Measure line or object to nearest inch. Level II students perform the following with assistance: Student will: • Identify a ruler and a yardstick. EX: Given a ruler, a yardstick and two unrelated items, identify the yardstick and the ruler.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Identify a ruler. EX: Given a ruler and an unrelated item, identify the ruler.
MA.7.4.4 convert units of measurement within and between customary and metric systems.	MA.7.4.ES.3 tell time to the nearest five-minute intervals.	MA.PD.7.4.ES.3 Level IV students perform the following complex task without assistance: Student will: • Identify time to the nearest 15 minute intervals. EX: Given a clock, indicate the specified time (e.g., 5:15; 10:30; 1:45). EX: Manipulate the hands of the clock to indicate a specified time. EX: Sketch hands of a clock on a worksheet to indicate a specified time. Level III students perform the following without assistance: Student will: • Tell time to the nearest five minute intervals. EX: Given a clock, indicate the specified time (e.g., 5:05; 10:35; 1:45). EX: Manipulate the hands of the clock to indicate a specified time. EX: Sketch hands of a clock on a worksheet to indicate a specified time.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Identify time in the hour and half-hour intervals. EX: Given a clock, indicate the specified time (e.g., 5:00; 10:30; 1:00). EX: Manipulate the hands of the clock to indicate a specified time to the hour and the half hour. EX: Sketch hands of a clock on a worksheet to indicate a specified time. Level I students attempt to perform the following with assistance: Student will: • Identify time in hour intervals. EX: Given a clock, indicate the specified time (e.g., 4:00; 10:00; 3:00). EX: Manipulate the hands of the clock to indicate a specified time to the hour. EX: Sketch hands of a clock on a worksheet to indicate a specified time.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.7.5.2 construct sample spaces by listing, tree diagrams, and frequency distribution tables to determine combinations and permutations. MA.7.5.3 collect, organize, graphically represent, and interpret data displays including: frequency distributions, line-plots, scatter plots, box and whiskers, and multiple-line graphs. MA.7.5.4 solve application problems involving measures of central tendency (mean, median, mode) and dispersion (range) from data, graphs, tables, and experiments using appropriate technology.	MA.7.5.ES.1 organize given data by category, frequency, and range.	MA.PD.7.5.ES.1 Level IV students perform the following complex task without assistance: Student will: • Given data, categorize it, determine frequency of occurrence for each category, and organize by range. EX: Given pictures of fall, winter, spring, and summer, categorize pictures to determine the number for each season, and arrange to form a bar graph from fewest to most. Level III students perform the following without assistance: Student will: • Given data, organize into frequency of occurrence and range. EX: Given two-weeks of temperatures, organize by category of weather, how often of each type of weather occurs and from high to low.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Given a category, identify items that belong in the category. EX: Give the student the category, find items or objects from magazines, flashcards, pictures, books, etc. Level I students attempt to perform the following with assistance: Student will: • Identify objects in a category. EX: Identify forks, spoons, identify seasons and colors, etc.
MA.7.5.1 determine experimental and theoretical probability of an event using appropriate technology.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- Demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- Demonstrate meaning of operations and how they relate to one another; and
- Compute fluently and make reasonable estimates through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: Students will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.1.1 compare and order rational and irrational numbers. MA.8.1.2 utilize the properties of terminating, repeating, and non-repeating decimals, and conversions between fractions, mixed numbers, and decimals.	MA.8.1.ES.1 recognize numbers to 100 including fractional halves, fourths, tenths and their decimals.	MA.PD.8.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Recognize numbers through 100 and match them with their word name. EX: Using flash cards, match numbers with their word name. • Count groups of 10s to 100. EX: Given a group of objects, which are divisible by 10, student will sort them into groups of 10s and count. • Recognize decimal, fraction, percent equivalences. (½, ¼, 1/10). EX: Given flash cards, group the equivalent numbers together (e.g. ½, 0.5, 50% or ½ and ½ = $0.50).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Recognize numbers up to 100. EX: Using flashcards, name the number. • Use a 100s chart, counts by 10s to 100. EX: Given a 100s chart, highlight the multiples of 10 then count to 100. • Recognize decimal and fraction equivalences. (½, ¼, 1/10). EX: Given flash cards, group the equivalent numbers together (e.g. ½ = $0.50). Level II students perform the following with assistance: • Compare sets of objects to find more, less, equal. EX: Given two groups of paperclips, determine which group has more. • Recognize that 0.5 (½) is less than a whole. EX: Recognize that $0.50 is less that a dollar. • Recognize single-digit numbers and match them with the number word. EX: Using flash cards, match numbers with their word name. Level I students attempt to perform the following with assistance: Student will: • Identify numbers 1 - 5 with corresponding objects. EX: Using flash cards, match numbers with their word name. • Identify a part of an object versus a whole object. EX: Indicate the partial object (i.e., cookies) when asked.

West Virginia Extended Academic Content Standards and Performance Descriptors For Students with the Most Significant Cognitive Disabilities

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.1.4 use powers, squares, and square roots to solve problems. MA.8.1.5 use estimation techniques with whole numbers, decimals, percent, fractions and mixed numbers to solve and verify solutions in application problems. MA.8.1.6 solve application problems with whole numbers, decimals, fractions, percents and integers including, but not limited to, rates, tips, discounts, sales tax and interest. MA.8.1.7 develop computational strategies based on the commutative, associative, and identity properties with emphasis on the inverse and distributive properties.	MA.8.1.ES.2 apply various strategies and operations to solve practical problems involving whole numbers.	MA.PD.8.1.ES.2 Level IV students perform the following complex task without assistance: Student will: • Choose the correct operation for a given problem. EX: Eight servings are in a box but only four servings are needed. Level III students perform the following without assistance: Student will: • Use various strategies and operations to solve problems involving real numbers. (addition, subtraction and multiplication). EX: Given a number between 1 and 25, use different combinations of numbers to represent the number (24 + 1, 25 – 1, 5 X 5, etc.). EX: Regroup 10 items into different sums (8 apples + 2 apples = 10 apples just as 7 apples + 3 apples = 10 apples). Level II students perform the following with assistance: Student will: • Combine items to create a specified number. EX: In the grocery store, select various fruits to equal ten. Level I students attempt to perform the following with assistance: Student will: • Match a number to a given set. EX: The number four to a set of four forks.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.1.3 extend scientific notation to numbers with a wide range of values using a calculator when appropriate.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.2.6 apply inductive and deductive reasoning to write a rule from data in a function table. MA.8.2.7 graph linear equations and inequalities within the Cartesian coordinate plane using ordered pairs table of values and appropriate technology. MA.8.2.8 formulate and apply a rule to generate arithmetic, geometric and algebraic pattern.	MA.8.2.ES.1 recognize and extend mathematical patterns.	MA.PD.8.2.ES.1 Level IV students perform the following complex task without assistance: Student will: • Extend a counting pattern. EX: Given a pattern of 20, 22, 24, 26,_?_. What fills in the blank? Level III students perform once in one setting without support the following: Student will: • Recognize and extend mathematical patterns. EX: Given three packs of gum containing five pieces in each, extend the pattern by adding packs containing equal numbers of pieces. EX: Given a pattern of two, four, six, eight,___. What fills in the blank?

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform without assistance the following: Student will: • Follow a counting pattern by counting two's, five's, ten's. EX: If you have two packs of gum with five pieces each, how many pieces of gum do you have? EX: Using a number line, starting with the number five, add five and give the next number. Level I students attempt to perform the following with assistance: Student will: • Follow a counting pattern. EX: Repeat a counting pattern stated by the teacher by counting two's to ten.
MA.8.2.1 use order-of-operations and exponents rules to solve problems with numerical and algebraic expressions containing whole numbers, integers, absolute value, fractions and exponents. MA.8.2.2 solve one and two step linear equations and inequalities with integers, fractions, and decimal solutions. MA.8.2.3 use ratio and proportion to create and solve equations.	MA.8.2.ES.2 given fractions one-half, one third, one-fourth, and decimal .5, .25, .75 identify which is greater than/less than.	MA.PD.8.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Demonstrate the concept of one-half, one third, and one-forth through daily activities and decimals .5, .25, .75 through provided coins. EX: Pass out ⅓ of the pencils and ½ of the stack of paper, and ¼ of the erasers. EX: Given a jar of coins select .5, .75, .25, which is more money?

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.2.10 represent and solve real world problems appropriate for eight-grade using multiple strategies.		Level III students perform the following without assistance: Student will: • Given fractions one-half, one third, one-fourth, and decimals .5, .25, .75 identify which is greater than/less than. EX: Represent ½ > ⅓ using blocks, grid paper, objects and worksheets and .5 < .75. Level II students perform the following with assistance: Student will: • Given fractional representation of two objects identify with is more. EX: Given ½ a stick of gum and ⅓ a stick, identify which is greater, which is less. Level I students attempt to perform the following with assistance: Student will: • Given a whole object and a partial object, identify which is "more than" which is "less than". EX: Given a whole sandwich and a half of a sandwich, which is more than/less than?
MA.8.2.4 add and subtract polynomials limited to two variables and positive exponents. MA.8.2.5 apply algebraic equations and expressions to solve application problems. MA.8.2.9 determine the slope of a line given two-points or slope/y-intercept equation (y=mx+b).	This objective is not developmentally appropriate for this population.	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.3.1 investigate the relationship between corresponding, alternate interior, and alternate exterior angles when parallel lines are cut by a transversal using models, pencil/paper and graphing calculator. MA.8.3.2 classify polyhedrons according to the number and shape of faces; determine the relationship between vertices, faces and edges. MA.8.3.3 identify, apply, and construct perpendicular and angle bisectors. MA.8.3.5 use coordinate geometry to represent and examine properties of similar and congruent figures and graph transformations.	MA.8.3.ES.1 identify angles and lines in the environment.	MA.PD.8.3.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Identify and locate different kinds of angles. EX: Find the different angles in the classroom (table, book, etc.). EX: Given a rectangle and a triangle, tell which figure has a right angle. EX: Identify the number of angles in a stop sign. • Identify parallel lines. EX: While walking in the community, indicate the streets that are parallel to a stated street.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Identify the angles of an object in the environment. EX: Tell which angles in the classroom are right angles (corners of the room, corner of a picture frame, bulletin board, etc.) • Identify lines. EX: Find examples of lines in the community. Level II students perform the following with assistance: • Assemble different kinds of angles. EX: Use manipulatives (e.g. Geoboard) to create angles. • Assemble lines. EX: Arrange erasers in lines. Level I students attempt to perform the following with assistance: Student will: • Recognize an angle. EX: Given a drawing or shape, student will point to an angle. • Recognize points. EX: Move to a specific location when directed (work station, restroom, lunchroom, etc.).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.3.4 create geometric patterns including tiling, art design, tessellations and scaling using transformations (rotations, reflections, translations). MA.8.3.6 create scale models including ratio, proportion and similar figures using pencil/paper and dynamic geometry software.	(These objectives are not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.4.1 estimate and solve application problems involving perimeter, area, surface area and volume of plane and solid geometric figures. MA.8.4.3 solve problems involving missing measurements in plane and solid geometric figures using formulas and drawings including irregular figures, models or definitions.	MA.8.4.ES.1 apply the concepts of area, perimeter and time to real-life situations.	MA.PD.8.4.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Determine and measure the perimeter of a rectangle. EX: Measure length and width of classroom and find perimeter. • Given the area formula, find the area of a figure. EX: A = s x s S = 3 in. A = l x w l = 2ft. w = 3 ft. • Identify and use the measurement tool needed to measure different lengths. EX: Select the tool needed to measure the classroom (ruler, meter or yard stick, tape measure, etc.). EX: Use the measure of time with clocks and calendars to manage daily life activities; show knowledge of scheduled times of daily events (lunch time, play time, toileting time).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • With or without a calculator, determine the perimeter and area of a rectangle. EX: A rectangular yard is 50 feet long and 30 feet wide, if you wanted to enclose the yard with fencing, how much fence would be needed? • Utilize the concept of time in real life. EX: Use a picture-symbol or written schedule to manage daily activities. Level II students perform the following with assistance: Student will: • Compare objects by linear features. EX: Stand back to back to determine who is taller. • Follow a daily schedule of two or more events. EX: Respond to directives of "snack time" or "time to go to P.E." Level I students attempt to perform the following with assistance: Student will: • Follow a daily schedule for a minimum of one activity. EX: Follow daily schedule established by the teacher in which there are specific lengths of time for each activity (e.g. meal time, toileting, PT exercises, independent work time).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.4.2 use the concept of volume for cone and pyramids as one-third the product of the area of the base and the height. MA.8.4.4 solve right triangle problems using the Pythagorean Theorem, indirect measurement and definitions.	(These objectives are not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.8.5.1 use appropriate technology to solve application problems involving combinations and permutations. MA.8.5.2 investigate the experimental and theoretical probability including compound probability of an event. MA.8.5.3 create and extrapolate information from multiple-bar graphs, box and whisker plots, and other data displays using appropriate technology. MA.8.5.4 analyze problem situations, games of chance, and consumer applications using statistical samplings to determine probability and make predictions.	MA.8.5.ES.1 solve problems to determine possible combinations.	MA.PD.8.5.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Make a graph from a survey. EX: Survey at least ten students and make a bar graph showing the results. • Make a prediction based on a real-life situation. EX: If the weatherman says 70% chance of rain, take a raincoat. EX: Use manipulatives to find combinations, then predict that an event will occur (e.g. predict that a blue shirt and red pants will be chosen).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Solve problems to determine possible combinations. EX: Use shirts and pants (no more than three of each) made of construction paper and pair them to show different combinations. EX: How many different dinner combinations can be made from three food groups? Level II students perform the following with assistance: Student will: • Make a prediction based on two choices. EX: Predict which colored blocks will be pulled out after teacher places a blue block and a red block in a container. EX: Having two choices of drinks, predict which will be chosen the most. Level I students attempt to perform the following with assistance: Student will: • Predict the effect of an action. EX: Touch the on "button" of a toy, anticipate what will happen.
MA.8.5.5 draw inferences and construct convincing arguments, including misuses of statistical or numeric information, based on data analysis.	(This objective is not developmentally appropriate for this population.)	

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 1: Number and Operations (MA.S.1)
Students will:

- Demonstrate understanding of numbers, ways of representing numbers, and relationships among numbers and number systems;
- Demonstrate meaning of operations and how they relate to one another; and
- Compute fluently and make reasonable estimates through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.
-

Essence of Standard: Students will demonstrate an understanding of numbers, meanings of operations, compute, and make reasonable estimates.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.1.1 solve computational and practical problems using properties of numbers, order of operation, computation, and estimation with decimals, fractions, integers, and mixed numbers, including ratio, proportion, and percents. (AM1.1, AGP.1, AGP.2, AGP.17) MA.10.1.2 write numbers involving scientific notation and combine numbers written in scientific notation to solve practical problems. (AM1.2) MA.10.1.3 estimate and simplify square roots into both exact and approximate forms. (AM1.14, A1.16)	MA.10.1.ES.1 solve problems with whole numbers, fractions and decimals.	MA.PD.10.1.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Chooses correct operations to solve application problems. EX: Determine amount of money need to purchase two items. EX: Determine how much money is needed to purchase more than two items. • Divide whole unit into equal portions. EX: Divide candy (M & Ms, Skittles) into equal parts for your group. EX: Given a pizza, divide it into equal parts for your group (fractional part not given). • Determine amount of dollars/change needed for a purchase. EX: Determine how much money is needed to purchase a drink or snack from a vending machine. EX: At various stores, determine if he/she has enough money to purchase an item. EX: Use next dollar strategy to make a purchase at various stores.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Calculate groups of numbers using four basic operations. EX: Complete worksheet of problems, (same operations moving to mixed operations). EX: Add and subtract money problems, (items on a menu, grocery items, etc.). EX: Make an inventory of items. • Divide a whole unit into ¼, ⅓, and ½. EX: Divide a whole item into parts according to direction. EX: Divide a whole cup of sugar into two (three, four) equal parts. • Find the value of a combination of coins/currency. EX: Count by nickels, dimes and quarters to one dollar. EX: Count mixed currency from $1.00 to $20.00. EX: Count money from a vending machine or cashier's money drawer.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Use manipulatives to add or subtract whole numbers up to twenty. EX: Using real items (make-up, earrings, CDs, candy bars), complete addition and subtraction problems. • Arrange parts to complete a whole. EX: Use a template to place parts on whole (slices on pizza). EX: Place parts (puzzle/picture divided into equal parts) together to make a whole without a template. • Identify name and value of money: coins – one, five, ten, and 25 cents and dollars - $1, $5, $10 and $20. EX: State name or point to name when shown sample. EX: Given money, indicate amount. EX: Given amount, indicate coin or dollar. EX: Given amount, indicate name of coin or dollar.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Given a quantity of objects, recognize when items are added or taken away. EX: Using piles of real items – candy, money, etc., add or subtract by one. EX: Increase number of items removed or added. • Differentiate between a whole unit and a fraction. EX: Whole cookie versus a part of a cookie. EX: Whole glass versus partly empty glass. • Differentiate between a coin and a non-coin. EX: Coin versus book (non-coin-like objects). EX: Poker chip versus coins (other coin-like objects).

