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K	ENGLISH	Oral Language	K.1	The student will demonstrate growth in the use of oral language. a) Listen to a variety of literacy forms, including stories and poems. b) Participate in choral speaking and recite short poems, rhymes, songs, and stories with repeated patterns. c) Participate in creative dramatics. d) Begin to discriminate between spoken sentences, words, and syllables. e) Recognize rhyming words. f) Generate rhyming words in a rhyming pattern.
K	ENGLISH	Oral Language	K.2	The student will use listening and speaking vocabularies. a) Use number words. b) Use worlds to describe/name people, places, and things. c) Use words to describe location, size, color, and shape. d) Use words to describe actions. e) Ask about words not understood. f) Follow one-step and two-steps directions. g) Begin to ask how and why questions.
K	ENGLISH	Oral Language	K.3	The student will build oral communication skills. a) Begin to follow implicit rules for conversation, including taking turns and staying on topic. b) Express ideas and needs in complete sentences. c) Begin to use voice level, phrasing, and intonation appropriate for language situation. d) Listen and speak in informal conversations with peers and adults. e) Begin to initiate conversations. f) Participate in discussions about books and specific topics.
K	ENGLISH	Oral Language	K.4	The student will hear, say, and manipulate phonemes (small units of sound) of spoken language. a) Identify orally words that rhyme. b) Identify words that rhyme. c) Blend sounds orally to make words or syllables. d) Divide one-syllable words into sounds (phonemes). e) Divide words into syllables.
K	ENGLISH	Reading	K.5	The student will understand how print is organized and read. a) Hold print materials in the correct position. b) Identify the front cover, back cover, and title page of a book. c) Follow words from left to right and from top to bottom on a printed page. d) Match voice with print: syllables, words, and phrases.
K	ENGLISH	Reading	K.6	The student will demonstrate an understanding that print makes sense. a) Explain that printed materials provide information. b) Identify common signs and logos. c) Read ten high-frequency words. d) Read and explain own writing and drawings.
K	ENGLISH	Reading	K.7	The student will develop an understanding of basic phonetic principles. a) Identify and name the uppercase and lowercase letters of the alphabet. b) Match consonant and short vowel sounds to appropriate letters. c) Identify beginning consonant sounds in single-syllable words.
K	ENGLISH	Reading	K.8	The student will demonstrate comprehension of fiction and nonfiction. a) Use pictures to make predictions about content. b) Retell familiar stories, using beginning, middle, and end. c) Discuss characters, setting, and events. d) Use story language in discussions and retellings. e) Identify what an author does and what an illustrator does. f) Identify the topics of nonfiction selections.
K	ENGLISH	Writing	K.9	The student will print the uppercase and lowercase letters of the alphabet independently.
K	ENGLISH	Writing	K.10	The student will print his/her first and last names.
K	ENGLISH	Writing	K.11	The student will write to communicate ideas. a) Draw pictures and/or use letters and phonetically spelled words to write about experiences, stories, people, objects, or events. b) Write left to right and top to bottom.
K	ENGLISH	Writing	K.12	The student will explore the uses of available technology for reading and writing.
K	SOCIAL STUDIES	History	K.1	The student will recognize that history describes events and people of other times and places by a) identifying examples of past events in legends, stories, and historical accounts of Pocahontas, George Washington, Betsy Ross, and Abraham Lincoln; b) identifying the people and events honored by the holidays of Thanksgiving Day, Martin Luther King, Jr. Day, Presidents' Day, and Independence Day (Fourth of July).
K	SOCIAL STUDIES	History	K.2	The student will describe everyday life in the present and in the past and begin to recognize that things change over time.
K	SOCIAL STUDIES	Geography	K.3	The student will describe the relative location of people, places, and things by using positional words, with emphasis on near/far, above/below, left/right, and behind/in front.
K	SOCIAL STUDIES	Geography	K.4	The student will use simple maps and globes to a) develop an awareness that a map is a drawing of a place to show where things are located and that a globe is a round model of the Earth; b) describe places referenced in stories and real-life situations; c) locate land and water features.
K	SOCIAL STUDIES	Geography	K.5	The student will develop an awareness that maps and globes a) show a view from above; b) show things in smaller size; c) show the position of objects.
K	SOCIAL STUDIES	Economics	K.6	The student will match simple descriptions of work that people do with the names of those jobs.

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K	SOCIAL STUDIES	Economics	**K.7**	The student will a) identify the difference between basic needs (food, clothing, and shelter) and wants (things people would like to have); b) recognize that people use money to purchase goods.
K	SOCIAL STUDIES	Civics	**K.8**	The student will demonstrate that being a good citizen involves a) takings turns and sharing; b) taking responsibility for certain classroom chores; c) taking care of personal belongings and respecting what belongs to others; d) following rules and understanding the consequences of breaking rules; e) practicing honesty, self-control, and kindness to others.
K	SOCIAL STUDIES	Civics	**K.9**	The student will recognize the American flag, the Pledge of Allegiance, and that the President is the leader of the United States.
K	SCIENCE	Scientific Investigation, Reasoning, and Logic	**K.1**	The student will conduct investigations in which a) basic properites of objects are identified by direct observation; b) observations are made from multiple positions to achieve different perspectives; c) objects are described both pictorially and verbally; d) a set of objects is sequenced according to size; e) a set of objects is separated into two groups based on a single physical attribute; f) nonstandard units are used to measure common objects; g) a question is developed from one or more observations; h) picture graphs are constructed using 10 o fewer units; i) an unseen member in a sequence of objects is predicted; and j) unusual or unexpected results in an activity are recognized.
K	SCIENCE	Scientific Investigation, Reasoning, and Logic	**K.2**	Students will investigate and understand that humans have senses that allow one to seek, find, take in, and react or respond to information in order to learn about one's surroundings. Key concepts include a) five senses and corresponding sensing organs (taste - tongue, touch - skin, smell - nose, hearing - ears, and sight - eyes; and b) sensory descriptors (sweet, sour, bitter, salty, rough/smooth, hard/soft, cold, warm, hot, loud/soft, high/low, bright/dull).
K	SCIENCE	Force, Motion, and Energy	**K.3**	The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications. Key concepts include a) attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal; and b) useful applications (refrigerator magnet, can opener, magnetized screwdriver, and magnetic games).
K	SCIENCE	Matter	**K.4**	The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include a) colors (red, orange, yellow, green, blue, purple), white, and black; b) shapes (circle, triangle, square, and rectangle) and forms (flexible/stiff, straight/curved); c) textures (rough/smooth) and feel (hard/soft); d) relative size and weight (big/little, large/small, heavy/light, wide/thin, long/short); and e) position (over/under, in/out, above/below, left/right) and speed (fast/slow).
K	SCIENCE	Matter	**K.5**	The student will investigate and understand that water flows and has properties that can be observed and tested. Key concepts include a) water occurs in different states (solid, liquid, gas); b) the natural flow of water is downhill; and c) some materials float in water, while others sink.
K	SCIENCE	Life Processes	**K.6**	The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include a) living things change as they grow, and they need food, water, and air to survive; b) plants and animals live and die (go through a life cycle); and c) offspring of plants and animals are similar but not identical to their parents and to one another.
K	SCIENCE	Interrelationships in Earth/Space Systems	**K.7**	The student will investigate and understand that shadows occur when light is blocked by an object. Key concepts include a) shadows occur in nature when sunlight is blocked by an object; and b) shadows can be produced by blocking artificial light sources.
K	SCIENCE	Earth Patterns, Cycles, and Change	**K.8**	The student will investigate and understand simple patterns in his/her daily life. Key concepts include a) weather observations; b) the shapes and forms of many common natural objects including seeds, cones, and leaves; c) animal and plant growth; and d) home and school routines.
K	SCIENCE	Earth Patterns, Cycles, and Change	**K.9**	The student will investigate and understand that change occurs over time and rates may be fast or slow. Key concepts include a) natural and human-made things may change over time; and b) changes can be noted and measured.
K	SCIENCE	Resources	**K.10**	The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include a) materials and objects can be used over and over again; b) everyday materials can be recycled; and c) water and energy conservation at home and in school helps preserve resources for future use.
K	MATHEMATICS	Number and Number Sense	**K.1**	The student, given two sets containing 10 or fewer concrete items, will identify and describe one set as having more, fewer, or the same number of members as the other set, using the concept of one-to-one correspondence.
K	MATHEMATICS	Number and Number Sense	**K.2**	The student, given a set containing 10 or fewer concrete items, will a) tell how many are in the set by counting te number of items orally; b) select the corresponding numeral from a given set; and c) write the numeral to tell how many are in the set.