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 2: Algebra (MA.S.2)
Students will:

- demonstrate understanding of patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships; and
- analyze change in various contexts through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand patterns and relations in numbers and able to analyze them in various contexts.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.2.1 define variables and solve multi-step linear equations and one-variable inequalities, interpret results on a number line and apply the skills toward solving practical problems. (AM1.10, AM1.11, AGP.18, A1.2, A1.3) MA.10.2.2 solve literal equations for a given variable and apply the skills toward solving practical problems. (AM1.8, A1.4) MA.10.2.3 solve practical problems using a four-step problem solving approach, justifying steps based on the properties of real numbers. (AM1.9, AM1.7)	MA.10.2.ES.1 solve problems using algebraic symbols (<, >, =).	MA.PD.10.2.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Find missing addends represented by **variables.** EX: Given practical problems, written out with a **variable** for the missing number, the student will solve for the variable (days to an event, how much more money is needed to buy an item). • Demonstrate the concepts of greater than, less than, and equal to when dealing with money. EX: Go to the grocery store determine if there is enough money or if the item will cost more than amount of money.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.2.4 evaluate and simplify algebraic expressions using • Grouping symbols; • Order of Operations; • Properties of real numbers with justification of steps; • Laws of Exponents. (AGP.17, AM1.5, AM1.15, A1.7) MA.10.2.5 solve absolute value equations in one variable and interpret the results on a number line. (AM1.12, A1.6) MA.10.2.9 factor and perform basic operations on simple polynomials. (AM2.7, AM2.8, AM2.9, A1.13, A1.14, A1.15)		Level III students perform without assistance the following Student will: • Find missing addends represented by a **box.** EX: Given practical problems written out with a **box** for the missing number the student will determine the missing number (days to an event, how much more money is needed to buy an item). • Use algebraic symbols (<, >, =) to compare two sets. EX: Recognize that a dime is less than a quarter; a nickel is less than a dime, etc. Level II students perform the following with assistance: Student will: • Identify a missing part in a sequence. EX: Given a (piecework) work task that requires the student to put something together, identify for the missing part. • Show "more than", "less than", "most", "least", "same". EX: Distinguish between two groups (objects, sports records, money). Level I students attempt to perform the following with assistance: Student will: • Identify a missing part. EX: Given a set of objects, indicate that an object is missing (utensils, shoes, socks, hearing aids). • Show "more than". EX: Look at two groups of items and indicate which group is more (food items, CDs, work related items).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.2.6 analyze a given set of data for the existence of a pattern numerically, algebraically, and graphically (AM2.1, A1.6). MA.10.2.7 determine the slope of a line given • an equation of a line; • the graph of a line; • two points to be identified. (AM2.2, A1.8) MA.10.2.8 write and graph linear equations. (AM2.3, AM2.4, A1.9, A1.10)	MA.10.2.ES.2 use a graph to represent relations in numbers.	MA.PD.10.2.ES.2 Level IV students perform the following complex task without assistance: Student will: • Identify the slope of a line graph (rising, falling, constant). EX: Given a line graph of temperature, the student will indicate the trend. Level III students perform the following without assistance: Student will: • Use a graph to represent relations in numbers. EX: Plot data on a line graph (earnings, weight, test scores). EX: Using pictorial models of thermometers marked with temperatures, student will connect temperature markings to form a line graph. EX: Plot information on bar graph. Level II students perform the following with assistance: Student will: • Model horizontal and vertical lines. EX: Using a game (Connect Four, checkers, chess), place same-colored pieces in a row to make a vertical or horizontal line. Level I students attempt to perform the following with assistance: Student will: • Recognize lines as going "up" or "across" (vertical/horizontal). EX: Touch a line as directed (up or across).

CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Math Content Standards and Objectives

Standard 3: Geometry (MA.S.3)
Students will:

- analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships,
- specify locations and describe spatial relationships using coordinate geometry and other representational systems,
- apply transformations and use symmetry to analyze mathematical situations, and
- solve problems using visualization, spatial reasoning, and geometric modeling through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will be able to understand geometric shapes, spatial relationships, and symmetry to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.3.1 use appropriate tools to make geometric constructions. (AGP.9) MA.10.3.2 identify angle relationships and apply in solving problems (complementary, supplementary, vertical and adjacent as well as relationships formed by parallel lines cut by a transversal). (AGP.13, AGP.14) MA.10.3.3 investigate similar figures and apply proportions in problem solving situations. (AGP.15) MA.10.3.4 explore circle relationships, emphasizing the vocabulary of circles. (AGP.16)	MA.10.3.ES.1 solve problems involving spatial relationships (geometric shapes, forms and figures, i.e., points, lines, angles, and shapes).	MA.PD.10.3.ES.1 Level IV students perform the following complex tasks without assistance: Student will: • Recognize and use lines in real-life situations. EX: Identify and follow boundary lines in community (bowling lanes, parking spaces, road lines, crosswalks, ticket lines, etc.). • Use lines and points to follow directions within the community. EX: Follow oral, written, visual directions to locate various places in the community (includes concepts such as parallel streets, intersections, etc.). • Find and name different angles within the community (right, straight, obtuse, acute). EX: Find and name different angles within the community (intersections, utility poles, fences). • Apply spatial relations in real-world settings EX: Pack a lunch box, choose correct size container for leftovers, etc.).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.3.5 solve right triangle problems using the Pythagorean Theorem. (MA8.4.4)		Level III students perform the following without assistance: Student will: • Identify lines and points on a grid. EX: Locate specific points using a map or grid with directions provided. • Name and locate different angles within the school (right and straight). EX: Find and name different angles within the school. (corner, blocks, door frames, tables, etc.). • Apply spatial relations in school setting. EX: Identify which items will fit in designated container shapes (locker, desk, backpack some items need to be turned in order to fit through a space). Level II students perform the following with assistance: Student will: • Model lines within the environment. EX: Arrange desks in parallel lines. EX: Place containers of supplies in a straight line. • Reproduce (copy) different kinds of angles. EX: Use various manipulatives to copy different types of angles (geo-boards, popsicle sticks). • Locate geometric shapes in the environment. EX: Lunchbox, storage containers, locker, desk, CD.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level I students attempt to perform the following with assistance: Student will: • Recognize lines. EX: Discriminate between a line and non-line (point, object, shape). • Represent angles. EX: Imitate hand positions/body gestures that create angles (peace sign). • Sort objects according to shapes. EX: Sort real-life objects according to shape (cans vs. boxes, football vs. baseball, plates vs. glasses, Frisbees vs. Nerf balls).

CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Math Content Standards and Objectives

Standard 4: Measurement (MA.S.4)
Students will:

- demonstrate understanding of measurable attributes of objects and the units, systems, and processes of measurement; and
- apply appropriate techniques, tools and formulas to determine measurements through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The Student will be able to understand the concept of measurement.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.4.1 calculate the missing measures of angles and lengths of sides of a polygon from given data, using formulas. MA.10.4.2 estimate, measure, and perform operations involving length, mass, and capacity using customary and metric units. (AGP.7) MA.10.4.3 use appropriate tools to measure geometric figures. (AGP.8) MA.10.4.4 develop and apply formulas for area, perimeter, surface area, and volume and apply them in solving practical problems. (AGP.10, AGP.11, AGP.12)	MA.10.4.ES.1 solve practical problems involving length, weight and capacity.	MA.PD.10.4.ES.1 Level IV students perform the following complex task without assistance: Student will: • Use measurement skills to perform in real life situations. EX: Identify and use appropriate tool and correct measures for the task in a given situation (measuring cups and spoons for recipes; measuring container for gas, kerosene, etc.; rulers or tape measures for home and personal purchases such as clothing or carpeting). Level III students perform the following without assistance: Student will: • Solve practical problems involving length, weight and capacity. EX: Use liters and gallons to measure liquids, use pounds and ounces to measure weight, use inches, feet, yards, and miles to measure length.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level II students perform the following with assistance: Student will: • Use appropriate tools for measurement. EX: Match the correct measuring cup size to recipe direction; scale to weigh themselves or the produce at the grocery, etc. Level I students attempt to perform the following with assistance: Student will: • Recognize the differences in measure terminology. EX: When given select objects, identify long/short, heavy/light, full/empty.

CONTENT STANDARDS AND PERFORMANCE DESCRIPTORS

Math Content Standards and Objectives

Standard 5: Data Analysis and Probability (MA.S.5)
Students will:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- develop and evaluate inferences and predictions that are based on models; and
- apply and demonstrate an understanding of basic concepts of probability through communication, representation, reasoning and proof, problem solving, and making connections within and beyond the field of mathematics.

Essence of Standard: The student will use data collection methods to collect, analyze, and display results after making inferences and predictions.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
MA.10.5.1 collect, organize, interpret data, and predict outcomes using the mean, mode, median, range, and standard deviation. (AM1.13, AGP.5) MA.10.5.4 read, interpret and construct graphs to solve problems. (AGP.4) MA.10.5.2 find the probability of conditional events and mutually exclusive events. (AGP.6) MA.10.5.3 predict the outcomes of simple events using the rules of probability. (AM1.16)	MA.10.5.ES.1 collect, organize and utilize numerical information and data. .	MA.PD.10.5.ES.1 Level IV students perform the following complex task without assistance: Student will: • Use collected data to make personal decisions. EX: Based on their budget, can a desired item be purchased? EX: Based on their work schedule, can they attend the movie on Saturday?

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
		Level III students perform the following without assistance: Student will: • Collect, organize and utilize numerical information and data. EX: Create and maintain a personal phone book, birthday list. EX: Create and maintain a calendar (personal planner) with doctors/therapy appointments, work schedules, sporting events, school holidays, etc. EX: Create and maintain a budget. Level II students perform the following with assistance: • Classify information using charts, logs, checklist. EX: Record similar events such as doctors appointments, birthdays or holidays with visual cues (such as stickers, stamps or pictures). EX: Identify like items for grouping (pets, favorite music, food). Level I students attempt to perform the following with assistance: Student will: • Recognize like items. EX: Match real-life items (picture of a spoon with a spoon).

West Virginia Extended Academic Content Standards and Performance Descriptors

for

Students with the Most Significant Cognitive Disabilities

Incorporating

Science
Grades 3 – 8 and 10 and 11

Table of Contents

Foreword

The West Virginia Board of Education and the West Virginia Department of Education are pleased to present Policy 2520.16: Alternate Academic Achievement Standards for students with the most significant cognitive disabilities.

A committee of general educators, special educators, and content specialists from across the state and the WVDE gathered to determine the essence of the content standards for science for grades 3 – 8, 10 and 11 so that appropriate grade level extended standards could be developed for this population and performance descriptors could be defined. The committee's work was guided by the federal requirement that, for this population, the State must adopt challenging academic achievement standards that are linked to the State's grade-level academic content standards, promote access to the general curriculum, and reflect professional judgment of the highest achievement standards possible.

Throughout the process, the committee was sensitive to the requirement to include for each content area at least three levels of achievement. The committee ultimately included four levels of achievement. Descriptions of the competencies associated with each achievement level were also produced by the committee.

The essence of the content standards, extended standards, and performance descriptors included here combine to give teachers a powerful resource for planning instruction. Identification of the essence of the standards, derivation of the extended grade level standards that are appropriate for this group of students and creation of grade level performance descriptors acknowledge that students acquire skills and knowledge in increments and at different rates. The focus throughout the document remains on keeping expectations high, acquiring mastery of skills that are essential for independent living, and offering students with significant cognitive disabilities in West Virginia rigorous and challenging instruction.

This policy is unique in that it adds science standards to both reading/language arts and mathematics standards. The West Virginia Content Standard in each of these areas for grades 3 – 8 and 10, and grade 11 for science only is shown specifically and is then followed with the essence of the standard, the extended grade level standard, and then the performance descriptor which answers the question "How well does the student perform on the extended standard at any given grade level?"

Steven L. Paine

Explanation of Terms

Alternate Academic Achievement Standards encompass the essence of State Content Standards, their linked extended standards, performance levels, performance descriptors aligned with the extended standards, and cut scores based on these extended standards and performance descriptors. As with State Content Standards, Alternate Academic Achievement Standards describe the level students with the most significant cognitive disabilities must reach to achieve proficiency on the extended standards when they complete their formal education.

Essence of the Standard is that which conveys the same ideas, skills and content of the Standard, expressed in simpler terms.

Extended Standards evolve from the essence of the standard, which provides linkage to the fundamental content of the State Content Standard. This extension ensures that students with the most significant cognitive disabilities have access to, and make progress in, the general curriculum.

Performance Descriptors describe, in narrative format, how students demonstrate achievement of the extended standards. Four performance levels have been adopted for West Virginia's alternate academic achievement standards: Above Mastery, Mastery, Partial Mastery, and Novice. **Mastery is considered to be demonstrated at Levels III and IV** and is identified as meeting the proficient level specified in *No Child Left Behind.*

A general description of each of these categories is included below:

- **Level IV: Above Mastery**
  A student at this level performs complex tasks without assistance, i.e., independently.

- **Level III: Mastery**
  A student at this level performs tasks without assistance and is considered progressing toward independence.

- **Level II: Partial Mastery**
  A student at this level performs tasks with assistance.

- **Level I: Novice**

A student at this entry level attempts to perform tasks with assistance.

Performance Descriptors serve two functions. Instructionally, they give teachers more information about the level of knowledge and skills they are building in their students. Performance descriptors are also used to categorize and explain student performance on statewide assessment instruments.

Numbering of Extended Standards

The number for each extended standard is composed of five parts, each part separated by a period:

- The content area code is SC for Science and CC for Chemistry
- The grade level
- The Content Standard number
- The letter ES, for Extended Standard; and
- The Extended Standard number

Illustration: SC.3.1.ES.2: Science, Grade 3, Standard 1, Extended Standard 2

Numbering of Performance Descriptors

The number for each group of four performance descriptors is composed of five parts, each part separated by a period:

- The content area is SC for science, BTC for biology and CTC for chemistry;
- The letters PD, for Performance Descriptor;
- The grade level,
- The Content Standard number; and
- The Extended Standard number.