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K	MATHEMATICS	Number and Number Sense	**K.3**	The student, given an ordered set of three objects and/or pictures, will indicate the ordinal position of each item, first through third, and the ordered position of each item from left-to-right, right-to-left, top-to-bottom, and/or bottom-to-top.
K	MATHEMATICS	Number and Number Sense	**K.4**	The student will investigate and recognize patterns from counting by fives and tens to 30, using concrete objects and a calculator.
K	MATHEMATICS	Number Sense	**K.5**	The student will count forward to 30 and backward from 10.
K	MATHEMATICS	Computation and Estimation	**K.6**	The student will add and subtract whole numbers, using up to 10 concrete items.
K	MATHEMATICS	Measurement	**K.7**	The student will recognize a penny, nickel, dime, and quarter and will determine the value of a collection of pennies and/or nickels whose total value is 10 cents or less.
K	MATHEMATICS	Measurement	**K.8**	The student will identify the instruments used to measure length (ruler), weight (scale), time (clock: digital and analog calendar: day, month, and season), and temperature (thermometer).
K	MATHEMATICS	Mesurement	**K.9**	The student will tell time to the hour, using an analog or digital clock.
K	MATHEMATICS	Measurement	**K.10**	The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block.
K	MATHEMATICS	Geometry	**K.11**	The student will identify, describe, and draw two-dimensional (plane) geometric figures (circle, triangle, square, and rectangle).
K	MATHEMATICS	Geometry	**K.12**	The student will describe the location of one object relative to another (above, below, next to) and identify representations of plane geometric figures (circle, triangle, square, and rectangle) regardless of their position and orientation in space.
K	MATHEMATICS	Geometry	**K.13**	The student will compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).
K	MATHEMATICS	Probability and Statistics	**K.14**	The student will gather data relating to familiar experiences by counting and tallying.
K	MATHEMATICS	Probability and Statistics	**K.15**	The student will display objects and information, using objects graphs, pictorial graphs, and tables.
K	MATHEMATICS	Probability and Statistics	**K.16**	The student will investigate and describe the results of dropping a two-colored counter or using a multicolored spinner.
K	MATHEMATICS	Patterns, Functions, and Algebra	**K.17**	The student will sort and classify objects according to similar attributes (size, shape, and color).
K	MATHEMATICS	Patterns, Functions, and Algebra	**K.18**	The student will identify, describe, and extend a repeating relationship (pattern) found in common objects, sounds, and movements.
FIRST GRADE	SCIENCE	Scientific Investigation, Reasoning, and Logic	**1.1**	The student will conduct investigations in which a) differences in physical properties are observed using the senses; b) simple tools are used to enhance observations; c) objects or events are classified and arranged according to attributes or properties; d) observations and data are communicated orally and with simple graphs, pictures, written statements, and numbers; e) length, mass, and volume are measured using standard and nonstandard units; f) predictions are based on patterns of observation rather than random guesses; g) simple experiments are conducted to answer questions; and h) inferences are made and conclusions are drawn about familiar objects and events.
FIRST GRADE	SCIENCE	Force, Motion, and Energy	**1.2**	The student will investigate and understand that moving objects exhibit different kinds of motion. Key concepts include a) objects may have straight, circular, and back-and-forth motions; b) objects may vibrate and produce sound; c) pushes or pulls can change the movement of an object; and d) the motion of objects may be observed in toys and in playground activities.
FIRST GRADE	SCIENCE	Matter	**1.3**	The student will investigate and understand how different common materials interact with water. Key concepts include a) some liquids will separate when mixed with water, but others will not; b) some common solids will dissolve in water, but others will not; and c) some substances will dissolve more readily in hot water than in cold water.

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FIRST GRADE	SCIENCE	Life Processes	1.4	The student will investigate and understand that plants have life needs and functional parts and can be classified according to certain characteristics. Key concepts include a) needs (food, air, water, light, and a place to grow); b) parts (seeds, roots, stems, leaves, blossoms, fruits); and c) characteristics (edible/nonedible, flowering/nonflowering evergreen/deciduous).
FIRST GRADE	SCIENCE	Life Processes	1.5	The student will investigate and understand that animals, including people, have life needs and specific physical characteristics and can be classified according to certain characteristics. Key concepts include a) life needs (air, food, water, and a suitable place to live); b) physical characteristics (body coverings, body shape, appendages, and methods of movement); and c) other characteristics (wild/tame, water homes/land homes).
FIRST GRADE	SCIENCE	Interrelationships in Earth/Space Systems	1.6	The student will investigate and understand the basic relationships between the sun and the Earth. Key concepts include a) the sun is the source of heat and light that warms the land, air, and water; and b) night and day are caused by the rotation of the Earth.
FIRST GRADE	SCIENCE	Earth Patterns, Cycles, and Change	1.7	The student will investigate and understand the relationship of seasonal change and weather to the activities and life processes of plants and animals. Key concepts include how temperature, light, and precipitation bring about changes in a) plants (growth, budding, falling leaves, and wilting); b) animals (behaviors, hibernation, migration, body covering, and habitat); and c) people (dress, recreation, and work).
FIRST GRADE	SCIENCE	Resources	1.8	The student will investigate and understand that natural resources are limited. Key concepts include a) identification of natural resources (plants and animals, water, air, land, minerals, forests, and soil); b) factors that affect air and water quality; and c) recycling, reusing, and reducing consumption of natural resources.
FIRST GRADE	SOCIAL STUDIES	History	1.1	The student will interpret information presented in picture time lines to show sequence of events and will distinguish between past and present.
FIRST GRADE	SOCIAL STUDIES	History	1.2	The student will describe the stories of American leaders and their contributions to our country, with emphasis on George Washington, Benjamin Franklin, Abraham Lincoln, and George Washington Carver.
FIRST GRADE	SOCIAL STUDIES	History	1.3	The student will discuss the lives of people associated with Presidents' Day, Columbus Day, and the events of Independence Day (Fourth of July).
FIRST GRADE	SOCIAL STUDIES	Geography	1.4	The student will develop map skills by a) recognizing basic map symbols, including references to land, water, cities, and roads; b) using cardinal directions on maps; c) identifying the physical shape of the United States and Virginia on maps and globes; d) locating Washington, D.C., the capital of the United States, and Richmond, the capital of Virginia, on a United States map.
FIRST GRADE	SOCIAL STUDIES	Geography	1.5	The student will construct a simple map of a familiar area, using basic map symbols in the map legend.
FIRST GRADE	SOCIAL STUDIES	Geography	1.6	The student will describe how location, climate, and physical surroundings affect the way people live, including their food, clothing, shelter, transportation, and recreation.
FIRST GRADE	SOCIAL STUDIES	Economics	1.7	The student will explain the difference between goods and services and will describe how people are both buyers and sellers of goods and services.
FIRST GRADE	SOCIAL STUDIES	Economics	1.8	The student will explain that people make choices because they cannot have everything they want.
FIRST GRADE	SOCIAL STUDIES	Economics	1.9	The student will recognize that people save money for the future to purchase goods and services.
FIRST GRADE	SOCIAL STUDIES	Civics	1.1	The student will apply the traits of a good citizen by a) focusing on fair play, exhibiting good sportsmanship, helping others, and treating others with respect; b) recognizing the purpose of rules and practicing self-control; c) working hard in school; d) taking responsibility for one's own actions; e) valuing honesty and truthfulness in oneself and others.
FIRST GRADE	SOCIAL STUDIES	Civics	1.11	The student will recognize the symbols and traditional practices that honor and foster patriotism in the United States by a) identifying the American flag, bald eagle, Washington Monument, and Statue of Liberty; b) demonstrating respect for the American flag by learning the Pledge of Allegiance.
FIRST GRADE	SOCIAL STUDIES	Civics	1.12	The student will recognize that communities in Virginia include people who have diverse ethnic origins, customs, and traditions, who make contributions to their communities, and who are united as Americans by common principles.
FIRST GRADE	ENGLISH	Oral Language	1.1	The student will continue to demonstrate growth in the use of oral language. a) Listen and respond to a variety of media, including books, audiotapes, videos, and other age-appropriate materials. b) Tell and retell stories and events in logical order. c) Participate in a variety of oral language activities, including choral speaking and reciting short poems, rhymes, songs, and stories with repeated patterns. d) Express ideas orally in complete sentences.
FIRST GRADE	ENGLISH	Oral Language	1.2	The student will continue to expand and use listening and speaking vocabularies. a) Increase oral descriptive vocabulary. b) Begin to ask for clarification and explanation of words and ideas. c) Follow simple two-step oral directions. d) Give simple two-step oral directions. e) Use singular and plural nouns.

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FIRST GRADE	ENGLISH	Oral Language	**1.3**	The student will adapt or change oral language to fit the situation. a) Initiate conversation with peers and adults. b) Follow rules for conversation. c) Use appropriate voice level in small-group settings. d) Ask and respond to questions in small-group settings.
FIRST GRADE	ENGLISH	Oral Language	**1.4**	The student will orally identify and manipulate phonemes (small units of sound) in syllables and multisyllabic words. a) Count phonemes (sounds) in syllables or words with a maximum of three syllables. b) Add or delete phonemes (sounds) orally to change syllables or words. c) Create rhyming words orally. d) Blend sounds to make word parts and words with one to three syllables.
FIRST GRADE	ENGLISH	Reading	**1.5**	The student will apply knowledge of how print is organized and read. a) Read from left to right and from top to bottom. b) Match spoken words with print. c) Identify letters, words, and sentences.
FIRST GRADE	ENGLISH	Reading	**1.6**	The student will apply phonetic principles to read and spell. a) Use beginning and ending consonants to decode and spell single-syllable words. b) Use two-letter consonant blends to decode and spell single-syllable words. c) Use beginning consonant digraphs to decode and spell single-syllable words. d) Use short vowel sounds to decode and spell single-syllable words. e) Blend beginning, middle, and ending sounds to recognize and read words. f) Use word patterns to decode unfamiliar words. g) Use compound words. h) Read and spell common, high-frequency sight words, including the, said, and come.
FIRST GRADE	ENGLISH	Reading	**1.7**	The student will use meaning clues and language structure to expand vocabulary when reading. a) Use titles and pictures. b) Use knowledge of the story and topic to read words. c) Use knowledge of sentence structure. d) Reread and self-correct.
FIRST GRADE	ENGLISH	Reading	**1.8**	The student will read familiar stories, poems, and passages with fluency and expression.
FIRST GRADE	ENGLISH	Reading	**1.9**	The student will read and demonstrate comprehension of a variety of fiction and nonfiction. a) Preview the selection. b) Set a purpose for reading. c) Relate previous experiences to what is read. d) Make predictions about content. e) Ask and answer who, what, when, where, why, and how questions about what is read. f) Identify characters, setting, and important events. g) Retell stories and events, using beginning, middle, and end. h) Identify the topic or main idea.
FIRST GRADE	ENGLISH	Reading	**1.1**	The student will use simple reference materials. a) Use knowledge of alphabetical order by first letter. b) Use a picture dictionary to find meanings of unfamiliar words.
FIRST GRADE	ENGLISH	Writing	**1.11**	The student will print legibly. a) Form letters. b) Space words and sentences.
FIRST GRADE	ENGLISH	Writing	**1.12**	The student will write to communicate ideas. a) Generate ideas. b) Focus on one topic. c) Use descriptive words when writing about people, places, things, and events. d) Use complete sentences in final copies. e) Begin each sentence with a capital letter and use ending punctuation in final copies. f) Use correct spelling for high-frequency sight words and phonetically regular words in final copies. g) Share writing with others. h) Use available technology.
FIRST GRADE	MATHEMATICS	Number and Number Sense	**1.1**	The student will count objects in a given set containing between 1 and 100 objects and write the corresponding numeral.
FIRST GRADE	MATHEMATICS	Number and Number Sense	**1.2**	The student will group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.
FIRST GRADE	MATHEMATICS	Number and Number Sense	**1.3**	The student will count forward by ones, fives, and tens to 100, by twos to 20, and backward by ones from 20.
FIRST GRADE	MATHEMATICS	Number and Number Sense	**1.4**	The student will recognize and write numerals 0 through 100.
FIRST GRADE	MATHEMATICS	Number and Number Sense	**1.5**	The student will identify the ordinal positions first through tenth, using an ordered set of objects.
FIRST GRADE	MATHEMATICS	Number and Number Sense	**1.6**	The student will identify and represent the concepts of one-half and one-fourth, using appropriate materials or a drawing.
FIRST GRADE	MATHEMATICS	Computation and Estimation	**1.7**	The student, given a familiar problem situation involving magnitude, will a) select a reasonable magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-digit numeral (e.g., 5, 50, and 500); b) explain the reasonableness of his/her choice.
FIRST GRADE	MATHEMATICS	Computation and Estimation	**1.8**	The student will recall basic addition facts — i.e., sums to 10 or less — and the corresponding subtraction facts.
FIRST GRADE	MATHEMATICS	Computation and Estimation	**1.9**	The student will create and solve story and picture problems involving one-step solutions, using basic addition and subtraction facts.

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FIRST GRADE	MATHEMATICS	Measurement	1.1	The student will a) identify the number of pennies equivalent to a nickel, a dime, and a quarter; b) determine the value of a collection of pennies, nickels, and dimes whose total value is 100 cents or less.
FIRST GRADE	MATHEMATICS	Measurement	1.11	The student will tell time to the half-hour, using an analog or digital clock.
FIRST GRADE	MATHEMATICS	Measurement	1.12	The student will use nonstandard units to measure length and weight.
FIRST GRADE	MATHEMATICS	Measurement	1.13	The student will compare the volumes of two given containers by using concrete materials (e.g., jelly beans, sand, water, rice).
FIRST GRADE	MATHEMATICS	Measurement	1.14	The student will compare the weights of two objects, using a balance scale.
FIRST GRADE	MATHEMATICS	Geometry	1.15	The student will describe the proximity of objects in space (near, far, close by, below, above, up, down, beside, and next to).
FIRST GRADE	MATHEMATICS	Geometry	1.16	The student will draw, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, corners, and square corners.
FIRST GRADE	MATHEMATICS	Geometry	1.17	The student will identify and describe objects in his/her environment that depict plane geometric figures (triangle, rectangle, square, and circle).
FIRST GRADE	MATHEMATICS	Probability and Statistics	1.18	The student will investigate, identify, and describe various forms of data collection in his/her world (e.g., recording daily temperature, lunch count, attendance, and favorite ice cream), using tables, picture graphs, and object graphs.
FIRST GRADE	MATHEMATICS	Probability and Statistics	1.19	The student will interpret information displayed in a picture or object graph, using the vocabulary more, less, fewer, greater than, less than, and equal to.
FIRST GRADE	MATHEMATICS	Patterns, Functions, and Algebra	1.2	The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.
FIRST GRADE	MATHEMATICS	Patterns, Functions, and Algebra	1.21	The student will recognize, describe, extend, and create a wide variety of patterns, including rhythmic, color, shape, and numerical. Patterns will include both growing and repeating patterns. Concrete materials and calculators will be used by students.
SECOND GRADE	SOCIAL STUDIES	History	2.1	The student will explain how the contributions of ancient China and Egypt have influenced the present world in terms of architecture, inventions, the calendar, and written language.
SECOND GRADE	SOCIAL STUDIES	History	2.2	The student will compare the lives and contributions of American Indians (First Americans), with emphasis on the Powhatan of the Eastern Woodlands, the Sioux of the Plains, and the Pueblo people of the Southwest.
SECOND GRADE	SOCIAL STUDIES	History	2.3	The student will identify and compare changes in community life over time in terms of buildings, jobs, transportation, and population.
SECOND GRADE	SOCIAL STUDIES	Geography	2.4	The student will develop map skills by a) locating China and Egypt on world maps; b) locating the regions of the Powhatan, Sioux, and Pueblo Indians on United States maps; c) comparing the climate, land, and plant life of these regions; d) describing how people in these regions adapt to their environment.
SECOND GRADE	SOCIAL STUDIES	Geography	2.5	The student will develop map skills by a) locating the equator, the seven continents, and the four oceans on maps and globes; b) locating selected rivers (James River, Mississippi River, Rio Grande), mountain ranges (Appalachian Mountains and Rocky Mountains), and lakes (Great Lakes) in the United States.
SECOND GRADE	SOCIAL STUDIES	Geography	2.6	The student will demonstrate map skills by constructing simple maps, using title, map legend, and compass rose.
SECOND GRADE	SOCIAL STUDIES	Economics	2.7	The student will describe the differences between natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings).
SECOND GRADE	SOCIAL STUDIES	Economics	2.8	The student will distinguish between the use of barter and money in the exchange for goods and services.
SECOND GRADE	SOCIAL STUDIES	Economics	2.9	The student will explain that scarcity (limited resources) requires people to make choices about producing and consuming goods and services.
SECOND GRADE	SOCIAL STUDIES	Civics	2.1	The student will explain the responsibilities of a good citizen, with emphasis on a) respecting and protecting the rights and property of others; b) taking part in the voting process when making classroom decisions; c) describing actions that can improve the school and community; d) demonstrating self-discipline and self-reliance; e) practicing honesty and trustworthiness.
SECOND GRADE	SOCIAL STUDIES	Civics	2.11	The student will identify George Washington, Abraham Lincoln, Susan B. Anthony, Helen Keller, Jackie Robinson, and Martin Luther King, Jr. as Americans whose contributions improved the lives of other Americans.

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SECOND GRADE	SOCIAL STUDIES	Civics	**2.12**	The student will understand that the United States is a land of people who have diverse ethnic origins, customs, and traditions, who make contributions to their communities, and who are united as Americans by common principles.
SECOND GRADE	ENGLISH	Oral Language	**2.1**	The student will demonstrate an understanding of oral language structure. a) Create oral stories to share with others. b) Create and participate in oral dramatic activities. c) Use correct verb tenses in oral communication. d) Use increasingly complex sentence structures in oral communication.
SECOND GRADE	ENGLISH	Oral Language	**2.2**	The student will continue to expand listening and speaking vocabularies. a) Use words that reflect a growing range of interests and knowledge. b) Clarify and explain words and ideas orally. c) Follow oral directions with three or four steps. d) Give three-step and four-step directions. e) Identify and use synonyms and antonyms in oral communication.
SECOND GRADE	ENGLISH	Oral Language	**2.3**	The student will use oral communication skills. a) Use oral language for different purposes: to inform, to persuade, and to entertain. b) Share stories or information orally with an audience. c) Participate as a contributor and leader in a group. d) Summarize information shared orally by others.
SECOND GRADE	ENGLISH	Reading	**2.4**	The student will use phonetic strategies when reading and spelling. a) Use knowledge of consonants, consonant blends, and consonant digraphs to decode and spell words. b) Use knowledge of short, long, and r-controlled vowel patterns to decode and spell words. c) Decode regular multisyllabic words.
SECOND GRADE	ENGLISH	Reading	**2.5**	The student will use meaning clues and language structure when reading. a) Use information in the story to read words. b) Use knowledge of sentence structure. c) Use knowledge of story structure and sequence.
SECOND GRADE	ENGLISH	Reading	**2.6**	The student will use language structure to expand vocabulary when reading. a) Use knowledge of prefixes and suffixes. b) Use knowledge of contractions and singular possessives. c) Use knowledge of simple abbreviations. d) Use knowledge of antonyms and synonyms.
SECOND GRADE	ENGLISH	Reading	**2.7**	The student will read fiction and nonfiction, using a variety of strategies independently. a) Preview the selection by using pictures, diagrams, titles, and headings. b) Set purpose for reading. c) Read stories, poems, and passages with fluency and expression. d) Reread and self-correct when necessary.
SECOND GRADE	ENGLISH	Reading	**2.8**	The student will read and demonstrate comprehension of fiction and nonfiction. a) Make predictions about content. b) Read to confirm predictions. c) Relate previous experiences to the topic. d) Ask and answer questions about what is read. e) Locate information to answer questions. f) Describe characters, setting, and important events in fiction and poetry. g) Identify the problem, solution, and main idea.
SECOND GRADE	ENGLISH	Reading	**2.9**	The student will demonstrate comprehension of information in reference materials. a) Use a table of contents. b) Use pictures and charts. c) Use dictionaries and indices.
SECOND GRADE	ENGLISH	Writing	**2.1**	The student will maintain manuscript and begin to make the transition to cursive.
SECOND GRADE	ENGLISH	Writing	**2.11**	The student will write stories, letters, and simple explanations. a) Generate ideas before writing. b) Organize writing to include a beginning, middle, and end. c) Revise writing for clarity. d) Use available technology.
SECOND GRADE	ENGLISH	Writing	**2.12**	The student will edit writing for correct grammar, capitalization, punctuation, and spelling. a) Recognize and use complete sentences. b) Use and punctuate declarative, interrogative, and exclamatory sentences. c) Capitalize all proper nouns and the word I. d) Use singular and plural nouns and pronouns. e) Use apostrophes in contractions, including don't, isn't, and can't. f) Use correct spelling for high-frequency sight words, including compound words and regular plurals.
SECOND GRADE	SCIENCE	Scientific Investigation, Reasoning, and Logic	**2.1**	The student will conduct investigations in which a) observation is differentiated from personal interpretation, and conclusions are drawn based on observations; b) observations are repeated to ensure accuracy; c) two or more attributes are used to classify items; d) conditions that influence a change are defined; e) length, volume, mass, and temperature measurements are made in metric units (centimeters, meters, liters, degrees Celsius, grams, kilograms) and standard English units (inches, feet, yards, cups, pints, quarts, gallons, degrees Fahrenheit, ounces, pounds); f) pictures and bar graphs are constructed using numbered axes; g) unexpected or unusual quantitative data are recognized; and h) simple physical models are constructed.
SECOND GRADE	SCIENCE	Force, Motion, and Energy	**2.2**	The student will investigate and understand that natural and artificial magnets have certain characteristics and attract specific types of metals. Key concepts include a) magnetism, iron, magnetic/nonmagnetic, poles, attract/repel; and b) important applications of magnetism including the magnetic compass.