Illustration: SC.PD.CC.1.ES.1: Science, Performance Descriptor,Chemistry.Standard 1, Extended Standard 1

Unique Electronic Numbers (UENs)

Unique Electronic Numbers (or UENs) are numbers that help to electronically identify, categorize and link specific bits of information. Once Policy 2520.16 is available on the Web, each standard, each objective, and each group of four performance descriptors will have a Unique Electronic Number (UEN) that will always remain the same.

The codes printed in Policy 2520.16 form the basis of the UENs. The only additional set of numbers that will be added to each code

to formulate its UEN will be a prefix that indicates the year and month that particular versions of Policy 2520.1 and Policy 2520.2 are approved by the State Board of Education.

The prefix for the UENs for each content area in Policy 2520.16 is noted at the top of each page containing standards, objectives and performance descriptors. As sections of 2520.16 are revised, UENs will be changed to reflect the new approval date.

UENs facilitate implementation of WV Standards into Electronic formats such as Databases and XML Files. The WV Department of Education encourages everyone who is going to use the WV Content Standards in any kind of electronic distribution, alignment, or software development to use the UENs so that all efforts can be cross-referenced and there is consistency across initiatives.

Alternate Academic Achievement Standards – Policy 2520.16

Alternate academic achievement standards clarify appropriate knowledge and skills in science for students with the most significant cognitive disabilities. These students are assessed with the West Virginia Alternate Performance Task Assessment. The extended grade level standards distill the essence of the three science standards that are included in the West Virginia Content Standards and then link extensions of those standards that are appropriate for this group of students. Performance descriptors for each grade describe observable behavior that meets Novice, Partial Mastery, Mastery and Above Mastery requirements. Cut scores based on the extended standards and their aligned performance descriptors define the thresholds between these performance levels.

These standards, written collaboratively by special education teachers, general education teachers, and WVDE content specialists, are based on the collective knowledge and expertise of this group with revisions by a statewide review team. The standards describe what students with the most significant cognitive disabilities should be able to accomplish across grade levels in the areas of science.

GRADE THREE EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Nature of Science (SC.S.3.1)
Students will

- demonstrate an understanding of the history and nature of science as a human endeavor encompassing the contributions of diverse cultures, scientists, and careers.
- demonstrate the abilities and understanding necessary to do scientific inquiry.
- demonstrate the ability to think and act as scientists by engaging in active inquires and investigations, while incorporating hands-on activities.

Essence of Standard: S.1 demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.3.1.1 recognize that science explanations may lead to new discoveries (e.g., knowledge leads to new question). SC.O.3.1.2 study the lives and discoveries of scientists of different cultures and backgrounds. SC.O.3.1.3 explore science careers in the community. SC.O.3.1.4 demonstrate curiosity, initiative and creativity by planning and conducting simple investigations. SC.O.3.1.5 recognize that developing solutions to problems takes time, patience and	SC.3.1. ES.1 recognize tools used to investigate scientific concepts (e.g., magnifying glass, thermometer, ruler).	SC.PD.3.1. ES.1 Level IV students perform the following complex task without assistance: Student will • apply scientific tool to its use. EX: use a microscope to view a cell. EX: use a ruler to measure an object. EX: use a measuring cup to measure a cup of sugar. Level III students perform the following without assistance: Student will • recognize tools used to investigate scientific concepts (e.g., magnifying glass, thermometer, ruler). EX: given three instruments (magnifying glass, thermometer, ruler), determine instrument used to measure temperature. EX: given the item, determine which objects will be viewed through a magnifying glass. Level II students perform the following with assistance: Student will • recognize use of a scientific tool. EX: given two scientific instruments, show how to use the provided tool.

	persistence through individual and cooperative ventures.		Level I students attempt to perform the following with assistance: Student will • find a scientific tool. EX: point to magnifying glass, thermometer, rain gauge or magnet.
SC.O.3.1.6	support statements with facts found through research from various sources, including technology.		
SC.O.3.1.7	use scientific instruments, technology, and everyday materials to investigate the natural world.		
SC.O.3.1.8	use safe and proper techniques for handling, manipulating and caring for science materials (e.g., following safety rules, maintain a clean work area, or treat living organisms humanely).		
SC.O.3.1.9	apply mathematical skills and use metric units in measurements.		
SC.O.3.1.10	interpret data presented in a table, graph, map or diagram and use it to answer questions and make predictions and inferences based on patterns of evidence.		
SC.O.3.1.11	identify and control variables.		

GRADE THREE EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.S.3.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology and the earth and space science.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.3.2.1 identify the structures of living things, including their systems and explain their functions. SC.O.3.2.2 observe, measure and record changes in living things (e.g., growth and development, or variations within species). SC.O.3.2.3 compare physical characteristics and behaviors of living organisms and explain how they are adapted to a specific environment (e.g., beaks and feet in birds, seed dispersal, camouflage, or	SC.3.2.ES.1 categorize characteristics of living and non-living matter.	SC.PD.3.2. ES.1 Level IV students perform the following complex task without assistance: Student will • describe how living and non living things are different. EX: describe how a tree can grow but a table cannot; a child can run and jump but rock cannot move on its own. Level III students perform the following without assistance: Student will • categorize characteristics of living and non-living matter. EX: categorize pictures into groups according to specific characteristics e.g.., organisms that breathe through the air versus through the water. Level II students perform the following with assistance: Student will • sort matter into living and non-living groups. EX: sort living and non-living matter into appropriate groups. EX: select picture of living matter from groups of pictures representing both living and non-living matter.

	different types of flowers.).		
SC.O.3.2.4	observe and describe relationships among organisms and predict the effect of adverse factors.		Level I students attempt to perform the following with assistance: Student will • identify living/non-living things. EX: point to an animal. EX: point to a plant. EX: point to a rock. EX: point to a car.
SC.O.3.2.5	relate the buoyancy of an object to its density.		
SC.O.3.2.6	identify physical and chemical properties.		
SC.O.3.2.7	relate changes in states of matter to changes in temperature.		
SC.O.3.2.8	investigate the dissolving of solids in liquids.		
SC.O.3.2.9	investigate the reflection and refraction of light by objects.	SC.3.2 ES. 2 recognize influences of force on motion.	SC.PD.3.2. ES.2 Level IV students perform the following complex task without assistance: Student will • compare influences of force on motion. EX: determine, if 2 motorcycles leave point A at the same time , one driving 30 mph, one at 10 mph, which will arrive at point B first. EX: determine which ball will move farther, one rolled on a smooth surface versus a rough surface.
SC.O.3.2.10	relate how the color of an object is based upon the reflection of light.		
SC.O.3.2.11	recognize that it takes work to move objects over a distance.		Level III students perform the following without assistance: Student will • recognize influences of force on motion. EX: do a simple experiment: recognize that when two balls are different sizes pushed with the same force one will go further. EX: recognize that a toy car will go further being pushed than letting it roll on its own. EX: recognize what effects gravity and friction have on a person going down a slide.
SC.O.3.2.12	examine the relationships between speed, distance, and time.		
SC.O.3.2.13	recognize that the greater a force is exerted on an object, the greater the change of its motion.		
SC.O.3.2.14	identify examples of potential and kinetic		

	energy.		
			Level II students perform the following with assistance: Student will • recognize that forces can cause motion. EX: recognize when a bat hits a baseball it will move. EX: recognize a swing will move when pushed.
			Level I students attempt to perform the following with assistance: Student will • identify motion EX: given picture of wheel, will it roll- yes /no? EX: given 2 pictures, point to the one that moves (car, building).
SC.O.3.2.15 SC.O.3.2.16 SC.O.3.2.17 SC.O.3.2.18 SC.O.3.2.19	identify fossils as a record of time. explore erosion of different materials by water and wind (e.g., sand, soil, or rocks). describe how volcanoes and earthquakes affect the earth. recognize the relative movement of the earth and moon in reaction to the sun. describe the similarities and differences among the planets.	SC.3.2.ES.3 describe basic characteristics of landforms.	SC.PD.3.2. ES.3 Level IV students perform the following complex task without assistance: Student will • locate different geographical landforms on map. EX: find geographical landform on map i.e., island, mountain, ocean.
			Level III students perform the following without assistance: Student will • describe basic characteristics of landforms. EX: describe mountains (mountains are high). EX: describe rivers (contain water).
			Level II students perform the following with assistance: Student will • label pictures of different landforms (rock, soil, water). EX: label picture of river, mountain or island.

SC.O.3.2.20	identify properties of minerals and recognize that rocks are composed of different minerals.		Level I students attempt to perform the following with assistance: Student will • identify natural materials that make up geographical landforms (rock, soil, water). EX: identify rock from pictures of a rock, tree, and leaf.
SC.O.3.2.21	explain how igneous, sedimentary and metamorphic rocks are formed.		
SC.O.3.2.22	identify geographical features using a model or map.		
SC.O.3.2.23	compare and contrast the layers of the earth and their various features.		

GRADE THREE EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.3.3)

Students will

- identify how the parts of a system interact.
- recognize and use models as representations of real things.
- observe and identify patterns of change, consistency or regularity within the environment.
- demonstrate the ability to utilize technology to gather and organize data to communicate designs, results and conclusions.
- identify that a solution to a problem often creates new problems.
- demonstrate the ability to listen to, be tolerant of, and evaluate the impact of different points of view on health, population, resources and environmental practices while working in collaborative groups.

Essence of Standard: S.3 demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performances Descriptors
SC.O.3.3.1 identify that systems are made of parts that interact with one another. SC.O.3.3.2 use models as representations of real things. SC.O.3.3.3 observe that changes occur gradually, repetitively, or randomly within the environment and question causes of changes. SC.O.3.3.4 given a set of objects, group order the objects according to an established scheme.	SC.3.3.ES.1 classify scientific systems within the environment.	SC.PD.3.3. ES.1 Level IV students perform the following complex task without assistance: Student will • compare different systems in the environment. EX: compare animals to their ecosystem (e.g., How is a camel suited to live in the desert? How is a polar bear suited for the North Pole?). EX: compare plants to their ecosystems.
		Level III students perform the following without assistance: Student will • classify scientific systems within the environment. EX: sort animals into those that live on land versus those that live in water. EX: classify eight pictures into the four seasons.
		Level II students perform the following with assistance: Student will • match a component of a scientific systems to a whole.

SC.O.3.3.5	given a set of events, objects, shapes, designs, or numbers, formulate patterns of constancy or regularity.		EX: match a picture of a fish to a picture of an ocean. EX: match a picture of a deer to a picture of a forest. EX: select picture of a rainforest.
SC.O.3.3.6	cite examples of the uses of science and technology in common daily events and in the community.		Level I students attempt to perform the following with assistance: Student will • select scientific systems. EX: select picture of a forest. EX: select picture of an ocean.
SC.O.3.3.7	explain a simple problem and identify a specific solution describing the use of tools and/or materials to solve the problem or to complete the task.		
SC.O.3.3.8	recognize that a solution to one scientific problem often creates new problems (e.g., recycling, pollution, conservation, or waste disposal).		
SC.O.3.3.9	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.		
SC.O.3.3.10	develop respect and responsibility for the environment by engaging in conservation practices.		

SC.O.3.3.11	describe how modern tools and appliances have positively and/or negatively impacted their daily lives		

GRADE FOUR EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Nature of Science (SC.S.4.1)
Students will

- demonstrate an understanding of the history and nature of science as a human endeavor encompassing the contributions of diverse cultures, scientists, and careers.
- demonstrate the abilities and understanding necessary to do scientific inquiry.
- demonstrate the ability to think and act as scientists by engaging in active inquires and investigations, while incorporating hands-on activities.

Essence of Standard: S.1 demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.4.1.1 explain how new discoveries lead to changes in scientific knowledge. SC.O.4.1.2 study the lives and discoveries of scientists of different cultures and backgrounds. SC.O.4.1.3 explore science careers in West Virginia. SC.O .4.1.4 demonstrate curiosity, initiative and creativity by developing questions that lead to investigations; designing simple experiments; and trusting observations of discoveries when trying new tasks and skills.	SC. 4.1. ES.1 apply tools in the investigation of scientific concepts (i.e., magnifying glass, thermometer, ruler, microscope, magnet).	SC.PD.4.1. ES.1 Level IV students perform the following complex task without assistance: Student will • interpret information yielded by a variety of tools. EX: given a picture of a thermometer with a Fahrenheit temperature marked (e.g. 72 degrees), indicate the temperature on the thermometer given 3 choices (e.g. 52, 72, 84 degrees). Level III students perform the following without assistance: Student will • apply tools in the investigation of scientific concepts (e.g., magnifying glass, thermometer, ruler, microscope, and magnet). EX: given two pictures (e.g., cell and a pencil) indicate which item could be viewed through a microscope. EX: choose which tool given two or more tools (e.g., magnifying glass, and microscope), is used to observe an object (e.g., insect, etc). Level II students perform the following with assistance: Student will • match scientific instrument or tool to its appropriate use. EX: given a picture of a magnet and in a field of two objects (e.g., paper clip, tree) match the magnetic object.

SC.O.4.1.5	recognize that developing solutions to problems, requires persistence, flexibility, open-mindedness, and alertness for the unexpected.		Level I students attempt to perform the following with assistance: Student will • identify a scientific instrument. EX: point to the microscope or magnet.
SC.O.4.1.6	support statements with facts found through research from various sources, including technology.		
SC.O.4.1.7	use scientific instruments, technology and everyday materials to investigate the natural world.		
SC.O.4.1.8	demonstrate safe and proper techniques for handling, manipulating and caring for science materials.		
SC.O.4.1.9	construct a hypothesis when provided a problem		
SC.O.4.1.10	establish variables and controls in an experiment; test variables through experimentation.		
SC.O.4.1.11	interpret data presented in a table, graph, or diagram and use it to answer questions and make decisions.		
SC.O.4.1.12	draw and support conclusions, make predictions and		

	inferences based on patterns of evidence (e.g., weather maps, variation of plants, or frequency and pitch of sound).		
SC.O.4.1.13	apply mathematical skills and use metric units in measurements and calculations.		