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SECOND GRADE	SCIENCE	Matter	**2.3**	The student will investigate and understand basic properties of solids, liquids, and gases. Key concepts include a) mass and volume; and b) processes involved with changes in matter from one state to another (condensation, evaporation, melting, and freezing).
SECOND GRADE	SCIENCE	Life Processes	**2.4**	The student will investigate and understand that plants and animals undergo a series of orderly changes in their life cycles. Key concepts include a) some animals (frogs and butterflies) undergo distinct stages during their lives, while others generally resemble their parents; and b) flowering plants undergo many changes, from the formation of the flower to the development of the fruit.
SECOND GRADE	SCIENCE	Living Systems	**2.5**	The student will investigate and understand that living things are part of a system. Key concepts include a) living organisms are interdependent with their living and nonliving surroundings; and b) habitats change over time due to many influences.
SECOND GRADE	SCIENCE	Interrelationhips in Earth/Space Systems	**2.6**	The student will investigate and understand basic types, changes, and patterns of weather. Key concepts include a) temperature, wind, precipitation, drought, flood, and storms; and b) the uses and importance of measuring and recording weather data.
SECOND GRADE	SCIENCE	Earth Patterns, Cycles, and Change	**2.7**	The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include a) effects on growth and behavior of living things (migration, hibernation, camouflage, adaptation, dormancy); and b) weathering and erosion of the land surface.
SECOND GRADE	SCIENCE	Resources	**2.8**	The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature. Key concepts include a) important plant products (fiber, cotton, oil, spices, lumber, rubber, medicines, and paper); b) the availability of plant products affects the development of a geographic area; and c) plants provide homes and food for many animals and prevent soil from washing away.
SECOND GRADE	MATHEMATICS	Number and Number Sense	**2.1**	The student will a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; and b) round two-digit numbers to the nearest ten.
SECOND GRADE	MATHEMATICS	Number and Number Sense	**2.2**	The student will compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (greater than, less than, or equal to).
SECOND GRADE	MATHEMATICS	Number and Number Sense	**2.3**	The student will identify the ordinal positions first through twentieth, using an ordered set of objects.
SECOND GRADE	MATHEMATICS	Number and Number Sense	**2.4**	The student will identify the part of a set and/or region that represents fractions for one-half, one-third, one-fourth, one-eighth, and one-tenth and write the corresponding fraction.
SECOND GRADE	MATHEMATICS	Number and Number Sense	**2.5**	The student will a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10, using mental mathematics, paper and pencil, hundred chart, calculators, and/or concrete objects, as appropriate; b) count backward by tens and from 100; c) groups objects by threes and fours; and d) recognize even and odd numbers, using objects.
SECOND GRADE	MATHEMATICS	Computation and Estimation	**2.6**	The student will recall basic addition facts — -i.e., sums to 18 or less — and the corresponding subtraction facts.
SECOND GRADE	MATHEMATICS	Computation and Estimation	**2.7**	The student, given two whole numbers whose sum is 99 or less, will a) estimate the sum; and b) find the sum, using various methods of calculation (mental computation, concrete materials, and paper and pencil).
SECOND GRADE	MATHEMATICS	Computation and Estimation	**2.8**	The student, given two whole numbers, each of which is 99 or less, will a) estimate the difference; and b) find the difference, using various methods of calculation (mental computation, concrete materials, and paper and pencil).
SECOND GRADE	MATHEMATICS	Computation and Estimation	**2.9**	The student will create and solve one-step addition and subtraction problems using data from simple tables, picture graphs, bar graphs, and practical situations.
SECOND GRADE	MATHEMATICS	Computation and Estimation	**2.1**	The student, given a simple addition or subtraction fact, will recognize and describe the related facts which represent and describe the inverse relationship between addition and subtraction (e.g., 3 + __ = 7, ___ + 3 = 7; 7 − 3 = __, and 7 − __ = 3).
SECOND GRADE	MATHEMATICS	Measurement	**2.11**	The student will a) count and compare a collection of pennies, nickels, dimes, and quarters whose total value is $2.00 or less; and b) identify the correct usage of the cent symbol (¢), dollar symbol ($), and decimal point (.).
SECOND GRADE	MATHEMATICS	Measurement	**2.12**	The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including measuring the distance around a polygon in order to determine perimeter.

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SECOND GRADE	MATHEMATICS	Measurement	**2.13**	The student, given grid paper, will estimate and then count the number of square units needed to cover a given surface in order to determine area.
SECOND GRADE	MATHEMATICS	Measurement	**2.14**	The student will estimate and then count the number of cubes in a rectangular box in order to determine volume.
SECOND GRADE	MATHEMATICS	Measurement	**2.15**	The student will estimate and then determine weight/mass of familiar objects in pounds and/or kilograms, using a scale.
SECOND GRADE	MATHEMATICS	Measurement	**2.16**	The student will tell and write time to the quarter hour, using analog and digital clocks.
SECOND GRADE	MATHEMATICS	Measurement	**2.17**	The student will use actual measuring devices to compare metric and U.S. Customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of more, less, and equivalent.
SECOND GRADE	MATHEMATICS	Measurement	**2.18**	The student will a) use a calendar language appropriately (e.g., months, today, yesterday, next week, last week); b) determine past and future days of the week; and c) identify specific dates on a given calendar.
SECOND GRADE	MATHEMATICS	Measurement	**2.19**	The student will read the temperature on a Celsius and/or Fahrenheit thermometer to the nearest 10 degrees.
SECOND GRADE	MATHEMATICS	Geometry	**2.2**	The student will identify, describe, and sort three-dimensional (solid) concrete figures, including a cube, rectangular solid (prism), square pyramid, sphere, cylinder, and cone, according to the number and shape of the solid's faces, edges, and corners.
SECOND GRADE	MATHEMATICS	Geometry	**2.21**	The student will identify and create figures, symmetric along a line, using various concrete materials.
SECOND GRADE	MATHEMATICS	Geometry	**2.22**	The student will compare and contrast plane and solid geometric shapes (circle/sphere, square/cube, and rectangle/rectangular solid).
SECOND GRADE	MATHEMATICS	Probability and Statistics	**2.23**	The student will read, construct, and interpret a simple picture and bar graph.
SECOND GRADE	MATHEMATICS	Probability and Statistics	**2.24**	The student will record data from experiments, using spinners and colored tiles/cubes, and use the data to predict which of two events is more likely to occur if the experiment is repeated.
SECOND GRADE	MATHEMATICS	Patterns, Functions, and Algebra	**2.25**	The student will identify, create, and extend a wide variety of patterns, using numbers concrete objects and pictures.
SECOND GRADE	MATHEMATICS	Patterns, Functions, and Algebra	**2.26**	The student will solve problems by completing a numerical sentence involving the basic facts for addition and subtraction. Examples include: 3 + __ = 7, or 9 − __ = 2. Students will create story problems, using the numerical sentences.
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.1**	The student will read and write six-digit numerals and identify the place value for each digit.
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.2**	The student will round a whole number, 9,999 or less, to the nearest ten, hundred, and thousand.
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.3**	The student will compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (greater than, less than, or equal to).
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.4**	The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. Students will use these relationships to solve problems such as 5 + 3 = 8 and 8 − 3 = ____.
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.5**	The student will a) divide regions and sets to represent a fraction; and b) name and write the fractions represented by a given model (area/region, length/measurement, and set). Fractions (including mixed numbers) will include halves, thirds, fourths, eighths, and tenths.
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.6**	The student will compare the numerical value of two fractions having like and unlike denominators, using concrete or pictorial models involving areas/regions, lengths/measurements, and sets.
THIRD GRADE	MATHEMATICS	Number and Number Sense	**3.7**	The student will read and write decimals expressed as tenths and hundredths, using concrete materials and models.
THIRD GRADE	MATHEMATICS	Computation and Estimation	**3.8**	The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

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THIRD GRADE	MATHEMATICS	Computation and Estimation	3.9	The student will recall the multiplication and division facts through the nines table.
THIRD GRADE	MATHEMATICS	Computation and Estimation	3.1	The student will represent multiplication and division, using area and set models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.
THIRD GRADE	MATHEMATICS	Computation and Estimation	3.11	The student will add and subtract with proper fractions having like denominators of 10 or less, using concrete materials and pictorial models representing areas/regions, lengths/measurements, and sets.
THIRD GRADE	MATHEMATICS	Computation and Estimation	3.12	The student will add and subtract with decimals expressed as tenths, using concrete materials, pictorial representations, and paper and pencil.
THIRD GRADE	MATHEMATICS	Measurement	3.13	The student will determine by counting the value of a collection of bills and coins whose total value is $5.00 or less, compare the value of the coins or bills, and make change.
THIRD GRADE	MATHEMATICS	Measurement	3.14	The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure a) length - inches, feet, yards, centimeters, and meters; b) liquid volume - cups, pints, quarts, gallons, and liters; and c) weight/mass - ounces, pounds, grams, and kilograms.
THIRD GRADE	MATHEMATICS	Measurement	3.15	The student will tell time to the nearest five-minute interval and to the nearest minute, using analog and digital clocks.
THIRD GRADE	MATHEMATICS	Measurement	3.16	The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.
THIRD GRADE	MATHEMATICS	Measurement	3.17	The student will read temperature to the nearest degree from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers will be used.
THIRD GRADE	MATHEMATICS	Geometry	3.18	The student will analyze two-dimensional (plane) and three-dimensional (solid) geometric figures (circle, square, rectangle, triangle, cube, rectangular solid [prism], square pyramid, sphere, cone, and cylinder) and identify relevant properties, including the number of corners, square corners, edges, and the number and shape of faces, using concrete models.
THIRD GRADE	MATHEMATICS	Geometry	3.19	The student will identify and draw representations of line segments and angles, using a ruler or straightedge.
THIRD GRADE	MATHEMATICS	Geometry	3.2	The student, given appropriate drawings or models, will identify and describe congruent and symmetrical, two-dimensional (plane) figures, using tracing procedures.
THIRD GRADE	MATHEMATICS	Probability and Statistics	3.21	The student, given grid paper, will a) collect and organize data on a given topic of his/her choice, using observations, measurements, surveys, or experiments; and b) construct a line plot, a picture graph, or a bar graph to represent the results. Each graph will include an appropriate title and key.
THIRD GRADE	MATHEMATICS	Probability and Statistics	3.22	The student will read and interpret data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.
THIRD GRADE	MATHEMATICS	Probability and Statistics	3.23	The student will investigate and describe the concept of probability as chance and list possible results of a given situation.
THIRD GRADE	MATHEMATICS	Patterns, Functions, and Algebra	3.24	The student will recognize and describe a variety of patterns formed using concrete objects, numbers, tables, and pictures, and extend the pattern, using the same or different forms (concrete objects, numbers, tables, and pictures).
THIRD GRADE	MATHEMATICS	Patterns, Functions, and Algebra	3.25	The student will a) investigate and create patterns involving numbers, operations (addition and multiplication), and relations that model the identity and commutative properties for addition and multiplication; and b) demonstrate an understanding of equality by recognizing that the equal sign (=) links equivalent quantities, such as 4 • 3 = 2 • 6.
THIRD GRADE	SOCIAL STUDIES	History	3.1	The student will explain how the contributions of ancient Greece and Rome have influenced the present world in terms of architecture, government (direct and representative democracy), and sports.
THIRD GRADE	SOCIAL STUDIES	History	3.2	The student will study the early West African empire of Mali by describing its oral tradition (storytelling), government (kings), and economic development (trade).

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THIRD GRADE	SOCIAL STUDIES	History	3.3	The student will study the exploration of the Americas by a) describing the accomplishments of Christopher Columbus, Juan Ponce de Léon, Jacques Cartier, and Christopher Newport; b) identifying reasons for exploring, the information gained, and the results from the travels.
THIRD GRADE	SOCIAL STUDIES	Geography	3.4	The student will develop map skills by a) locating Greece, Rome, and West Africa; b) describing the physical and human characteristics of Greece, Rome, and West Africa; c) explaining how the people of Greece, Rome, and West Africa adapted to and/or changed their environment to meet their needs.
THIRD GRADE	SOCIAL STUDIES	Geography	3.5	The student will develop map skills by a) positioning and labeling the seven continents and four oceans to create a world map; b) using the equator and prime meridian to identify the four hemispheres; c) locating the countries of Spain, England, and France; d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de Léon (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia); e) locating specific places on a simple letter-number grid system.
THIRD GRADE	SOCIAL STUDIES	Geography	3.6	The student will interpret geographic information from maps, tables, graphs, and charts.
THIRD GRADE	SOCIAL STUDIES	Economics	3.7	The student will explain how producers use natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings) to produce goods and services for consumers.
THIRD GRADE	SOCIAL STUDIES	Economics	3.8	The student will recognize the concepts of specialization (being an expert in one job, product, or service) and interdependence (depending on others) in the production of goods and services (in ancient Greece, Rome, the West African empire of Mali, and in the present).
THIRD GRADE	SOCIAL STUDIES	Economics	3.9	The student will identify examples of making an economic choice and will explain the idea of opportunity cost (what is given up when making a choice).
THIRD GRADE	SOCIAL STUDIES	Civics	3.1	The student will recognize why government is necessary in the classroom, school, and community by a) explaining the purpose of rules and laws; b) explaining that the basic purposes of government are to make laws, carry out laws, and decide if laws have been broken; c) explaining that government protects the rights and property of individuals.
THIRD GRADE	SOCIAL STUDIES	Civics	3.11	The student will explain the importance of the basic principles that form the foundation of a republican form of government by a) describing the individual rights to life, liberty, and the pursuit of happiness; and equality under the law; b) identifying the contributions of George Washington, Thomas Jefferson, Abraham Lincoln, Rosa Parks, Thurgood Marshall, and Martin Luther King, Jr.; c) recognizing that Veterans Day and Memorial Day honor people who have served to protect the country's freedoms.
THIRD GRADE	SOCIAL STUDIES	Civics	3.12	The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.
THIRD GRADE	ENGLISH	Oral Language	3.1	The student will use effective communication skills in group activities. a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said. b) Ask and respond to questions from teachers and other group members. c) Explain what has been learned.
THIRD GRADE	ENGLISH	Oral Language	3.2	The student will present brief oral reports. a) Speak clearly. b) Use appropriate volume and pitch. c) Speak at an understandable rate. d) Organize ideas sequentially or around major points of information. e) Use grammatically correct language and specific vocabulary to communicate ideas.
THIRD GRADE	ENGLISH	Reading	3.3	The student will apply word-analysis skills when reading. a) Use knowledge of all vowel patterns. b) Use knowledge of homophones. c) Decode regular multisyllabic words.
THIRD GRADE	ENGLISH	Reading	3.4	The student will use strategies to read a variety of fiction and nonfiction materials. a) Preview and use text formats. b) Set a purpose for reading. c) Apply meaning clues, language structure, and phonetic strategies. d) Use context to clarify meaning of unfamiliar words. e) Read fiction and nonfiction fluently and accurately. f) Reread and self-correct when necessary.
THIRD GRADE	ENGLISH	Reading	3.5	The student will read and demonstrate comprehension of fiction. a) Set a purpose for reading. b) Make connections between previous experiences and reading selections. c) Make, confirm, or revise predictions. d) Compare and contrast settings, characters, and events. e) Identify the author's purpose. f) Ask and answer questions. g) Draw conclusions about character and plot. h) Organize information and events logically. i) Summarize major points found in fiction materials. j) Understand basic plots of fairy tales, myths, folktales, legends, and fables.

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THIRD GRADE	ENGLISH	Reading	3.6	The student will continue to read and demonstrate comprehension of nonfiction. a) Identify the author's purpose. b) Make connections between previous experiences and reading selections. c) Ask and answer questions about what is read. d) Draw conclusions. e) Organize information and events logically. f) Summarize major points found in nonfiction materials. g) Identify the characteristics of biographies and autobiographies. h) Compare and contrast the lives of two persons as described in biographies and/or autobiographies.
THIRD GRADE	ENGLISH	Reading	3.7	The student will demonstrate comprehension of information from a variety of print resources. a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials. b) Use available technology.
THIRD GRADE	ENGLISH	Writing	3.8	The student will write legibly in cursive.
THIRD GRADE	ENGLISH	Writing	3.9	The student will write descriptive paragraphs. a) Develop a plan for writing. b) Focus on a central idea. c) Group related ideas. d) Include descriptive details that elaborate the central idea. e) Revise writing for clarity.
THIRD GRADE	ENGLISH	Writing	3.1	The student will write stories, letters, simple explanations, and short reports across all content areas. a) Use a variety of planning strategies. b) Organize information according to the type of writing. c) Identify the intended audience. d) Revise writing for specific vocabulary and information. e) Use available technology.
THIRD GRADE	ENGLISH	Writing	3.11	The student will edit writing for correct grammar, capitalization, punctuation, and spelling. a) Use complete and varied sentences. b) Use the word I in compound subjects. c) Use past and present verb tense. d) Use singular possessives. e) Use commas in a simple series. f) Use simple abbreviations. g) Use apostrophes in contractions with pronouns. h) Use correct spelling for high-frequency sight words, including irregular plurals.
THIRD GRADE	SCIENCE	Scientific Investigation, Reasoning, and Logic	3.1	The student will plan and conduct investigations in which a) predictions and observations are made; b) objects with similar characteristics are classified into at least two sets and two subsets; c) questions are developed to formulate hypotheses; d) volume is measured to the nearest milliliter and liter; e) length is measured to the nearest centimeter; f) mass is measured to the nearest gram; g) data are gathered, charted, and graphed (line plot, picture graph, and bar graph); h) temperature is measured to the nearest degree Celsius; i) time is measured to the nearest minute; j) inferences are made and conclusions are drawn; and k) natural events are sequenced chronologically.
THIRD GRADE	SCIENCE	Force, Motion, and Energy	3.2	The student will investigate and understand simple machines and their uses. Key concepts include a) types of simple machines (lever, screw, pulley, wheel and axle, inclined plane, and wedge); b) how simple machines function; c) compound machines (scissors, wheelbarrow, and bicycle); and d) examples of simple and compound machines found in the school, home, and work environment.
THIRD GRADE	SCIENCE	Matter	3.3	The student will investigate and understand that objects are made of materials that can be described by their physical properties. Key concepts include a) objects are made of one or more materials; b) materials are composed of parts that are too small to be seen without magnification; and c) physical properties remain the same as the material is reduced in size.
THIRD GRADE	SCIENCE	Life Processes	3.4	The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include a) methods of gathering and storing food, finding shelter, defending themselves, and rearing young; and b) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.
THIRD GRADE	SCIENCE	Living Systems	3.5	The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include a) producer, consumer, decomposer; b) herbivore, carnivore, omnivore; and c) predator and prey.
THIRD GRADE	SCIENCE	Living Systems	3.6	The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments); b) dry-land environments (desert, grassland, rain forest, and forest environments); and c) population and community.
THIRD GRADE	SCIENCE	Interrelationships in Earth/Space Systems	3.7	The student will investigate and understand the major components of soil, its origin, and importance to plants and animals including humans. Key concepts include a) soil provides the support and nutrients necessary for plant growth; b) topsoil is a natural product of subsoil and bedrock; c) rock, clay, silt, sand, and humus are components of soils; and d) soil is a natural resource and should be conserved.
THIRD GRADE	SCIENCE	Earth Patterns, Cycles, and Change	3.8	The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides); and b) animal and plant life cycles.
THIRD GRADE	SCIENCE	Earth Patterns, Cycles, and Change	3.9	The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include a) the energy from the sun drives the water cycle; b) processes involved in the water cycle (evaporation, condensation, precipitation); c) water is essential for living things; and d) water supply and water conservation.