GRADE FOUR EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.S.4.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology and the earth and space science.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: **S.2** apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.4.2.1 describe the different characteristics of plants and animals, which help them to survive in different niches and environments. SC.O.4.2.2 associate the behaviors of living organisms to external and internal influences (e.g., hunger, climate, or seasons). SC.O.4.2.3 identify and classify variations in structures of living things including their systems and explain their functions (e.g., skeletons, teeth, plant needles, or leaves). SC.O.4.2.4 compare and	SC.4.2 ES.1 describe characteristics of matter in the environment.	SC.PD.4.2. ES.1 Level IV students perform the following complex task without assistance: Student will • compare different characteristics of living organisms and different characteristics of non-living organisms. EX: compare how a rock and dirt are different. EX: compare how a dog and a horse are different. Level III students perform the following without assistance: Student will • describe characteristics of matter in the environment. EX: describe characteristics of animals in the north versus animals in the desert. EX: identify pictures representing physical properties as solid, liquid or gas. Level II students perform the following with assistance: Student will • identify characteristics of living matter. EX: match pictures of different animal's life cycles: baby/adult, puppy/dog. EX: place living/non-living thing into appropriate groups.

	sequence changes in cycles in relation to plant and animal life..		
SC.O.4.2.5	give examples how plants and animals closely resemble their parents and that some characteristics are inherited from the parents and others results from interaction with the environment.		Level I students attempt to perform the following with assistance: Student will • indicate example of living/non living things. EX: Indicate which of two objects is living (dog or rock).
SC.O.4.2.6	identify human uses of plants and animals (e.g., food sources, or medicines).		
SC.O.4.2.7	describe the effects of altering environmental barriers on the migration of animals.		
SC.O.4.2.8	construct and explain models of habitats, food chains, and food webs.		
SC.O.4.2.9	investigate how properties can be used to identify substances.		
SC.O.4.2.10	design an experiment to investigate the dissolving of solids and analyze the results.		
SC.O.4.2.11	examine simple chemical changes (e.g., tarnishing, rusting, or burning).		
SC.O.4.2.12	explain that materials including air take up space and are made of parts that are too small		

	to be seen without magnification.		
SC.O.4.2.13	differentiate changes in states of matter due to heat loss or gain.		
SC.O.4.2.14	investigate variables that affect the rate of evaporation of a liquid.		
SC.O.4.2.15	compare and classify liquids based on density.		
SC.O.4.2.16	identify different forms of energy and describe energy transformations that occur between them (e.g., electrical to heat, or radiant to chemical).	SC.4.2.ES.2 recognize different types of forces of motion.	SC.PD.4.2.ES.2 Level IV students perform the following complex task without assistance: Student will • compare different types of forces of motion. EX: given a picture of pulling a sled up a slope and a picture of a person riding down the slope, compare the two types of forces. EX: given a picture of a ball being hit by a bat and picture of a ball falling through a net, determine which demonstrates gravity.
SC.O.4.2.17	examine types and properties of waves (e.g., transverse, longitudinal, frequency, or wavelengths).		Level III students perform the following without assistance: Student will • recognize different types of forces of motion. EX: determine which ball would go faster, one released on a level surface or one released on a slope. EX: determine whether the beach ball or bowling ball would go further when pushed with the same force.
SC.O.4.2.18	investigate static electricity and conductors/nonconductors of electricity.		
SC.O.4.2.19	construct simple electrical circuits.		Level II students perform the following with assistance: Student will • classify objects accordng to how they move (i.e., roll, swing, float, fly). EX: separate pictures of items into categories of movement (roll vs. swing).
SC.O.4.2.20	describe and explain the relationship between a compass and a magnetic field.		
SC.O.4.2.21	relate motion of an object to its frame of reference.		Level I students attempt to perform the following with assistance: Student will • identify an object that rolls and one that does not. EX: indicate which one will roll and which one will not: ball and a
SC.O.4.2.22	predict and investigate the motion of an object		

if the applied force is changed. SC.O.4.2.23 explore that sounds are produced by vibrating objects and columns of air and form conclusions about the relationship between frequency and pitch of sound. SC.O.4.2.24 investigate the change in the length, tension, or thickness of the vibrating object on the frequency of vibration (e.g., string, wire, or rubber band).		concrete block; a wheel and a book.
SC.O. 4.2.25 examine the geologic time scale. SC.O.4.2.26 locate and identify patterns of stars and their change in location throughout the year. SC.O.4.2.27 compare and explain the relative time differences to erode materials. SC.O.4.2.28 investigate the cause and effects of volcanoes, earthquakes and landslides. SC.O.4.2.29 interpret a weather	SC 4.2. ES.3 compare the effects of different natural events on the environment (volcanoes, floods/rain, droughts).	SC.PD.4.2. ES.3 Level IV students perform the following complex task without assistance: Student will • predict the effect of different natural events on the environment. EX: given a picture of a volcanic eruption, predict which picture shows what will happen (e.g., lava over house vs. house surrounded by water). EX: predict what will happen with excessive rain (provide pictures of a drought and a flood). Level III students perform the following without assistance: Student will • compare the effects of different natural events on the environment. EX: compare the effects of a flood and a fire on the environment. EX: sort the effects of natural events according to their causes (floods, lava flow, fire).

	chart or map and predict outcomes.		Level II students perform the following with assistance: Student will • describe the effects of a natural event on the environment. EX: point to the natural event (volcano) associated with a lava flow. EX: point to a representation of the weather that would cause a flood (rain).
SC.O.4.2.30	identify the sun as a star.		
SC.O.4.2.31	explain the effects of alignment of earth, moon and sun on the earth.		
SC.O.4.2.32	describe and explain the planets orbital paths.		Level I students attempt to perform the following with assistance: Student will • identify natural events. EX: identify which picture shows a landside. EX: identify which picture shows a volcano.
SC.O.4.2.33	differentiate between types of rock and describe the rock cycle.		
SC.O.4.2.34	compare ocean water and fresh water.		
SC.O.4.2.35	investigate soil types and soil composition.		

GRADE FOUR EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.4.3)

Students will

- identify how the parts of a system interact.
- recognize and use models as representations of real things.
- observe and identify patterns of change, consistency or regularity within the environment.
- demonstrate the ability to utilize technology to gather and organize data to communicate designs, results and conclusions.
- identify that a solution to a problem often creates new problems.
- demonstrate the ability to listen to, be tolerant of, and evaluate the impact of different points of view on health, population, resources and environmental practices while working in collaborative groups.

Essence of Standard: S.3 demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.4.3.1 identify that systems are made of parts that interact with one another. SC.O.4.3.2 create models as representations of real things. SC.O.4.3.3 observe that changes occur gradually, repetitively, or randomly within the environment and question causes of change. SC.O.4.3.4 given a set of objects, group or order the objects according to an established scheme.	SC.4.3.ES.1 compare scientific systems and patterns within the environment.	SC.PD.4.3.ES.1 Level IV students perform the following complex task without assistance: Student will • complete parts of a scientific system/patterns within environment EX: order parts to whole from components of a system. (human cells, tissue, organs). EX: using pictures, complete moon phase pattern. EX: using pictures, complete the water cycle.
		Level III students perform the following without assistance: Student will • compare scientific systems and patterns within the environment. EX: compare the difference of how humans fish breathe using pictures. EX: associate weather patterns with a particular season.
		Level II students perform the following with assistance: Student will • select scientific systems/patterns.

		EX: indicate which pattern shows the correct order of the seasons.
SC.O.4.3.5 given a set of events, objects, shapes, designs, or numbers, find patterns of constancy or regularity. SC.O.4.3.6 identify and explain a simple problem or task to be completed; identify a specific solution; and list task requirements. SC.O.4.3.7 use an appropriate engineering design to solve a problem or complete a task. SC.O.4.3.8 recognize that a solution to one scientific problem often creates new problems (e.g., recycling pollution, conservation, waste disposal, or need for technology). SC.O.4.3.9 listen to and be tolerant of different viewpoints by engaging in collaborative activities and modifying ideas when new and valid information is presented from a variety of resources. SC.O.4.310 describe the positive and negative consequences of the application of technology on		Level I students attempt to perform the following with assistance: Student will • identify scientific systems/patterns. EX: identify day from pictures representing night and day.

personal health and the environment. SC.O.4.3.11 develop respect and responsibility for the environment by engaging in conservation practices.		

GRADE FIVE EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives.
Standard 1: Science (SC.S.5.1)
Students will

- demonstrate an understanding of the history of science and the evolvement of scientific knowledge.
- demonstrate an understanding of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- demonstrate an understanding of the characteristics of a scientist.
- demonstrate skills of scientific inquiry.

Essence of Standard: S.1. demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
SC.0.5.1.1	realize that scientists formulate and test their explanations of nature using observation and experiments.	SC.5.1.ES.1 interpret information yielded by a variety of scientific tools.	SC.PD.5.1.ES.1 Level IV students perform the following complex task without assistance: Student will • apply scientific knowledge to interpret collected data. EX: apply scientific knowledge to draw conclusions from a temperature chart. EX: apply scientific knowledge to determine the weather for a given area (rain, snow, wind) from a weather map/pictorial chart.
SC.0.5.1.2	recognize scientific knowledge is subject to modification as new scientific information challenges current explanations.		
SC.O.5.1.3	examine the careers and contributions of men and women of diverse cultures to the development of science.		Level III students perform the following without assistance: Student will • interpret information yielded by a variety of scientific tools. EX: use a ruler to measure length of object and compare the sizes. EX: use a thermometer to track daily temperature and identify the day with the highest temperature.
SC.O.5.1.4	compare and contrast the historical significance of scientific discoveries.		
SC.O.5.1.5	cooperate and collaborate to ask		Level II students perform the following with assistance: Student will • select appropriate scientific tool for use. EX: given a picture of a ruler, thermometer and an apple, point to the instrument that measures temperature.

	questions, design and conduct investigations to find answers and solve problems.		EX: when shown two pictures, a ruler and a magnifying glass point to the picture that indicates what is used to measure the length of a book.
SC.O.5.1.6	formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data.		Level I students attempt to perform the following with assistance: Student will • identify a scientific instrument from a nonscientific instrument. EX: given pictures of two objects (e.g., piano and microscope), point to picture of scientific instrument.
SC.O.5.1.7	apply skepticism, careful methods, logical reasoning and creativity in investigating the observable universe.		
SC.O.5.1.8	use a variety of technologies and scientific instruments to conduct explorations, investigations and experiments of the natural world.		
SC.O.5.1.9	demonstrate safe techniques for handling, manipulating and caring for science materials, equipment, natural specimens and living organisms.		
SC.O.5.1.10	utilize experimentation to demonstrate scientific processes and thinking skills (e.g., formulating questions, predicting, forming hypotheses, quantifying, or identifying dependent		

	and independent variables).		
SC.O.5.1.11	construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.		
SC.O.5.1.12	use inferential reasoning to make logical conclusions from collected data.		

GRADE FIVE EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.S.52)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology and the earth and space science.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.5.2.1 demonstrate an understanding of the interconnections of biological, earth and space, and physical science. SC.O.5.2.2 identify and explain common energy conversions in cycles of matter including photosynthesis and the carbon dioxide cycle. SC.O.5.2.3 identify the structures of living organisms and explain their function. SC.O.5.2.4 observe and identify cells of organisms using a microscope. SC.O.5.2.5 compare variations of plant growth and reproduction.	SC.5.2.ES.1 describe adaptations that allow survival in different environments.	SC.PD.5.2.ES.1 Level IV students perform the following complex task without assistance: Student will • predict which animals or plants will survive better in various ecosystems. EX: predict which would survive better in a desert, a daisy versus a cactus. EX: predict which would survive better eating from tall trees, a giraffe or a goat. Level III students perform the following without assistance: Student will • describe adaptations that allow survival in different environments. EX: describe why porcupines have quills. EX: describe the adaptation that protects a skunk. Level II students perform the following with assistance: • recognize an adaptation in a living organism. EX: given a picture of a white bunny in snow and a picture of a dog sitting in a yard, identify the animal with an adaptation.

SC.O.5.2.6 contrast how the different characteristics of plants and animals help them to survive in different niches and environments including adaptations, natural selection, and extinction. SC.O.5.2.7 through the use of research and technology, explore the extinction of a species due to environmental conditions. SC.O.5.2.8 trace and describe the pathways of the sun's energy through producers, consumers and decomposers using food webs and pyramids.		Level I students attempt to perform the following with assistance: Student will • identify living and non-living organisms. EX: point to the picture of something that is living, point to the picture of the item that is not alive (flower, rock).
SC.O.5.2.9 explain that the mass of a material is conserved whether it is together, in parts, or in a different state. SC.O.5.2.10 recognize the elements are composed of only one type of matter. SC.O.5.2.11 using the periodic table, identify common elements according to their symbols. SC.O.5.2.12 through	SC.5.2.ES.2 identify the effects of different types of forces (i.e., electrical, magnetic, gravitational, friction).	SC.PD.5.2.ES.2 Level IV students perform the following complex task without assistance: Student will • describe the forces that control environmental situations. EX: describe how gravity is different on the earth verses the moon. EX: describe what force would be applicable when moving a dolly over smooth versus bumpy surfaces. Level III students perform the following without assistance: Student will • identify the effects of different types of forces (i.e., electrical, magnetic, gravitational, friction). EX: given a paperclip and a magnet, identify which force is demonstrated.

	experimentation, identify substances by their relative densities (mass/volume=density).		EX: identify what force causes an apple to fall from a tree. EX: given a picture of an object representing a force (e.g., magnet) identify which object would be influenced by that force (e.g., nail or beaker).
SC.O.5.2.13	analyze diagrams of electrical circuits.		Level II students perform the following with assistance: Student will • identify the effects of forces. EX: identify the effects of gravity. EX: identify the effects of friction.
SC.O.5.2.14	measure electricity using voltage and wattage.		
SC.O.5.2.15	investigate the properties of an electromagnet by selecting appropriate materials, designing and testing an electromagnet, and evaluating differences in design.		Level I students attempt to perform the following with assistance: Student will • identify a force from a non-force. EX: identify which picture shows a moving object and which shows a stationary object.
SC.O.5.2.16	describe how the variables of gravity and friction affect the motion of objects.		
SC.O.5.2.17	compare and contrast the change in length, tension, or thickness of a vibrating object on the frequency of vibration.		
SC.O.5.2.18	describe the layers of the earth and their various features.	SC.5.2.ES.3 describe the impact of natural influences on landforms.	SC.PD.5.2.ES.3 Level IV students perform the following complex task without assistance: Student will • predict changes in landforms due to natural influences. EX: predict the effects of a volcanic eruption on a mountain. EX: predict the effect of an earthquake in a forest.
SC.O.5.2.19	identify and describe natural landforms and explain how they change and impact weather and climate.		
SC.O.5.2.20	use a variety of instruments and sources to collect and		Level III students perform the following without assistance: Student will • describe the impact of natural influences on landforms.

	display weather data to describe weather patterns.		EX: describe what happens to the land following an earthquake. EX: describe the affects of a forest fire on the mountain.
SC.O.5.2.21	compare and explain the different rates of weathering, erosion and deposition on various materials.		Level II students perform the following with assistance: Student will recognize different natural influences (e.g., fire, floods, wind). EX: point to a picture of a forest fire.
SC.O.5.2.22	analyze a topographical map to make inferences related to elevation and land features.		Level I students attempt to perform the following with assistance: Student will • identify land forms. EX: point to a picture of peninsula, cliffs, and mountain.
SC.O.5.2.23	identify resources as being renewable or non-renewable.		
SC.O.5.2.24	explore and explain how fossils and geologic features can be used to determine the relative age of rocks and rock layers.		
SC.O.5.2.25	recognize that the Earth is made of plates (plate tectonics).		

GRADE FIVE EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.5.3)

Students will

- explore the relationship between the parts and the whole system; construct a variety of useful models; examine changes that occur in an object or system.
- demonstrate an understanding of the interdependence between science and technology.
- demonstrate the ability to utilize technology to gather data and communicate designs, results and conclusions.
- demonstrate the ability to evaluate the impact of different points of view on health, population, resource and environmental practices.

Essence of Standard: S.3 demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.5.3.1 explore the relationship between the parts of a system to the whole system. SC.O.5.3.2 construct a variety of useful models of an object, event, or process. SC.O.5.3.3 compare and contrast changes that occur in an object or a system to its original state. SC.O.5.3.4 compare and contrast the influence that a variation in scale will have on the way an object or system works. (e.g., cooling rates of different-sized containers of water, strength of different-	SC.5.3.ES.1 describe the relationship between the parts of an electrical system to the whole system.	SC.PD.5.3.ES.1 Level IV students perform the following complex task without assistance: Student will: • predict what would happen if a part of a system was removed. EX: predict what will happen when there is no cord on a lamp.
		Level III students perform the following without assistance: Student will: • describe the relationship between the parts of an electrical system to the whole system. EX: describe how the parts of a lamp work together (light switch, bulb, cord).
		Level II students perform the following with assistance: Student will: • identify all parts of a given system. EX: label parts of an electrical system (light bulb, switch, cord).

	sized constructions from the same material, or flight characteristics of different-sized model airplanes).		Level I students attempt to perform the following with assistance: Student will • name one part of a given system. EX: given a lamp, point to an electrical cord.
SC.O.5.3.5	research everyday applications and interactions of science and technology.		
SC.O.5.3.6	evaluate and critically analyze mass media reports of scientific developments and events.		
SC.O.5.3.7	explore the connections between science, technology, society and career opportunities.		