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THIRD GRADE	SCIENCE	Resources	**3.1**	The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include a) the interdependency of plants and animals; b) the effects of human activity on the quality of air, water, and habitat; c) the effects of fire, flood, disease, and erosion on organisms; and d) conservation and resource renewal.
THIRD GRADE	SCIENCE	Resources	**3.11**	The student will investigate and understand different sources of energy. Key concepts include a) the sun's ability to produce light and heat energy; b) sources of energy (sunlight, water, wind); c) fossil fuels (coal, oil, natural gas) and wood; and d) renewable and nonrenewable energy resources.
FOURTH GRADE	VIRGINIA STUDIES	Skills	**VS.1**	The student will develop skills for historical and geographical analysis including the ability to a) identify and interpret artifacts and primary and secondary source documents to understand events in history; b) determine cause and effect relationships; c) compare and contrast historical events; d) draw conclusions and make generalizations; e) make connections between past and present; f) sequence events in Virginia history; g) interpret ideas and events from different historical perspectives; h) evaluate and discuss issues orally and in writing; i) analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events.
FOURTH GRADE	VIRGINIA STUDIES	Virginia: The Land and Its First Inhabitants	**VS.2**	The student will demonstrate knowledge of the geography and early inhabitants of Virginia by a) locating Virginia and its bordering states on maps of the United States; b) locating and describing Virginia's Coastal Plain (Tidewater), Piedmont, Blue Ridge Mountains, Valley and Ridge, and Appalachian Plateau; c) locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, and Rappahannock River); d) locating three American Indian (First American) language groups (the Algonquian, the Siouan, and the Iroquoian) on a map of Virginia; e) describing how American Indians (First Americans) adapted to the climate and their environment to secure food, clothing, and shelter.
FOURTH GRADE	VIRGINIA STUDIES	Colonization and Conflict: 1607 through the American Revolution	**VS.3**	The student will demonstrate knowledge of the first permanent English settlement in America by a) explaining the reasons for English colonization; b) describing how geography influenced the decision to settle at Jamestown; c) identifying the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement; d) identifying the importance of the Virginia Assembly(1619) as the first representative legislative body in English America; e) identifying the importance of the arrival of Africans and women to the Jamestown settlement; f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival; g) describing the interactions between the English settlers and the Powhatan people, including the contributions of the Powhatans to the survival of the settlers.
FOURTH GRADE	VIRGINIA STUDIES	Colonization and Conflict: 1607 through the American Revolution	**VS.4**	The student will demonstrate knowledge of life in the Virginia colony by a) explaining the importance of agriculture and its influence on the institution of slavery; b) describing how European (English, Scotch-Irish, German) immigrants, Africans, and American Indians (First Americans) influenced the cultural landscape and changed the relationship between the Virginia colony and England; c) explaining how geography influenced the relocation of Virginia's capital from Jamestown to Williamsburg to Richmond; d) describing how money, barter, and credit were used.
FOURTH GRADE	VIRGINIA STUDIES	Colonization and Conflict: 1607 through the American Revolution	**VS.5**	The student will demonstrate knowledge of the role of Virginia in the American Revolution by a) identifying the reasons why the colonies went to war with England as expressed in the Declaration of Independence; b) identifying the various roles played by Virginians in the Revolutionary War era, with emphasis on George Washington, Thomas Jefferson, and Patrick Henry; c) identifying the importance of the American victory at Yorktown.
FOURTH GRADE	VIRGINIA STUDIES	Political Growth and Western Expansion: 1781 to the Mid 1800s	**VS.6**	The student will demonstrate knowledge of the role of Virginia in the establishment of the new American nation by a) explaining why George Washington is called the "Father of our Country" and James Madison is called the "Father of the Constitution"; b) identifying the ideas of George Mason and Thomas Jefferson as expressed in the Virginia Declaration of Rights and the Virginia Statute for Religious Freedom; c) explaining the influence of geography on the migration of Virginians into western territories.
FOURTH GRADE	VIRGINIA STUDIES	Civil War and Post-War Eras	**VS.7**	The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by a) identifying the events and differences between northern and southern states that divided Virginians and led to secession, war, and the creation of West Virginia; b) describing Virginia's role in the war, including identifying major battles that took place in Virginia.
FOURTH GRADE	VIRGINIA STUDIES	Civil War and Post-War Eras	**VS.8**	The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by a) identifying the effects of Reconstruction on life in Virginia; b) identifying the effects of segregation and "Jim Crow" on life in Virginia; c) describing the importance of railroads, new industries, and the growth of cities to Virginia's economic development.
FOURTH GRADE	VIRGINIA STUDIES	Virginia: 1900 to the Present	**VS.9**	The student will demonstrate knowledge of twentieth century Virginia by a) describing the economic and social transition from a rural, agricultural society to a more urban, industrialized society, including the reasons people came to Virginia from other states and countries; b) identifying the social and political events in Virginia linked to desegregation and Massive Resistance and their relationship to national history; c) identifying the political, social, and/or economic contributions made by Maggie Walker, Harry F. Byrd, Sr., Arthur R. Ashe, Jr., and L. Douglas Wilder.

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FOURTH GRADE	VIRGINIA STUDIES	Virginia: 1900 to the Present	**VS.10**	The student will demonstrate knowledge of government, geography, and economics by a) identifying the three branches of Virginia government and the function of each; b) describing the major products and industries of Virginia's five geographic regions; c) explaining how advances in transportation, communications, and technology have contributed to Virginia's prosperity and role in the global economy.
FOURTH GRADE	ENGLISH	Oral Language	**4.1**	The student will use effective oral communication skills in a variety of settings. a) Present accurate directions to individuals and small groups. b) Contribute to group discussions. c) Seek ideas and opinions of others. d) Use evidence to support opinions. e) Use grammatically correct language and specific vocabulary to communicate ideas.
FOURTH GRADE	ENGLISH	Oral Language	**4.2**	The student will make and listen to oral presentations and reports. a) Use subject-related information and vocabulary. b) Listen to and record information. c) Organize information for clarity.
FOURTH GRADE	ENGLISH	Reading	**4.3**	The student will read fiction and nonfiction with fluency and accuracy. a) Use context to clarify meanings of unfamiliar words. b) Explain words with multiple meanings. c) Use knowledge of word origins; synonyms, antonyms, and homonyms; and multiple meanings of words. d) Use word-reference materials, including the glossary, dictionary, and thesaurus.
FOURTH GRADE	ENGLISH	Reading	**4.4**	The student will read and demonstrate comprehension of fiction. a) Explain the author's purpose. b) Describe how the choice of language, setting, and information contributes to the author's purpose. c) Compare the use of fact and fantasy in historical fiction with other forms of literature. d) Identify major events and supporting details. e) Describe the relationship between text and previously read materials. f) Identify sensory words.
FOURTH GRADE	ENGLISH	Reading	**4.5**	The student will read and demonstrate comprehension of nonfiction. a) Use text organizers, such as type, headings, and graphics, to predict and categorize information. b) Formulate questions that might be answered in the selection. c) Explain the author's purpose. d) Make simple inferences, using information from texts. e) Draw conclusions, using information from texts. f) Summarize content of selection, identifying important ideas and providing details for each important idea. g) Describe relationship between content and previously learned concepts or skills. h) Distinguish between cause and effect and between fact and opinion. i) Identify new information gained from reading.
FOURTH GRADE	ENGLISH	Reading	**4.6**	The student will demonstrate comprehension of information resources to research a topic. a) Construct questions about a topic. b) Collect information, using the resources of the media center, including online, print, and media resources. c) Evaluate and synthesize information.
FOURTH GRADE	ENGLISH	Writing	**4.7**	The student will write effective narratives, poems, and explanations. a) Focus on one aspect of a topic. b) Develop a plan for writing. c) Organize writing to convey a central idea. d) Write several related paragraphs on the same topic. e) Utilize elements of style, including word choice and sentence variation. f) Write rhymed, unrhymed, and patterned poetry. g) Use available technology.
FOURTH GRADE	ENGLISH	Writing	**4.8**	The student will edit writing for correct grammar, capitalization, spelling, punctuation, and sentence structure. a) Use subject-verb agreement. b) Include prepositional phrases. c) Eliminate double negatives. d) Use noun-pronoun agreement. e) Use commas in series, dates, and addresses. f) Incorporate adjectives and adverbs. g) Use the articles a, an, and the correctly. h) Use correct spelling for frequently used words, including common homophones.
FOURTH GRADE	MATHEMATICS	Number and Number Sense	**4.1**	The student will a) identify (orally and in writing) the place value for each digit in a whole number expressed through millions; b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.
FOURTH GRADE	MATHEMATICS	Number and Number Sense	**4.2**	The student will a) identify, model, and compare rational numbers (fractions and mixed numbers), using concrete objects and pictures; b) represent equivalent fractions; and c) relate fractions to decimals, using concrete objects.
FOURTH GRADE	MATHEMATICS	Number and Number Sense	**4.3**	The student will compare the numerical value of fractions (with like and unlike denominators) having denominators of 12 or less, using concrete materials.
FOURTH GRADE	MATHEMATICS	Number and Number Sense	**4.4**	The student will a) read, write, represent, and identify decimals expressed through thousandths; b) round to the nearest whole number, tenth, and hundredth; and c) compare the value of two decimals, using symbols (<, >, or =), concrete materials, drawings, and calculators.
FOURTH GRADE	MATHEMATICS	Computation and Estimation	**4.5**	The student will estimate whole-number sums and differences and describe the method of estimation. Students will refine estimates, using terms such as closer to, between, and a little more than.
FOURTH GRADE	MATHEMATICS	Computation and Estimation	**4.6**	The student will add and subtract whole numbers written in vertical and horizontal form, choosing appropriately between paper and pencil methods and calculators.

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FOURTH GRADE	MATHEMATICS	Computation and Estimation	**4.7**	The student will find the product of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer, using estimation and paper and pencil. For larger products (a two-digit numeral times a three-digit numeral), estimation and calculators will be used.
FOURTH GRADE	MATHEMATICS	Computation and Estimation	**4.8**	The student will estimate and find the quotient of two whole numbers, given a one-digit divisor.
FOURTH GRADE	MATHEMATICS	Computation and Estimation	**4.9**	The student will a) add and subtract with fractions having like and unlike denominators of 12 or less, using concrete materials, pictorial representations, and paper and pencil; b) add and subtract with decimals through thousandths, using concrete materials, pictorial representations, and paper and pencil; and c) solve problems involving addition and subtraction with fractions having like and unlike denominators of 12 or less and with decimals expressed through thousandths, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.
FOURTH GRADE	MATHEMATICS	Measurement	**4.1**	The student will a) estimate and measure weight/mass, using actual measuring devices, and describe the results in U.S. Customary/metric units as appropriate, including ounces, pounds, grams, and kilograms; b) identify equivalent measurements between units within the U.S. Customary system (ounces and pounds) and between units within the metric system (grams and kilograms); and c) estimate the conversion of ounces and grams and pounds and kilograms, using approximate comparisons (1 ounce is about 28 grams, or 1 gram is about the weight of a paper clip; 1 kilogram is a little more than 2 pounds). * * The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.
FOURTH GRADE	MATHEMATICS	Measurement	**4.11**	The student will a) estimate and measure length, using actual measuring devices, and describe the results in both metric and U.S. Customary units, including part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, millimeters, centimeters, and meters; b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters); and c) estimate the conversion of inches and centimeters, yards and meters, and miles and kilometers, using approximate comparisons (1 inch is about 2.5 centimeters, 1 meter is a little longer than 1 yard, 1 mile is slightly farther than 1.5 kilometers, or 1 kilometer is slightly farther than half a mile). * * The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.
FOURTH GRADE	MATHEMATICS	Measurement	**4.12**	The student will a) estimate and measure liquid volume, using actual measuring devices and using metric and U.S. Customary units, including cups, pints, quarts, gallons, milliliters, and liters; b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons) and between units within the metric system (milliliters and liters); and c) estimate the conversion of quarts and liters, using approximate comparisons (1 quart is a little less than 1 liter, 1 liter is a little more than 1 quart).* * The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U. S. Customary and metric units.
FOURTH GRADE	MATHEMATICS	Measurement	**4.13**	The student will a) identify and describe situations representing the use of perimeter and area; and b) use measuring devices to find perimeter in both standard and nonstandard units of measure.
FOURTH GRADE	MATHEMATICS	Geometry	**4.14**	The student will investigate and describe the relationships between and among points, lines, line segments, and rays.
FOURTH GRADE	MATHEMATICS	Geometry	**4.15**	The student will a) identify and draw representations of points, lines, line segments, rays, and angles, using a straightedge or ruler; and b) describe the path of shortest distance between two points on a flat surface.
FOURTH GRADE	MATHEMATICS	Geometry	**4.16**	The student will identify and draw representations of lines that illustrate intersection, parallelism, and perpendicularity.
FOURTH GRADE	MATHEMATICS	Geometry	**4.17**	The student will a) analyze and compare the properties of two-dimensional (plane) geometric figures (circle, square, rectangle, triangle, parallelogram, and rhombus) and three-dimensional (solid) geometric figures (sphere, cube, and rectangular solid [prism]); b) identify congruent and noncongruent shapes; and c) investigate congruence of plane figures after geometric transformations such as reflection (flip), translation (slide) and rotation (turn), using mirrors, paper folding, and tracing.
FOURTH GRADE	MATHEMATICS	Geometry	**4.18**	The student will identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate plane.
FOURTH GRADE	MATHEMATICS	Probability and Statistics	**4.19**	The student will a) predict the likelihood of outcomes of a simple event, using the terms certain, likely, unlikely, impossible; and b) determine the probability of a given simple event, using concrete materials.
FOURTH GRADE	MATHEMATICS	Probability and Statistics	**4.2**	The student will collect, organize, and display data in line and bar graphs with scale increments of one or greater than one and use the display to interpret the results, draw conclusions, and make predictions.
FOURTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	**4.21**	The student will recognize, create, and extend numerical and geometric patterns, using concrete materials, number lines, symbols, tables, and words.
FOURTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	**4.22**	The student will recognize and demonstrate the meaning of equality, using symbols representing numbers, operations, and relations [e.g., 3 + 5 = 5 + 3 and 15 + (35 + 16) = (15 + 35) + 16].

FOURTH GRADE	SCIENCE	Scientific Investigation, Reasoning, and Logic	**4.1**	The student will plan and conduct investigations in which a) distinctions are made among observations, conclusions, inferences, and predictions; b) hypotheses are formulated based on cause-and-effect relationships; c) variables that must be held constant in an experimental situation are defined; d) appropriate instruments are selected to measure linear distance, volume, mass, and temperature; e) appropriate metric measures are used to collect, record, and report data; f) data are displayed using bar and basic line graphs; g) numerical data that are contradictory or unusual in experimental results are recognized; and h) predictions are made based on data from picture graphs, bar graphs, and basic line graphs.
FOURTH GRADE	SCIENCE	Force, Motion, and Energy	**4.2**	The student will investigate and understand characteristics and interaction of moving objects. Key concepts include a) motion is described by an object's direction and speed; b) forces cause changes in motion; c) friction is a force that opposes motion; and d) moving objects have kinetic energy.
FOURTH GRADE	SCIENCE	Force, Motion, and Energy	**4.3**	The student will investigate and understand the characteristics of electricity. Key concepts include a) conductors and insulators; b) basic circuits (open/closed, parallel/series); c) static electricity; d) the ability of electrical energy to be transformed into heat, light, and mechanical energy; e) simple electromagnets and magnetism; and f) historical contributions in understanding electricity.
FOURTH GRADE	SCIENCE	Life Processes	**4.4**	The student will investigate and understand basic plant anatomy and life processes. Key concepts include a) the structures of typical plants (leaves, stems, roots, and flowers); b) processes and structures involved with reproduction (pollination, stamen, pistil, sepal, embryo, spore, and seed); c) photosynthesis (sunlight, chlorophyll, water, carbon dioxide, oxygen, and sugar); and d) dormancy.
FOURTH GRADE	SCIENCE	Living Systems	**4.5**	The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment. Key concepts include a) behavioral and structural adaptations; b) organization of communities; c) flow of energy through food webs; d) habitats and niches; e) life cycles; and f) influence of human activity on ecosystems.
FOURTH GRADE	SCIENCE	Interrelationships in Earth/Space Systems	**4.6**	The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include a) weather measurements and meteorological tools (air pressure – barometer, wind speed – anemometer, rainfall – rain gauge, and temperature – thermometer); and b) weather phenomena (fronts, clouds, and storms).
FOURTH GRADE	SCIENCE	Earth Patterns, Cycles, and Change	**4.7**	The student will investigate and understand the relationships among the Earth, moon, and sun. Key concepts include a) the motions of the Earth, moon, and sun (revolution and rotation); b) the causes for the Earth's seasons and phases of the moon; c) the relative size, position, age, and makeup of the Earth, moon, and sun; and d) historical contributions in understanding the Earth-moon-sun system.
FOURTH GRADE	SCIENCE	Resources	**4.8**	The student will investigate and understand important Virginia natural resources. Key concepts include a) watershed and water resources; b) animals and plants; c) minerals, rocks, ores, and energy sources; and d) forests, soil, and land.
FIFTH GRADE	SCIENCE	Scientific Investigation, Reasoning, and Logic	**5.1**	The student will plan and conduct investigations in which a) rocks, minerals, and organisms are identified using a classification key; b) estimations of length, mass, and volume are made; c) appropriate instruments are selected and used for making quantitative observations of length, mass, volume, and elapsed time; d) accurate measurements are made using basic tools (thermometer, meter stick, balance, graduated cylinder); e) data are collected, recorded, and reported using the appropriate graphical representation (graphs, charts, diagrams); f) predictions are made using patterns, and simple graphical data are extrapolated; g) manipulated and responding variables are identified; and h) an understanding of the nature of science is developed and reinforced.
FIFTH GRADE	SCIENCE	Force, Motion, and Energy	**5.2**	The student will investigate and understand how sound is transmitted and is used as a means of communication. Key concepts include a) frequency, waves, wavelength, vibration; b) the ability of different media (solids, liquids, and gases) to transmit sound; and c) uses and applications (voice, sonar, animal sounds, and musical instruments).
FIFTH GRADE	SCIENCE	Force, Motion, and Energy	**5.3**	The student will investigate and understand basic characteristics of visible light and how it behaves. Key concepts include a) the visible spectrum and light waves; b) refraction of light through water and prisms; c) reflection of light from reflective surfaces (mirrors); d) opaque, transparent, and translucent; and e) historical contributions in understanding light.
FIFTH GRADE	SCIENCE	Matter	**5.4**	The student will investigate and understand that matter is anything that has mass, takes up space, and occurs as a solid, liquid, or gas. Key concepts include a) atoms, elements, molecules, and compounds; b) mixtures including solutions; and c) the effect of heat on the states of matter.
FIFTH GRADE	SCIENCE	Living Systems	**5.5**	The student will investigate and understand that organisms are made of cells and have distinguishing characteristics. Key concepts include a) basic cell structures and functions; b) kingdoms of living things; c) vascular and nonvascular plants; and d) vertebrates and invertebrates.
FIFTH GRADE	SCIENCE	Interrelationships in Earth/Space Systems	**5.6**	The student will investigate and understand characteristics of the ocean environment. Key concepts include a) geological characteristics (continental shelf, slope, rise); b) physical characteristics (depth, salinity, major currents); and c) biological characteristics (ecosystems).