GRADE SIX EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Science (SC.S.6.1)
Students will

- demonstrate an understanding of the history of science and the evolvement of scientific knowledge.
- demonstrate an understanding of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- demonstrate an understanding of the characteristics of a scientist.
- demonstrate skills of scientific inquiry.

Essence of Standard: S.1. demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.6.1.1 realize that scientists formulate and test their explanations of nature using observation and experiments. SC.O.6.1.5 cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems. SC.O.6.1.6 formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data collection. SC.O.6.1.7 apply skepticism, careful methods, logical reasoning and creativity in investigating the observable universe. SC.O.6.1.8 use a variety of	SC 6.1.ES.1 apply scientific processes used in problem solving.	SC.PD.6.1.ES.1 Level IV students perform the following complex task without assistance: Student will • sequence a scientific process to solve a problem. EX: sequence the steps to conduct a simple experiment (e.g., a stalk of celery in water and a stalk of celery in water with food coloring to study changes). EX: explain the changes that occur to the ingredients in baking (e.g., liquid to solids). Level III students perform the following without assistance: Student will • apply scientific processes used in problem solving. EX: mix colors to create a new color. EX: given a thermometer with a temperature marked, show a place on the thermometer that would indicate an increase in temperature when heat is added. Level II students perform the following with assistance: Student will • match a scientific process to a task. EX: given a set of pictures (e.g., drop of water, ice cube, sand) match the pictures that represents different forms of the same substance.

	technologies and scientific instruments to conduct explorations, investigations and experiments of the natural world.		EX: given a bag of un-popped popcorn, indicate what process is needed to make it pop. Level I students attempt to perform the following with assistance: Student will • identify items relating to scientific processes. EX: identify the microscope, thermometer, or scales from a desk, chalkboard, tree.
SC.O.6.1.9	demonstrate safe techniques for handling, manipulating and caring for science materials, equipment, natural specimens and living organisms.		
SC.O.6.1.10	utilize experimentation to demonstrate scientific processes and thinking skills (e.g., formulating questions, predicting, forming hypotheses, quantifying, or identifying dependent and independent variables).		
SC.O.6.1.11	construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.		
SC.O.6.1.12	use inferential reasoning to make logical conclusions from collected data.		

SC.O.6.1.2 recognize scientific knowledge is subject to modification as new scientific information challenges current explanations. SC.O.6.1.3 examine the careers and contributions of men and women of diverse cultures to the development of science. SC.O.6.1.4 compare and contrast the historical significance of scientific discoveries.	SC.6.1.,ES.2 recognize the contributions of science.	SC.PD.6.1.ES.2 Level IV students perform the following complex task without assistance: Student will • explore the contributions of science. EX: compare the contributions of a scientific discovery (stove vs. microwave). EX: contrast the contributions of a scientific discovery (candle vs. light bulb).	
		Level III students perform the following without assistance: Student will • recognize the contributions of science. EX: complete a fill-in-the-blank activity involving scientific discoveries. EX: identify how the computer makes life easier.	
		Level II students perform the following with assistance: Student will • match scientific developments and their functions. EX: match the discovery and the product (plane to space shuttle, old fashioned phone to cell phone). EX: match discovery to its use in society (cell phone to communication).	
		Level I students attempt to perform the following with assistance: Student will • select picture of a scientific invention that has made life easier. EX: select a picture of a car versus a horse.	

GRADE SIX EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.S.6.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology and the earth and space science.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
Life science SC.O.6.2.1 demonstrate the interrelationships among physics, chemistry, biology, earth and environmental science, and astronomy. SC.O.6.2.2 use pictures to show cyclical processes in nature (e.g., nitrogen cycle, carbon cycle, or water cycle). SC.O.6.2.3 classify living organisms according to their structure and functions. SC.O.6.2.4 compare the similarities of internal features of organisms, which can be used to	SC.6.2.ES.1 describe the life cycles in nature.	SC.PD.6.2.ES.1 Level IV students perform the following complex task without assistance: Student will • interpret the life cycles in nature. EX: sequence pictures illustrating the stages of the life cycle of a butterfly. EX: chart the growth of a seed over a two week period.
		Level III students perform the following without the assistance: Student will • describe the life cycles in nature. EX: describe a egg to chicken cycle. EX: describe seeds to plant cycle.
		Level II students perform the following with assistance: Student will • match stage of a life cycle to an animal. EX: match a cocoon to a butterfly. EX: match a tadpole to a frog.
		Level I students attempt to perform the following with assistance:

	infer relatedness.		Student will • select a stage in a life cycle. EX: point to a picture of an egg or a hen.
SC.O.6.2.5	examine how abiotic and biotic factors affect the interdependence among organisms.		
SC.O.6.2.6	construct models of plant and animal cells and compare the basic parts (e.g., cytoplasm, cell wall, cell membrane, nucleus, or chloroplasts).		
SC.O.6.2.7	compare growth cycles in different plants (e.g., mosses, ferns, perennials, biennials, woody plants, or herbaceous plants).		
SC.O.6.2.8	predict changes in populations of organisms due to limiting environmental factors (e.g., food supply, predators, disease, or habitat).		
SC.O.6.2.9	analyze the ecological consequences of human interactions with the environment (e.g., renewable and non-renewable resources).		
SC.O.6.2.20	correlate the relationship of mass to gravitational force (e.g., larger the mass the larger the gravitational force, or the closer the objects		

the stronger the force).		

Physical science SC.O.6.2.10 classify and investigate properties and processes (changes) as either physical or chemical. SC.O.6.2.11 investigate the formation and separation of simple mixtures of matter concluding that matter is composed of tiny particles and that the particles are the same for the same type of matter. SC.O.6.2.12 use indicators to classify substances as acidic, basic or neutral. SC.O.6.2.13 using the periodic table, identify the symbols of elements as solids, liquids, and gases; metals or nonmetals. SC.O.6.2.14 describe the composition and properties of matter (e.g., particles, malleability, melting point, density, inertia, or specific heat). SC.O.6.2.15 investigate the properties of the electromagnetic spectrum (e.g., wavelengths, frequencies, visible	SC.6.2.ES.2 classify the properties and processes of energy.	SC.PD.6.2.ES.2 Level IV students perform the following complex task without assistance: Student will • determine the processes and properties of energy and matter. EX: select simple machines (inclined plane, wheel and axle, levers, etc) that would be used to complete a task (e.g., simple machine that would be used to load a heavy box into a truck). EX: classify items as having kinetic or potential energy. EX: determine whether a substance is an acid, base or neutral using litmus paper. Level III students perform the following without assistance: Student will • classify the properties and processes of energy. EX: classify the processes of energy that result in heat (sun, fire). EX: classifying object by temperature using a thermometer. Level II students perform the following with assistance: Student will • identify the properties and processes of energy. EX: label pictures that are associated to light or sound energy. EX: match pictures of items that are hot to a thermometer. Level I students attempt to perform the following with assistance: Student will • choose objects that represent the properties and processes of energy. EX: given three pictures, point to the one that represents heat.

	light); relate wavelengths and/or frequencies to position on the electromagnetic spectrum (e.g., colors, x-ray).		
SC.O.6.2.16	recognize that an object's color is based upon the absorption and reflection of light waves.		
SC.O.6.2.17	describe light and sound in terms of longitudinal or transverse waves.		
SC.O.6.2.18	describe the flow of heat between objects (e.g., hot air rises, or absorption and release of heat by metals).		
SC.O.6.2.19	diagram simple parallel and series circuits (e.g., hot air rises, or absorption and release of heat by metals).		
SC.O.6.2.21	examine simple machines and the forces involved.		
SC.O.6.2.22	apply the effects of balanced and unbalanced forces on motion of objects.		
SC.O.6.2.23	explain motion in terms of frames of reference and analyze graphs depicting motion and predicted future motion.		

Earth and space SC.O.6.2.24 monitor major atmospheric events using a variety of resources including technology. SC.O.6.2.25 compare and contrast continental drift hypothesis to the plate tectonic theory. SC.O.6.2.26 associate plant and animal life forms with specific geologic time periods. SC.O.6.2.27 recognize the phases of the moon. SC.O.6.2.28 investigate models of earth-moon-sun relationships (e.g., gravity, time, or tides). SC.O.6.2.29 compare the earth's tilt and revolution to the seasonal changes.	SC.6.2.ES.3 explain the relationships between the earth, moon and sun.	SC.PD.6.2.ES.3 Level IV students perform the following complex task without assistance: Student will • interpret the impact of the moon and sun on earth. EX: interpret the seasonal changes in relation to the sun. Level III students perform the following without assistance: Student will • explain the relationships between the earth, moon and sun. EX: sequence planets in order from the sun. EX: label the phases of the moon. Level II students perform the following with assistance: Student will • match relationships between the earth, moon and sun. EX: identify/describe a season. EX : point to the picture of the crescent, new or full moon. Level I students attempt to perform the following with assistance: Student will • identify the earth, moon and sun. EX: point to the picture of the sun given pictures of sun, moon and earth. EX: identify the moon when given photos/pictures of the moon and the sun.

GRADE SIX EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.6.3)

Students will

- explore the relationship between the parts and the whole system; construct a variety of useful models; examine changes that occur in an object or system.
- demonstrate an understanding of the interdependence between science and technology.
- demonstrate the ability to utilize technology to gather data and communicate designs, results and conclusions.
- demonstrate the ability to evaluate the impact of different points of view on health, population, resource and environmental practices.

Essence of Standard: S.1 demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.6.3.1. explore the relationship between the parts of a system to the whole system. SC.O.6.3.2. construct a variety of useful models of an object, event, or process. SC.O.6.3.3 compare and contrast changes that occur in an object or a system to its original state. SC.O.6.3.4 compare and contrast the influence that a variation in scale will have on the way an object or system works. (e.g., cooling rates of different-sized containers of water, strength of different-	SC.6.3.ES.1 describe changes in the earth's systems.	SC.PD.6.3.ES.1 Level IV students perform the following complex task without assistance: Student will • predict changes in systems. EX: construct a model of an active volcano and predict the changes that will occur. EX: predict the changes that occur in the environment as a result of a tornado. Level III students perform the following without assistance: Student will • describe changes in the earth's systems. EX: describe the four layers of earth's geosphere (crust, mantle, outer core, inner core). EX: using an apple sliced in quarters, identify and label the names of the layers of the atmosphere. EX: using technology (internet, TV,) find and list the weather conditions for a one week period.

	sized constructions from the same material, or flight characteristics of different-sized model airplanes).		Level II students perform the following with assistance: Student will • match parts of a system to the whole. EX: given three pictures identify types of weather (e.g., snowy, raining, sunny) EX: given three pictures identify the parts of a water system (river, streams, lakes).
SC.O.6.3.5	research everyday applications and interactions of science and technology.		
SC.O.6.3.6	evaluate and critically analyze mass media reports of scientific developments and events		Level I students attempt to perform the following with assistance: Student will • identify a system. EX: given a globe point to the ocean.

GRADE SEVEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Science (SC.S.7.1)
Students will

- demonstrate an understanding of the history of science and the evolvement of scientific knowledge.
- demonstrate an understanding of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- demonstrate an understanding of the characteristics of a scientist.
- demonstrate skills of scientific inquiry.

Essence of Standard: S.1. demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

<table>
<tr><th colspan="2">Grade Level Objectives</th><th>Extended Grade Level Standards</th><th>Performance Descriptors</th></tr>
<tr><td>SC.O.7.1.5</td><td>cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems.
SC.O.7.1.6 formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data collection.
SC.O.7.1.7 apply skepticism, careful methods, logical reasoning and creativity in investigating the observable universe.
SC.O.7.1.8 use a variety of technologies and scientific instruments to conduct explorations,</td><td>SC.7.1.ES.1
apply the scientific methods to collect and record data.</td><td>SC.PD.7.1.ES.1
Level IV students perform the following complex task without assistance:
Student will
• apply the scientific method to identify a question that can be answered given a simple scenario.
EX: given liquid in three different shaped containers, determine if they contain the same amount.
EX: given a chart comparing the rate of growth of a plant grown in darkness and one grown in the light, tell which data indicates the growth of plant grown in light.

Level III students perform the following without assistance:
Student will
• apply the scientific method to collect and record data.
EX: measure the volume of liquids in different shape containers and record the measurements on a chart.

Level II students perform the following with assistance:
Student will
• match tools and scientific instruments to their use.
EX: determine which of these tools can be used to compare the mass of two objects, a scale or a ruler.</td></tr>
</table>

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
	investigations and experiments of the natural world.		Level I students attempt to perform the following with assistance: Student will • identify scientific tools and instruments. EX: microscopes, telescopes, graduated cylinder, scales.
SC.O.7.1.9	demonstrate safe techniques for handling, manipulating and caring for science materials, equipment, natural specimens and living organisms.		
SC.O.7.1.10	utilize experimentation to demonstrate scientific processes and thinking skills (e.g., formulating questions, predicting, forming hypotheses, quantifying, or identifying dependent and independent variables).		
SC.O.7.1.11	construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.		
SC.O.7.1.12	use inferential reasoning to make logical conclusions from collected data.		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.7.1.1 realize that scientists formulate and test their explanations of nature using observation and experiments. SC.O.7.1.2 recognize scientific knowledge is subject to modification as new scientific information challenges current explanations. SC.O.7.1.3 examine the careers and contributions of men and women of diverse cultures to the development of science. SC.O.7.1.4 compare and contrast the historical significance of scientific discoveries.	SC.7.1.ES.2 explore the contributions of science innovations to modern day life.	SC.PD.7.1.ES.2 Level IV students perform the following complex task without assistance: Student will • describe the importance of scientific innovations. EX: describe the fastest way to communicate information (email vs general mail vs. instant messaging). Level III students perform the following without assistance: Student will • explore the contributions of science innovations to modern day life. EX: compare benefits of transportation by car vs airplane vs bicycle. EX: contrast home cooked food with fast food. Level II students perform the following with assistance: Student will • match scientific developments to their uses. EX: match a picture of a telephone to someone communicating on one. EX: match a microwave to a bag of microwave popcorn. Level I students attempt to perform the following with assistance: Student will • identify a modern innovation. EX: identify a telephone. EX: identify a computer.

GRADE SEVEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.S.7.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth /environmental science and astronomy.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.7.2.1 demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth/environmental science, and astronomy. SC.O.7.2. 2 identify and describe disease causing organisms (such as bacteria, viruses, protozoa, fungi) and the diseases they cause. SC.O.7.2. 3 explain how skeletal, muscular, and integumentary systems work together in the human body. SC.O.7.2. 4 compare the level of organization of cells,	SC.7.2.ES.1 describe the effects of environmental changes on plants and animals.	SC.PD.7.2.ES.1 Level IV students perform the following complex task without assistance: Student will • predict the effects of environmental changes on plants and animals. EX: predict how air pollution will affect air quality. EX: predict how water pollution will affect drinking water.
		Level III students perform the following without assistance: Student will • describe the effects of environmental changes on plants and animals. EX: describe how air pollution can make it difficult to breathe. EX: describe how water pollution kills fish.
		Level II students perform the following with assistance: Student will • identify sources of pollution. EX: select pictures representing sources of pollution such as oil spills, litter, smoke stacks, or cars from non-polluting items such as bicycle, recycling bin.

	tissues and organs in living things.		
SC.O.7.2.5	construct simple keys to differentiate among living things with similar characteristics.		Level I students attempt to perform the following with assistance: Student will • identify pollution (air, water, and land). EX: choose the picture that represents pollution given two or more choices (e.g., dirty streams or a clean stream; litter or a trash can).
SC.O.7.2. 6	use pictures to show cyclical processes in nature (e.g., water cycle, nitrogen cycle, or carbon cycle).		
SC.O.7.2.7	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).		
SC.O.7.2. 8	analyze how changes in the environment have led to reproductive adaptations through natural selection.		
SC.O.7.2.9	explain how an organism's behavior response is a combination of heredity and the environment.		
SC.O.7.2.10	analyze the differences in the growth, development and reproduction in flowering and non-flowering plants.		
SC.O.7.2.11	predict the trends of interdependent		

	populations if one of the limiting factors is changed.		
SC.O.7.2.12	evaluate the consequences of the introduction of chemicals into the ecosystem (e.g., environmental consequences, human health risks, or mutations).		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.7.2.13 compare differences among elements, compounds, homogeneous and heterogeneous mixtures. SC.O.7.2.14 examine the differences in types of solutions (e.g., solutes and solvents, relative concentrations, conductivity, pH) SC.O.7.2.15 examine chemical reactions involving acids and bases by monitoring color changes of indicator(s) and identifying the salt formed in the neutralization reaction. SC.O.7.2.16 write word equations to describe how sound is perceived by the ear. SC.O.7.2.17 describe the movement of individual particles and verify the conservation of matter during the phase changes (e.g., melting, boiling, or freezing SC.O.7.2.18 identify the characteristics of sound waves and describe how sound is perceived by the ear. SC.O.7.2.19 define the absorption	SC.7.2.ES.2 are describe the properties and processes of matter and energy.	SC.PD.7.2.ES.2 Level IV students perform the following complex task without assistance: Student will • predict the properties of processes of matter and energy. EX: determine what will happen when you mix vinegar and baking soda (acid and base). EX: determine what will happen when you mix salt and water (makes a solution). EX: determine what will happen when you mix water and sand (makes a heterogeneous mixture). Level III students perform the following without assistance: Student will • describe the properties and processes of matter and energy. EX: describe what happens to water when you heat or cool it. (liquid to gas or liquid to solid). Level II students perform the following with assistance: Student will • match the properties and processes of matter and energy. EX: match pictures that demonstrate one of the states of matter. (solid, liquid, gas). EX: match pictures of thermometers with pictures of objects that are hot or cold. Level I students attempt to perform the following with assistance: Student will • identify the properties of matter and energy. EX: point to the picture that shows a solid object. EX: point to the picture that shows light energy (light bulb).

	and reflection of light as translucent, opaque and transparent.		
SC.O.7.2.20	interpret and illustrate changes in waves as they encounter various mediums (e.g., mirrors, or lenses).		
SC.O.7.2.21	investigate absorption and reflection of light by an object.		
SC.O.7.2.22	characterize AC and DC circuits.		
SC.O.7.2.23	explain conservation of matter and energy and investigate the different forms of energy (e.g., mechanical, potential, kinetic, or gravitational).		
SC.O.7.2.24	perform experiments with simple machines to demonstrate the relationship between forces and distance; use vectors to represent motion.		
SC.O.7.2.25	explain the effect of gravity on falling objects (e.g., $g=9.8m/s^2$, object dropped on earth and on moon).		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.7.2.26 describe and compare the causes of tides, surfs and currents. SC.O.7.2.27 examine the effects of the sun's energy on oceans and weather (e.g., air masses, or convection currents). SC.O.7.2.28 interpret GIS maps and create and interpret topographical maps. SC.O.7.2.32 explain how changing latitude affects climate. SC.O.7.2.29 describe rock (e.g., crystal/particle size, or mineral composition and uses). SC.O.7.2.30 classify rocks (e.g., rock cycle). SC.O.7.2.31 determine the relevant age of rock layers using index fossils and the law of superposition. SC.O.7.2.33 trace the life cycle of a star.	SC.7.2.ES.3 describe the factors that affect weather.	SC.PD.7.2.ES.3 Level IV students perform the following complex task without assistance: Student will • interpret simple weather charts. EX: indicate the month with the most rainfall from a chart. Level III students perform the following without assistance: Student will • describe the factors that affect weather (climate and location). EX: describe how living near a body of water affects the weather (more or less rain depending on your location). Level II students perform the following with assistance: Student will • identify seasonal weather patterns. EX: identify the season in which you would mostly likely have hot, sunny days. Level I students attempt to perform the following with assistance: Student will • identify different types of weather. EX: given a choice of three pictures, show the picture of rain.

GRADE SEVEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.7.3)

Students will

- explore the relationship between the parts and the whole system; construct a variety of useful models; examine changes that occur in an object or system.
- demonstrate an understanding of the interdependence between science and technology.
- demonstrate the ability to utilize technology to gather data and communicate designs, results and conclusions.
- demonstrate the ability to evaluate the impact of different points of view on health, population, resource and environmental practices.

Essence of Standard: S.3 The student will demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.7.3.1 explore the relationship between the parts of a system to the whole system. SC.O.7.3.2 construct a variety of use full models of an object, event, or process. SC.O.7.3.3 compare and contrast changes that occur in an object or a system to its original state. SC.O.7.3.4 compare and contrast the influence that a variation in scale will have on the way an object or system works (e.g., cooling rates of	SC.S.7.3.ES.1 describe the relationship of the various components of a system with the overall system.	SC.PD.7.3.ES.1 Level IV students perform the following complex task without assistance: Student will • predict the changes in systems and relate them to practical uses in technology. EX: predict what happens to the respiratory system if you inhale smoke. EX: predict how the earth would be affected if the sun no longer existed.
		Level III students perform the following without assistance: Student will • describe the relationship of the various components of a system with the overall system. EX: describe the relationship of the parts of a water cycle to the whole. EX: describe the relationships of animals within the food chain.

	different-sized containers of water, strength of different-sized constructions from the same material, or flight characteristics of different-sized model airplanes		Level II students perform the following with assistance: Student will • identify the function of system. EX: point to a picture of lungs when asked what helps us to breathe. EX: identify what plants need to live.
SC.O.7.3.5	research every day applications and interactions of science and technology.		Level I students attempt to perform the following with assistance: Student will • point to the components of a system. EX: point to the picture of a major organ of one of the systems (heart, lungs, brain).
SC.O.7.3.6	evaluate and critically analyze mass media reports of scientific developments and events.		
SC.O.7.3.7	explore the connections between science, technology, society and career opportunities		

GRADE EIGHT EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Nature of Science (SC.S.8.1)
Students will

- demonstrate an understanding of the history and nature of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- demonstrate the ability to use inquiry process to solve problems.

Essence of Standard: S.1. demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
SC.O.8.1.1	formulate scientific explanations based on historical observations and experimental evidence, accounting for variability in experimental results.	SC.8.1.ES.1 use scientific processes and skills to organize data.	SC.PD.8.1.ES.1 Level IV students perform the following complex task without assistance: Student will • draw conclusions from collected data. EX: use the leaf chart to draw conclusions. EX: use the rain information collected to draw conclusions.
SC.O.8.1.2	demonstrate how a testable methodology is employed to seek solutions for personal and societal issues. (e.g., "scientific method").		Level III students perform the following without assistance: Student will • use scientific processes and skills to organize data. EX: graph number of broad flat leaves and long thin leaves in a simple histogram or bar graph. EX: record the amount of rain collected each day on a chart or graph.

SC.O.8.1.3	relate societal, cultural and economic issues to key scientific innovations.		Level II students perform the following with assistance Student will • use scientific processes and skills to collect data. EX: in a leaf collection, sort the leaves according to shape and record the number of each. EX: use a rain gauge to collect rain.
SC.O.8.1.4	conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic).		Level I students attempt to perform the following with assistance: Student will • match an appropriate conclusion with data. EX: select picture that shows what happens when you burn something. EX: select the picture that shows what happens when ice cream is left in the sun.
SC.O.8.1.5	implement safe procedures and practices when manipulating equipment, materials, organisms, and models.		
SC.O.81.6	use appropriate technology solutions within a problem solving setting to measure and collect data; interpret data; analyze and/or report data; interact with simulations; conduct research; and present and communicate conclusions.		
SC.O.8.1.7	design, conduct, evaluate and revise experiments (e.g.,		

	compose a question to be investigated, design a controlled investigation that produces numeric data, evaluate the data in the context of scientific laws and principles, construct a conclusion based on findings, propose revisions to investigations based on manipulation of variables and/or analysis of error, or communicate and defend the results and conclusions).		
SC.O.8.1.8	draw conclusions from a variety of data sources to analyze and interpret systems and models (e.g., use graphs and equations to measure and apply variables such as rate and scale, evaluate changes in trends and cycles, predict the influence of external variances such as potential sources of error, or interpret maps.		
SC.O.8.1.1	formulate scientific explanations based on historical observations and experimental evidence, accounting	SC.8.1. ES.2 describe the importance of scientific innovations.	SC.PD.8.1.ES.2 Level IV students perform the following complex task without assistance: Student will • explain the importance of scientific innovations.

	for variability in experimental results.		EX: explain the benefits of having a computer in your room. EX: explain the benefit of using an airplane, washing machine, etc.
SC.O.8.1.2	demonstrate how a testable methodology is employed to seek solutions for personal and societal issues. (e.g., "scientific method").		Level III students perform the following without assistance: Student will • describe the importance of scientific innovations. EX: describe the quickest way to cook a meal. EX: describe the quickest way to travel long distance.
SC.O.8.1.3	relate societal, cultural and economic issues to key scientific innovations.		Level II students perform the following with assistance Student will • identify a discovery that has made life easier. EX: circle the picture showing a transportation discovery (give choice of horse and buggy to a car). EX: circle the picture of a discovery that makes home life easier.
SC.O.8.1.4	conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic).		Level I students attempt to perform the following with assistance: Student will • identify the use of a scientific discovery. EX: choose the picture of a person using a scientific discovery (e.g., a picture of a person talking on a cell phone). EX: point to a picture that represents a scientific discovery.
SC.O.8.1.5	implement safe procedures and practices when manipulating equipment, materials, organisms, and models.		
SC.O.81.6	use appropriate technology solutions within a problem solving setting to measure and collect data; interpret data;		

	analyze and/or report data; interact with simulations; conduct research; and present and communicate conclusions.		
SC.O.8.1.7	design, conduct, evaluate and revise experiments (e.g., compose a question to be investigated, design a controlled investigation that produces numeric data, evaluate the data in the context of scientific laws and principles, construct a conclusion based on findings, propose revisions to investigations based on manipulation of variables and/or analysis of error, or communicate and defend the results and conclusions).		
SC.O.8.1.8	draw conclusions from a variety of data sources to analyze and interpret systems and models (e.g., use graphs and equations to measure and apply variables such as rate and scale, evaluate changes in trends and cycles, predict the influence of external		

	variances such as potential sources of error, or interpret maps.		

GRADE EIGHT EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.S.8.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth /environmental science and astronomy.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
SC.O.8.2.1	demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth/environmental science, and astronomy.	SC.8.2.ES.1 determine patterns in nature.	SC.PD.8.2.ES.1 Level IV students perform the following complex task without assistance: Student will • model patterns in nature. EX: given 3-4 pictures of a seed growing to plant, put in order. EX: arrange pictures of the stages of the moon in order.
SC.O.8.2.2	examine and describe the structures and functions of cell organelles.		Level III students perform the following without the assistance: Student will • describe patterns in nature. EX: describe the pattern in nature for plant stages. EX: describe a simple food chain.
SC.O.8.2.3.	explain how the circulatory, respiratory and reproductive systems work together in the human body.		Level II students perform the following with assistance: Student will • identify patterns in nature. EX: identify the ending point of a pattern (i.e., a seed becoming a plant).
SC.O.8.2.4	compare the variations in cells, tissues and organs of the circulatory, respiratory and reproductive		Level I students attempt to perform the following with assistance: Student will • match a pattern in nature. EX: match like pictures representing patterns of nature (winter to

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
	systems of different organisms.		winter, seed to seed).
SC.O.8.2.5	discuss how living cells obtain the essentials of life through chemical reactions of transpiration, respiration and photosynthesis.		
SC.O.8.2.6	analyze how behaviors of organisms lead to species continuity (e.g., reproductive/mating behaviors, or seed dispersal).		
SC.O.8.2.7	demonstrate the basic principles of genetics; introduce Mendel's law, monohybrid crosses, production of body and sex cells (mitosis/meiosis), genes, chromosomes, and inherited traits.		
SC.O.8.2.8	compare patterns of human development to other vertebrates.		
SC.O.8.2.9	organize groups of unknown organisms based on observable characteristics (e.g., create dichotomous keys).		
SC.O.8.2.10	trace matter and energy flow in a food web as it flows from		

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
	sunlight to producers and consumers, 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).		
SC.O.8.2.11	use the periodic table to locate and classify elements as metallic, non-metallic or metalloid.	SC.8.2.ES.2 recognize sources of energy in nature.	SC.PD.8.2.ES.2 Level IV students perform the following complex task without assistance: Student will • categorize sources of energy in nature . EX: categorize sources of energy as light, temperature or sound. EX: categorize a set of pictures as either kinetic or potential energy (car moving, piece of fire wood, basketball bouncing, and a match).
SC.O.8.2.12	reconstruct development models of the atom (e.g., Crookes, Thompson, Becquerel, Rutherford, or Bohr).		Level III students perform the following without the assistance: Student will • recognize sources of energy in nature. EX: identify the sources of energy found in nature (coal, oil, natural gas, wind, sun).
SC.O.8.2.13	calculate the number of protons, neutrons, and electrons and use the information to construct a Bohr model of the atom.		Level II students perform the following with assistance: Student will • identify objects that use various fuel sources. EX: point to pictures of objects that use gasoline or electricity.
SC.O.8.2.14	classify elements into their families based upon their valence electrons.		Level I students attempt to perform the following with assistance: Student will • select a source of energy in nature. EX: point to a picture of the sun. EX: point to the picture of a windmill.
SC.O.8.2.15	evaluate the variations in diffusion rates and examine the effect of changing temperatures.		
SC.O.8.2.16	conduct and classify		

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
	chemical reactions by reaction type (e.g., synthesis, decomposition, single replacement or double replacement); energy type (e.g., endothermic and exothermic); and write word equations for the chemical reactions.		
SC.O.8.2.17	identify and describe factors that affect chemical reaction rates, including catalysts, temperature changes, light energies and particle size.		
SC.O.8.2.18	examine the various sources of energy (e.g., fossil fuels, wind, solar, geothermal, nuclear, biomass).		
SC.O.8.2.19	explain the Doppler effect (e.g., sound).		
SC.O.8.2.20	quantitatively represent wavelength, frequency and velocity (e.g., $V=\lambda f$).		
SC.O.8.2.21	relate the conservation of energy theory to energy transformations (e.g., electrical/heat, or mechanical/heat).		
SC.O.8.2.22	quantitatively represent work, power, pressure (e.g.,		

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
	Work=Force x distance, Power=Work/time, or pressure=force/area) from collected data.		
SC.O.8.2.23	graph and interpret the relationships of distance versus time, speed versus time, and acceleration versus time.		
SC.O.8.2.25	illustrate and calculate the mechanical advantage of simple machines.		
SC.O.8.2.24	describe Newton's Laws of Motion; identify examples, illustrate qualitatively and quantitatively drawing vector examples.		
SC.8.2.26	research and draw conclusions related to the quality and quantity of surface and ground water.	SC.8.2.ES.3 identify the components of patterns in earth and space science.	SC.PD.8.2.ES.3 Level IV students perform the following complex task without assistance: Student will • sequence patterns in earth and space science. EX given a list of planet names or pictures of planets, arrange them in order by size (smallest to largest). EX: given a list of the stages of the water cycle with one stage blank, select the missing stage from 3 choices.
SC.O.8.2.27	identify and explain the principle forces of plate tectonics and related geological		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
events (e.g., earthquakes, volcanoes, or landforms). SC.O.8.2.28 determine the impact of oceans on weather and climate; relate global patterns of atmospheric movement on local weather. SC.O.8.2.29 analyze the forces of tectonics, weathering and erosion that have shaped the earth's surface SC.O.8.2.30 model processes of soil formation and suggest methods of soil preservation and conservation. SC.O.8.2.31 research and recognize the societal concerns of exploration and colonization of space. SC.O.8.3.32 explain phenomena associated with motions in sun-earth-moon system. (e.g., eclipses, tides, or seasons). SC.O.8.2.33 describe the origin and orbits of comets, asteroids, and meteoroids.		Level III students perform the following without assistance: Student will • identify the components of patterns in earth and space science. EX: identify objects found in space, given pictures of sun, stars, planets and objects not found in space, such as trees, dogs and houses. EX: identify the components of the water cycle. Level II students perform the following with assistance: Student will • match patterns in earth and space science using a model. EX: Put picture of the season in correct order following a model. EX: Put pictures of planets in the correct order following a model. Level I students attempt to perform the following with assistance: Student will • identify a concepts in earth and space science. EX: point to a picture that represents a season. EX: point to a picture of a planet.

GRADE EIGHT EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.8.3)

Students will

- demonstrate the ability to use inquiry process to explore systems, models, and changes.
- demonstrate an understanding of the interdependence between science and technology.
- demonstrate an understanding of the utilization of technology to gather data and communicate designs, results and conclusions.
- demonstrate an understanding of the personal and societal benefits of science, and an understanding of public policy decisions as related to health, population, resource and environmental issues.

Essence of Standard: S.3 The student will demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.8.3.1 synthesize concepts across various science disciplines to better understand the natural world (e.g., form and function, systems, or change over time). SC.O.8.3.2 investigate, compare and design scientific and technological solutions to personal and societal problems. SC.O.8.3.3 communicate experimental designs, results and conclusions using advanced technology tools. SC.O.8.3.4 collaborate to present research on current environmental and	SC.8.3.ES.1 determine scientific and technological solutions for everyday problems.	SC.PD.8.3.ES.1 Level IV students perform the following complex task without assistance: Student will • apply scientific and technological solutions to everyday problems. EX: use the computer to communicate to a classmate. EX: use a microwave oven to reheat food.
		Level III students perform the following without assistance: Student will • determine scientific and technological solutions for everyday problems. EX: determine solution to carrying a stack of CDs (Mp3 player). EX: determine an alternative to using a land-line phone.
		Level II students perform the following with assistance: Student will • match scientific and technological solutions to everyday problems EX: indicate which of the following items would be used to measure liquids: a beaker, a Bunsen burner or a dinner plate.,

Grade Level Objectives		Extended Grade Level Standards	Performance Descriptors
	technological issues to predict possible solutions.		Level I students attempt to perform the following with assistance: Student will • identify a scientific or technological solution to an everyday problem. EX: point to the picture of the microwave oven. EX: point to the picture of a computer.
SC.O.8.3.5	explore occupational opportunities in science, engineering and technology and evaluate the required academic preparation.		
SC.O.8.3.6	given a current science-technology-societal issue, construct and defend potential solutions.		

GRADE TEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Nature of Science (SC.S.1)
Students will

- demonstrate an understanding of the history and nature of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- demonstrate the ability to use inquiry process to solve problems.

Essence of Standard: S.1. demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CB.1.1 formulate scientific explanations based on historical observations and experimental evidence, accounting for variability in experimental results. SC.O.CB.1.2 demonstrate how a testable methodology is employed to seek solutions for personal and societal issues (e.g., "scientific methods"). SC.O.CB.1.3 relate societal, cultural and economic issues to key scientific innovations. SC.O.CB.1.5 implement safe	SC.CB.1.ES.1 safely use laboratory equipment.	SC.PD.CB.1.ES.1 Level IV students perform the following complex task without assistance: Student will • sequence the steps to safely conduct lab experiments. EX: given safety rules, determine the order in which they would be completed. Level III students perform the following without assistance: Student will • safely use laboratory equipment. EX: given a lab experiment (pour liquid from a beaker into graduated cylinder) choose the correct safety equipment (eye protection and apron). EX: given a lab experiment (Bunsen burner, beaker) choose the correct safety equipment (oven mitt, tongs, hot hands). Level II students perform the following with assistance: Student will • select the correct safety laboratory equipment for conducting experiments. EX: match items to correct usage: goggles to eyes, apron to body, hair tie to hair, closed vs. open shoes.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
procedures and practices when manipulating equipment, materials, organisms, and models.		Level I students attempt to perform the following with assistance: Student will • identify laboratory safety equipment. EX: given pictures of an object choose the requested item: goggles, apron, shoes, hair tie, oven mitts, tongs or hot hands.
SC.O.CB.1.4 conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic). SC.O.CB.1.6 use appropriate technology solutions within a problem solving setting to measure and collect data; interpret data; analyze and/or report data; interact with simulations; conduct research;	SC.CB.1.ES.2 connect historical scientific innovations to modern day usage.	SC.PD.CB.1.ES.2 Level IV students perform the following complex task without assistance: Student will • sequence related scientific innovations. EX: sequence Bunsen burner, hot plate, microwave in the order in which they were invented. EX: sequence pictures of crank phone, rotary dial phone, touchtone phone, and cell phone in order of development.
		Level III students perform the following without assistance: Student will • connect historical scientific innovations to modern day usage. EX: connect magnifying glass to microscope. EX: connect slide of bacteria to picture of pill (antibiotic).
		Level II students perform the following with assistance Student will • choose the appropriate use of a scientific instrument. EX: choose a microscope to view a slide. EX: choose x-ray to see broken bone.
		Level I students attempt to perform the following with assistance: Student will • identify a scientific instrument/innovations. EX: given a picture of a scientific instrument (e.g., microscope, Bunsen burner, hot plate, microwave, pill), identify the scientific instrument. EX: given picture of a x-ray and a different item, choose the

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
and present and communicate conclusions.		requested item.
SC.O.CB.1.7 design, conduct, evaluate and revise experiments (e.g., compose a question to be investigated, design a controlled investigation that produces numeric data, evaluate the data in the context of scientific laws and principles, construct a conclusion based on findings, propose revisions to investigations based on manipulation of variables and/or analysis of error, or communicate and defend the results and conclusions).		
SC.O.CB.1.8 draw conclusions from a variety of data sources to analyze and interpret systems and models (e.g., use graphs and equations to measure and apply variables		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
such as rate and scale, evaluate changes in trends and cycles, or predict the influence of external variances such as potential sources of error).		

GRADE TEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives; demonstrate an understanding of the interrelationships among physics, chemistry, biology and the earth and space sciences.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CB.2.27 compare the characteristics, structures and life cycles of simple to complex organisms.	SC.CB.2.ES.1 classify organisms according to their characteristics and structures.	SC.PD.CB.2.ES.1 Level IV students perform the following complex task without assistance: Student will • classify organisms according to their methods of reproduction. EX: identify that birds lay eggs, dogs have puppies, etc.
		Level III students perform the following without assistance: Student will • classify organisms according to their characteristics and structures. EX: classify birds and fish according to features (scales, feathers, fur).
		Level II students perform the following with assistance: Student will • identify animals according to characteristics. EX: identify an animal that has fur (feathers, scales). EX: Identify an aquatic animal, identify land animal.
		Level I students attempt to perform the following with assistance: Student will • identify animals. EX: point to a horse.

SC.O.CB.2.4	analyze the flow of matter and energy through cellular processes such as photosynthesis, respiration and fermentation.	SC.CB.2.ES.2 apply the knowledge of populations and ecology to the environment.	SC.PD.CB.2.ES.2 Level IV students perform the following complex task without assistance: Student will • predict the outcome of plant growth with limited factors. EX: predict what will happen if too many seeds are planted in one container. EX: predict what will happen if there is drought, extreme cold, or flooding.
SC.O.CB.2.11	compile GIS and traditional map data to locate patterns in biological and environmental systems.		Level III students perform the following without assistance: Student will • apply the knowledge of populations and ecology to the environment. EX: perform experiments with plants; adding too much water to plant versus no water no sunlight with sunlight.
SC.O.CB.2.12	characterize complex interactions of organisms within ecosystems based on their niches including interspecific and interaspecific.		Level II students perform the following with assistance: Student will • identify factors that allow plant growth. EX: given pictures, identify factors that seeds need to grow (sun, rain soil, rock). EX: given pictures of rock, car, boat, sun determine which will help plants grow.
SC.O.CB.2.13	evaluate the use of a particular sampling technique to study ecosystems.		Level I students attempt to perform the following with assistance: Student will • recognize a seed. EX: identify pictures of seeds. EX: identify seed given a seed/another item.
SC.O.CB.2.14	predict changes in a ecosystem's productivity when environmental variables are altered.		
SC.O.CB.2.15	analyze graphs		

	reflecting changes in populations to predict future populations.		
SC.O.CB.2.22	compare and contrast the morphology, reproduction and life cycles of plants in view of the habitats supporting the plants.		
SC.O.CB.2.23	evaluate forest management practice for short and long-term resource utilization.		
SC.O.CB.2.24	assess the importance of wild and cultivated plants to human society, economics and environment.		
SC.O.CB.2.25	analyze animal behaviors and reproductive strategies as they lead to evolutionary success in specific environment.		
SC.O.CB.2.26	compare the characteristics, structures and		

	life cycles of simple to complex organisms.		
SC.O.CB.2.7 SC.O.CB.2.8 SC.O.CB.2.9 SC.O.2.10.10	assess water use practices based on water supply and quality. defend the use of recycling as a tool for energy and resource conservation. illustrate the functioning of modern sanitary landfills and compare them with historic disposal methods. predict the effects of human activity on cycles of matter and energy in the biosphere over time.	SC.CB.2.ES.3 recognize how humans impact the environment.	SC.PD.CB.2.ES.3 Level IV students perform the following complex task without assistance: Student will • describe how humans lessen their impact on the environment. EX: describe benefits of recycling versus landfill. EX: identify benefits of purchasing recyclable items vs. non recyclable items. EX: discuss whether people should dispose of their trash or recycle. Level III students perform the following without assistance: Student will • recognize how humans impact the environment. EX: tell why turning lights off when no one is in the room impacts the environment. EX: describe how people should dispose of trash or recycle. Level II students perform the following with assistance: Student will • identify items that can be recycled. EX: given pictures of a soda can and a cat, point to object that can be recycled. (Other examples of items: glass bottle and Styrofoam; leaf and rock).

SC.O.CB.2.16 SC.O.CB.2.17	model cycles in soil including natural and human interactions that influence soil development. evaluate the effects of biocide use and chemical hazards on the diversity of life in ecosystems.		Level I students attempt to perform the following with assistance: Student will • choose the appropriate method for disposing trash. EX: identify trash can, recycle bin, garbage bag.

GRADE TEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.S.3)

Students will

- demonstrate the ability to use inquiry process to explore systems, models, and changes.
- demonstrate an understanding of the interdependence between science and technology.
- demonstrate an understanding of the utilization of technology to gather data and communicate designs, results and conclusions.
- demonstrate an understanding of the personal and societal benefits, the impact of different points of view, predict the long-tern societal impact and an understanding of public policy decisions as related to health, population, resource and environmental issues.

Essence of Standard: S.3 demonstrate the ability to evaluate the personal and societal benefits of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CB.3.1 synthesize concepts across various science disciplines to better understand the natural world (e.g., form and function, systems, or change over time). SC.S.CB.3.2 investigate, compare and design scientific and technological solutions to address personal and societal problems. SC.S.CB.3.3 communicate experimental designs, results and conclusions	SC.CB.3.ES.1 evaluate the impact of science and technology on the environment.	SC.PD.CB.3.ES.1 Level IV students perform the following complex task without assistance: Student will • use technology to predict the impact of science on the environment. EX: given daily temperature, rainfall , wind direction, the student will chart and interpret weather information. Level III students perform the following without assistance: Student will • evaluate the impact of science and technology on the environment. EX: read the temperature on a thermometer and record it. EX: using a picture of a rain gauge, read and record the amount of rain. Level I students attempt to perform the following with assistance: Student will • identify science and technology tools. EX: given pictures of a thermometer, rain gauge, weather vane identify requested item. EX: given a thermometer and a rock, select the thermometer.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
using advanced technology tools. SC.S.CB.3.4 collaborate to present research on current environmental and technological issues to predict possible solutions. SC.S.CB.3.5 explore occupational opportunities in science, engineering and technology and evaluate the required academic preparation. SC.S.CB.3.6 given a current science-technology-societal issue, construct and defend potential solutions.		Level I students attempt to perform the following with assistance: Student will: • match science-technology tools. EX: given 3 pictures, a thermometer and two pictures (thermometer and rock) match.

GRADE ELEVEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives
Standard 1: Nature of Science (SC.S.CC.1)
Students will

- demonstrate an understanding of the history and nature of science as a human endeavor encompassing the contributions of diverse cultures and scientists.
- demonstrate the ability to use inquiry process to solve problems.

Essence of Standard: S.1. demonstrate the understanding of the history of science and the ways the inquiry process is used to solve problems.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CC. 1.4 conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic SC.O.CC. 1.5 implement safe procedures and practices when manipulating equipment, materials, organisms, and models. SC.O.CC. 1.6 use appropriate technology solutions within a problem solving setting to	SC.CC.1.ES.1 safely use laboratory equipment to measure items.	SC.PD.CC.1.ES.1 Level IV students perform the following complex task without assistance: Student will • interpret and graph collected data. EX: graph the amount of liquid in various beakers. EX: given a bar graph of different temperatures, answer questions about the data . Level III students perform the following without assistance: Student will • safely use laboratory equipment to measure items. EX: select and use laboratory equipment to measure volume. EX: determine which object should be used to safely handle a hot pan or beaker on a Bunsen burner. Level II students perform the following with assistance: Student will • match the instrument to its function. EX: given a beaker and a thermometer, choose the one that measures amount. Level I students attempt to perform the following with assistance: Student will • identify laboratory equipment.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
measure and collect data; interpret data; analyze and/or report data; interact with simulations; conduct research; and present and communicate conclusions. SC.O.CC. 1.7 design, conduct, evaluate and revise experiments (e.g., compose a question to be investigated, design a controlled investigation that produces numeric data, evaluate the data in the context of scientific laws and principles, construct a conclusion based on findings, propose revisions to investigations based on manipulation of variables and/or analysis of error, or communicate and defend the results and conclusions). SC.O.CC. 1.8 draw conclusions from a variety of data sources to analyze and interpret systems and models (e.g., use graphs and equations to measure and apply variables such as rate		EX: select requested item (goggles, beaker, thermometer).

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
and scale, evaluate changes in trends and cycles, predict the influence of external variances such as potential sources of error, or interpret maps).		
SC.O.CC.1.1 formulate scientific explanations based on historical observations and experimental evidence, accounting for variability in experimental results. SC.O.CC.1.3 relate societal, cultural and economic issues to key scientific innovations.	SC.CC.1.ES.2 identify scientific innovations in chemistry	SC.PD.CC.1.ES.2 Level IV students perform the following complex task without assistance: Student will • sequence chronogically related scientific innovations. EX: sequence pan balance, triple beam balance and electronic balance in order that they were invented. EX: given pictures of fire, stove, microwave, sequence them in order of discovery.
		Level III students perform the following without assistance: Student will identify scientific innovations in chemistry EX: discuss the use and benefits of plastic in modern day life.
		Level II students perform the following with assistance: Student will • match a modern scientific instrument to its use. EX: match a thermometer to taking temperature, microwave to heating food, stopwatch to keeping time.
		Level I students attempt to perform the following with assistance: Student will • identify a modern scientific instrument. EX: choose which is a more modern instrument, an electronic scale or a balance scale. EX: choose which is a more modern instrument, a digital thermometer or a mercury thermometer.
The following objective was not included in the extended standards:		

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CC.1.2 demonstrate how a testable framework is employed to seek solutions for personal and societal issues. (e.g., "scientific method").		

GRADE ELEVEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 2: Content of Science (SC.CC.2)

Students will

- demonstrate knowledge, understanding and applications of scientific facts, concepts, principles, theories, and models as delineated in the objectives.
- demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth /environmental science and astronomy.
- apply knowledge, understanding and skills of science subject matter/concepts to daily life experiences.

Essence of Standard: S.2 apply knowledge, understanding and skills of science subject matter.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CC.2.1 classify examples of matter as pure substance or mixture. SC.O.CC.2.2 compare and contrast the properties of metals, nonmetals and metalloids. SC.O.CC.2.3 research the sources and uses of elements. SC.O.CC.2.4 using kinetic energy explain the physical states of matter. SC.O.CC.2.5 perform calculations using the gas laws. SC.O.CC.2.6 predict the physical and chemical properties of an element based on the relationship	SC.CC.2.ES.1 classify examples of matter based on their properties.	SC.PD.CC.2.ES.1 Level IV students perform the following complex task without assistance: Student will • organize examples of solids into non-metals and metals. EX: sort real metal and non-mental items. EX: sort pictures of metal and non-metal items.
		Level III students perform the following without assistance: Student will • classify examples of matter based on their properties. EX: classify substances as pure substances or mixtures.
		Level II students perform the following with assistance: Student will • sort items based on properties of matter. EX: sort items into solids, liquids and gases.
		Level I students attempt to perform the following with assistance: Student will • identify an item as a solid or a liquid. EX: choose a solid item; rock or book. EX: choose a liquid item; water, coke, juice.

	between its group and period on the periodic table. SC.O.CC.2.7 examine experimentally the methods of separating mixtures (e.g., filtration, distillation, or chromatography). SC.O.CC.2.20 compare and contrast the properties of strong and weak acids and bases.		
SC.O.CC.2.8 generate the correct formula and/or name for ionic and molecular compounds. SC.O.CC.2.11 write and balance a chemical equation, given the information in a sentence. SC.O.CC.2.12 classify a balanced equation into one of the five basic types (e.g., synthesis or combination, decomposition, single replacement, double replacement, or combustion). SC.O.CC.2.19 recognize that water's role as a solvent is dependent upon its polarity.	SC.CC.2. ES.2 identify the difference between a chemical change and a physical change.	SC.PD.CC.2.ES.2 Level IV students perform the following complex task without assistance: Student will • apply knowledge of chemical changes. EX: given a log (insert other similar items), describe what needs to happen to cause a chemical change. Level III students perform the following without assistance: Student will • identify the difference between a chemical change and a physical change. EX: participate in an experiment: when vinegar and baking soda are combined in one glass and oil and water in a second glass, identify which one produces a chemical change. Level II students perform the following with assistance: Student will • identify a chemical change. EX: given two pictures of cutting a log versus burning a log, identify which picture shows a chemical change.

SC.O.CC.2.21 predict the product of an acid-base reaction. SC.O.CC.2.23 classify reactions as exothermic and endothermic reactions by the direction of heat flow in a chemical reaction.		Level I students attempt to perform the following with assistance: Student will • identify a physical change. EX: given two pictures (cutting paper and burning paper) identify which is a physical change. EX: given two pictures (burning log and cutting log), identify which shows a physical change.
SC.O.CC.2.13 perform unit conversions using dimensional analysis. SC.O.CC.2.14 apply the mole concept to chemical formulas to find the molar mass. SC.O.CC.2.15 calculate the percent composition by mass of the elements in a compound. SC.O.CC.2.16 perform mole conversions to generate values for theoretical yield, percentage yield and to identify the limiting reactant. SC.O.CC.2.18 perform solution concentration calculations (e.g., molarity, or ppm). SC.O.CC.2.24 perform experiments to determine this specific capacity of metal.	SC.CC.2. ES.3 compare substances by mass, temperature or concentration.	SC.PD.CC.2.ES.3 Level IV students perform the following complex task without assistance: Student will • predict the changes in mass, temperature or concentration, given different circumstances. EX: Mass- given a deflated balloon, predict what will happen as the balloon is blown-up. EX: Temperature- determine what happens to a snowman as temperature increases. EX: Concentration- determine what happens when a teaspoon of sugar is added to lemonade, tea or water (tastes sweeter).
		Level III students perform the following without assistance: Student will ▪ compare substances by mass, temperature or concentration. EX: Mass - Weigh 2 different substances on a pan balance and determine which has more mass. EX: Temperature - given 2 buckets of water, one in the sun and one in the snow, determine which will be warmer and which will be colder. EX: Concentration - given two glasses of tea with different amounts of sugar, indicate which has a greater concentration of sugar (tastes sweeter).
		Level II students perform the following with assistance: Student will • recognize that mass and temperature can be changed. EX: given one block of wood first and another one on top, describe what happens to the mass when the second block is added.

		EX: describe what happens to the temperature of water when it boils.
		Level I students attempt to perform the following with assistance: Student will • identify that temperature is a measure of heat in a substance and that mass is the amount of matter in a substance. EX: given substances of two different temperatures indicate which is hotter. EX: given a large block and a small block, identify which has more mass.

The following objectives were not included in the extended standards:

SC.O.CC.2.9	classify compounds of having an ionic or covalent bonds.
SC.O.CC.2.17	determine experimentally the effects of temperature and concentration on solution properties (e.g., solubility, conductivity, or density and colligative properties).
SC.O.CC.2.22	compare and contrast the concepts of heat and temperature.
SC.O.CC.2.10	predict the polarity of a bond by calculating the electronegativity difference between the two elements in the bond.
SC.O.CC.2.25	interpret a phase change diagram.

GRADE ELEVEN EXTENDED SCIENCE
CONTENT STANDARDS AND ACHIEVEMENT DESCRIPTORS

Science Content Standards and Objectives

Standard 3: Application of Science (SC.CC.3)

Students will

- demonstrate the ability to use inquiry process to explore systems, models, and changes.
- demonstrate an understanding of the interdependence between science and technology.
- demonstrate an understanding of the utilization of technology to gather data and communicate designs, results and conclusions.
- demonstrate an understanding of the personal and societal benefits of science, and an understanding of public policy decisions as related to health, population, resource and environmental issues.

Essence of Standard: S.3 demonstrate an understanding of everyday applications and interactions of science and technology.

Grade Level Objectives	Extended Grade Level Standards	Performance Descriptors
SC.O.CC.3.1 synthesize concepts across various science disciplines to better understand the natural world (e.g., form and function, or systems and change over time). SC.O.CC.3.2 investigate, compare and design scientific and technological solutions to address personal and societal problems. SC.O.CC.3.3 communicate experimental designs, results and conclusions using	SC.CC.3.ES.1 describe the impact of technology on the environment.	SC.PD.CC.3.ES.1 Level IV students perform the following complex task without assistance: Student will • determine solutions to environmental problems. EX: determine solution to air pollution – electric cars, car pools. EX: determine solution to water pollution- prevent oil spills, clean up spills. EX: determine solution to trash/litter- recycle, composting, buying recycled products.
		Level III students perform the following without assistance: Student will • describe the impact of technology on the environment. EX: use pictures to identify the impact of water, land and air pollution. EX: describe how impact of solar panels reduces dependence on electricity. EX: describe how trash is reduced through recycling and reuse.

	advanced technology tools.		Level II students perform the following with assistance: Student will • recognize causes of pollution. EX: using pictures, match pollutions with their cause: Air pollution- caused by cars and factories Water pollution- caused by factories, oil spills Trash/litter – people.
SC.O.CC.3.4	collaborate to present research on current environmental and technological issues to predict possible solutions.		
SC.O.CC.3.5	explore occupational opportunities in science, engineering and technology and evaluate the required academic preparation.		Level I students attempt to perform the following with assistance: Student will • identify different types of pollution. EX: use pictures to match water pollution to dead fish; air pollution to smog.
SC.O.CC.3.6	given a current science-technology-societal issue, construct and defend potential solutions.		

Policy 2520.16: ***Alternate Academic Achievement Standards for West Virginia Schools***

Comment Log
January 12, 2007 – February 12, 2007

Action Type
N: No Response - Negative
NA: Not Accepted + Positive
A: Accepted o Neutral

Date	Individual/Organization	Comments	Action / Type	Rationale
		§126-44D-1. Extended Science Grades 3 – 8 and 10 and 11 Content Standards and Achievement Descriptors		
1-25-2007	Stephanie Lyon Autism Teacher Cabell County Schools	I like the idea of extended standards, however, I really wish that there were standards for all grades, not just the grades that take alternate assessment. We have kids that are K-2 especially who need standards and there aren't any. Sometimes, especially with lower functioning students, even the grade level standards modified are still too much. There need to be standards for every grade, or standards for different degrees of disabilities.	N/0	Not applicable to policy revisions.
1-30-2007	Deena Young Special Education Director	Page 1. 3.1.ES.1 and Levels I – IV change the word instruments to tool. Page 1. Level III second EX change the	A	

	RESA V	word above to items Page 1. Delete example and add: show how to use the provided tool. Page 24. 5.2.ES.1 remove the words "animals to" and change the word survive to "survival" and change Level III to reflect change. Page 33 Level II change "an" to "a" Page 43 Level IV second example add the word "will" after pollution Page 63 Level IV change first example to read: "use the computer to communicate to a classmate" Page 35. change,"EX: match the items that will sink or float to those that will not. To "match pictures of items that are hot to a thermometer."		
2-9-2007	Sandy Furbee Special Education Teacher Marion County Schools	SC.PD.CB.1.ES.1, 2, 3 Grade 10 Performance Descriptors and SC.CC.1.ES.1 and 2 Grade 11 Performance Descriptors include activities and equipment not found in traditional Special Education classrooms and will present a significant dollar investment. These materials include beakers, graduated cylinders, safety aprons, goggles, bunsen burners, beakers, hot hands, hot plate, microwave, microscopes, magnifying glass, slides, xray pictures, pan balance, triple beam balance, electronic balance, stopwatch. In some activities, pictures of these items might suffice it is unlikely that this group of	N/-	Not applicable to policy revisions

		learners would gain any functional knowledge without the real world items. Additionally, Regular Education teachers are unlikely to 'loan' these items that are breakable, expensive and hard to replace. Finally, please remember that it has been determined by IEP committee that these students can not achieve progress in most academic goals in the regular education environment even with supplemental aids and modification. While I strongly agree that students will benefit from grade level activities for these Science goals, I fear that access to materials will present a significant road block to implementation.		
2/20/07		*Results of the Alignment Study by Norm Webb through the Office of Assessment and Accountability indicated the Depth of Knowledge for the 11th to be high.*	A	*Minor adjustment were made to the DOK and not the content.*

Annette Carey

From: Nobody [nobody@wvde.state.wv.us]
Sent: Friday, February 09, 2007 2:18 PM
To: fibanez@wvde.state.wv.us; acarey@access.k12.wv.us
Subject: Comment Received for Policy 2510.16 (2007-02-09 14:17:41)

Please save this email in a "Comments Received Online" folder.
Your folder will be a backup. All comments are saved in our database.
The Complete Comments Report from the database can be found here:
http://129.71.2.32/r.html?id=c997c7c2902df3436c4e2506a911ebe2
This is an encrypted URL. Please Bookmark it.

Comment Received for Policy 2510.16
##
Name: Sandy Furbee
Organization: Marion County Schools
Email: sandyfurbee@aol.com
Title: SpEd Teacher
Address1: Route 1 Box 37
Address2:
City/State/Zip: Metz, , WV 26585
Role: Teacher
Posted: 2007-02-09 14:17:41
Posted from IP: 168.216.255.144

Comments for section Extended Science Grades 3 - 8 and 10 and 11 Content Standards and Achievement Descriptors
---
SC.PD.CB.1.ES.1, 2, 3 Grade 10 Performance Descriptors and SC.CC.1.ES.1 and 2 Grade 11 Performance Descriptors include activities and equipment not found in traditional Special Education classrooms and will present a significant dollar investment. These materials include beakers, graduated cylinders, safety aprons, goggles, bunsen burners, beakers, hot hands, hot plate, microwave, microscopes, magnifying glass, slides, xray pictures, pan balance, triple beam balance, electronic balance, stopwatch. In some activities, pictures of these items might suffice it is unlikely that this group of learners would gain any functional knowledge without the real world items. Additionally, Regular Education teachers are unlikely to 'loan' these items that are breakable, expensive and hard to replace. Finally, please remember that it has been determined by IEP committee that these students can not achieve progress in most academic goals in the regular education environment even with su!
pplemental aids and modification. While I strongly agree that students will benefit from grade level activities for these Science goals,I fear that access to materials will present a significant road block to implementation.

Annette Carey

From: Nobody [nobody@wvde.state.wv.us]
Sent: Thursday, January 25, 2007 11:09 AM
To: fibanez@wvde.state.wv.us; acarey@access.k12.wv.us
Subject: Comment Received for Policy 2510.16 (2007-01-25 11:08:45)

Please save this email in a "Comments Received Online" folder.
Your folder will be a backup. All comments are saved in our database.
The Complete Comments Report from the database can be found here:
http://129.71.2.32/r.html?id=c997c7c2902df3436c4e2506a911ebe2
This is an encrypted URL. Please Bookmark it.

Comment Received for Policy 2510.16
##
Name: Stephanie Lyon
Organization: Cabell County Schools
Email: stephanielyonmes@hotmail.com
Title: Autism Teacher
Address1: 3033 Bradley Road
Address2:
City/State/Zip: Huntington, WV 25704
Role: Teacher
Posted: 2007-01-25 11:08:45
Posted from IP: 168.216.107.120

Comments for section Extended Science Grades 3 - 8 and 10 and 11 Content Standards and Achievement Descriptors
---
I like the idea of extended standards, however, I really wish that there were standards for all grades, not just the grades that take alternate assessment. We have kids that are K-2 especially who need standards and there aren't any. Sometimes, especially with lower functioning students, even the grade level standards modified are still too much. There need to be standards for every grade, or standards for different degrees of disabilities.

126CSR44P

POLICY 2520.16: Alternate Academic Achievement Standards for West Virginia Schools

COMMENT PERIOD ENDS: February 12, 2007

COMMENT RESPONSE FORM

The following form is provided to assist those who choose to comment on Policy 2520.16: Alternate Academic Achievement Standards in science for West Virginia Schools. Additional sheets may be attached, if necessary.

Name : Deena Young Organization: RESA V

Title: Special Education Director

Street Address: 2507 Ninth Avenue

City: Parkersburg State: WV Zip: 26101

Please check the box below that best describes your role.

☐ School System Superintendent	☐ School System Staff	☐ Parent/Family
☐ Principal	☐ Teacher	☐ Business/Industry
X **Professional Support Staff**	☐ Service Personnel	☐ Community Member

COMMENTS/SUGGESTIONS

Extended Science Grades 3 – 8 and 10 and 11 Content Standards and Achievement Descriptors
Page 1. 3.1.ES.1 and Levels I – IV change the word instruments to tool.
Page 1. Level III second EX change the word above to items
Page 1. Delete example and add: show how to use the provided tool.
Page 24. 5.2.ES.1 remove the words "animals to" and change the word survive to "survival" and change Level III to reflect change.
Page 33 Level II can "an"to "a"
Page 43 Level IV second example add the word "will" after pollution
Page 63 Level IV change first example to read: "use the computer to communicate to a classmate"

Please direct all comments to:

Annette Carey
Office of Instruction
West Virginia Department of Education
Capitol Building 6, Room 304
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305-0330
E-Mail Address: acarey@access.k12.wv.us
Fax No.: (304) 558-3741