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FIFTH GRADE	SCIENCE	Earth Patterns, Cycles, and Change	**5.7**	The student will investigate and understand how the Earth's surface is constantly changing. Key concepts include a) the rock cycle including identification of rock types; b) Earth history and fossil evidence; c) the basic structure of the Earth's interior; d) plate tectonics (earthquakes and volcanoes); e) weathering and erosion; and f) human impact.
FIFTH GRADE	ENGLISH	Oral Language	**5.1**	The student will listen, draw conclusions, and share responses in subject-related group learning activities. a) Participate in and contribute to discussions across content areas. b) Organize information to present reports of group activities. c) Summarize information gathered in group activities.
FIFTH GRADE	ENGLISH	Oral Language	**5.2**	The student will use effective nonverbal communication skills. a) Maintain eye contact with listeners. b) Use gestures to support, accentuate, and dramatize verbal message. c) Use facial expressions to support and dramatize verbal message. d) Use posture appropriate for communication setting.
FIFTH GRADE	ENGLISH	Oral Language	**5.3**	The student will make planned oral presentations. a) Determine appropriate content for audience. b) Organize content sequentially or around major ideas. c) Summarize main points before or after presentation. d) Incorporate visual aids to support the presentation. e) Use grammatically correct language and specific vocabulary.
FIFTH GRADE	ENGLISH	Reading	**5.4**	The student will read fiction and nonfiction with fluency and accuracy. a) Use context to clarify meaning of unfamiliar words. b) Use knowledge of root words, prefixes, and suffixes. c) Use dictionary, glossary, thesaurus, and other word-reference materials.
FIFTH GRADE	ENGLISH	Reading	**5.5**	The student will read and demonstrate comprehension of fiction. a) Describe the relationship between text and previously read materials. b) Describe character development in fiction and poetry selections. c) Describe the development of plot and explain how conflicts are resolved. d) Describe the characteristics of free verse, rhymed, and patterned poetry. e) Describe how an author's choice of vocabulary and style contributes to the quality and enjoyment of selections.
FIFTH GRADE	ENGLISH	Reading	**5.6**	The student will read and demonstrate comprehension of nonfiction. a) Use text organizers, such as type, headings, and graphics, to predict and categorize information. b) Identify structural patterns found in nonfiction. c) Locate information to support opinions, predictions, and conclusions. d) Identify cause-and-effect relationships. e) Identify compare-and-contrast relationships. f) Skim materials to develop a general overview of content and to locate specific information. g) Identify new information gained from reading.
FIFTH GRADE	ENGLISH	Reading	**5.7**	The student will demonstrate comprehension of information from a variety of print resources. a) Develop notes that include important concepts, summaries, and identification of information sources. b) Organize information on charts, maps, and graphs.
FIFTH GRADE	ENGLISH	Writing	**5.8**	The student will write for a variety of purposes: to describe, to inform, to entertain, and to explain. a) Choose planning strategies for various writing purposes. b) Organize information. c) Demonstrate awareness of intended audience. d) Use precise and descriptive vocabulary to create tone and voice. e) Vary sentence structure. f) Revise writing for clarity. g) Use available technology to access information.
FIFTH GRADE	ENGLISH	Writing	**5.9**	The student will edit writing for correct grammar, capitalization, spelling, punctuation, and sentence structure. a) Use plural possessives. b) Use adjective and adverb comparisons. c) Identify and use interjections. d) Use apostrophes in contractions and possessives. e) Use quotation marks with dialogue. f) Use commas to indicate interrupters and in the salutation and closing of a letter. g) Use a hyphen to divide words at the end of a line. h) Edit for clausal fragments, run-on sentences, and excessive coordination.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Skills	**US1.1**	The student will develop skills for historical and geographical analysis, including the ability to a) identify and interpret primary and secondary source documents to increase understanding of events and life in United States history to 1877; b) make connections between the past and the present; c) sequence events in United States history from pre-Columbian times to 1877; d) interpret ideas and events from different historical perspectives; e) evaluate and discuss issues orally and in writing; f) analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events; g) distinguish between parallels of latitude and meridians of longitude; h) interpret patriotic slogans and excerpts from notable speeches and documents.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Geography	**US1.2**	The student will use maps, globes, photographs, pictures, and tables to a) locate the seven continents; b) locate and describe the location of the geographic regions of North America: Coastal Plain, Appalachian Mountains, Canadian Shield, Interior Lowlands, Great Plains, Rocky Mountains, Basin and Range, and Coastal Range; c) locate and identify the water features important to the early history of the United States: Great Lakes, Mississippi River, Missouri River, Ohio River, Columbia River, Colorado River, Rio Grande, Atlantic Ocean, Pacific Ocean, and Gulf of Mexico.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Exploration to Revolution: Pre-Columbian Times to the 1770's	**US1.3**	The student will demonstrate knowledge of how early cultures developed in North America by a) locating where the American Indians (First Americans) settled, with emphasis on Arctic (Inuit), Northwest (Kwakiutl), Plains (Sioux), Southwest (Pueblo), and Eastern Woodland (Iroquois); b) describing how the American Indians (First Americans) used their environment to obtain food, clothing, and shelter.

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FIFTH GRADE	UNITED STATES HISTORY TO 1877	Exploration to Revolution: Pre-Columbian Times to the 1770's	US1.4	The student will demonstrate knowledge of European exploration in North America and West Africa by a) describing the motivations, obstacles, and accomplishments of the Spanish, French, Portuguese, and English explorations; b) describing cultural interactions between Europeans and American Indians (First Americans) that led to cooperation and conflict; c) identifying the location and describing the characteristics of West African societies (Ghana, Mali, and Songhai) and their interactions with traders.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Exploration to Revolution: Pre-Columbian Times to the 1770's	US1.5	The student will demonstrate knowledge of the factors that shaped colonial America by a) describing the religious and economic events and conditions that led to the colonization of America; b) comparing and contrasting life in the New England, Mid-Atlantic, and Southern colonies, with emphasis on how people interacted with their environment; c) describing colonial life in America from the perspectives of large landowners, farmers, artisans, women, indentured servants, and slaves; d) identifying the political and economic relationships between the colonies and England.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Revolution and the New Nation: 1770s to the Early 1800s	US1.6	The student will demonstrate knowledge of the causes and results of the American Revolution by a) identifying the issues of dissatisfaction that led to the American Revolution; b) identifying how political ideas shaped the revolutionary movement in America and led to the Declaration of Independence, with emphasis on the ideas of John Locke; c) describing key events and the roles of key individuals in the American Revolution, with emphasis on George Washington, Benjamin Franklin, Thomas Jefferson, Patrick Henry, and Thomas Paine; d) explaining reasons why the colonies were able to defeat Britain.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Revolution and the New Nation: 1770s to the Early 1800s	US1.7	The student will demonstrate knowledge of the challenges faced by the new nation by a) identifying the weaknesses of the government established by the Articles of Confederation; b) identifying the basic principles of the new government established by the Constitution of the United States and the Bill of Rights; c) identifying the conflicts that resulted in the emergence of two political parties; d) describing the major accomplishments of the first five presidents of the United States.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Expansion and Reform: 1801 to 1861	US1.8	The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by a) describing territorial expansion and how it affected the political map of the United States, with emphasis on the Louisiana Purchase, the Lewis and Clark expedition, and the acquisitions of Florida, Texas, Oregon, and California; b) identifying the geographic and economic factors that influenced the westward movement of settlers; c) describing the impact of inventions, including the cotton gin, the reaper, the steamboat, and the steam locomotive, on life in America; d) identifying the main ideas of the abolitionist and suffrage movements.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Civil War and Reconstruction: 1860s to 1877	US1.9	The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by a) describing the cultural, economic, and constitutional issues that divided the nation; b) explaining how the issues of states' rights and slavery increased sectional tensions; c) identifying on a map the states that seceded from the Union and those that remained in the Union; d) describing the roles of Abraham Lincoln, Jefferson Davis, Ulysses S. Grant, Robert E. Lee, Thomas "Stonewall" Jackson, and Frederick Douglass in events leading to and during the war; e) using maps to explain critical developments in the war, including major battles; f) describing the effects of war from the perspectives of Union and Confederate soldiers (including black soldiers), women, and slaves.
FIFTH GRADE	UNITED STATES HISTORY TO 1877	Civil War and Reconstruction: 1860s to 1877	US1.10	The student will demonstrate knowledge of the effects of Reconstruction on American life by a) identifying the provisions of the 13th, 14th, and 15th Amendments to the Constitution of the United States and their impact on the expansion of freedom in America; b) describing the impact of Reconstruction policies on the South.
FIFTH GRADE	MATHEMATICS	Number and Number Sense	5.1	The student will a) read, write, and identify the place values of decimals through thousandths; b) round decimal numbers to the nearest tenth or hundredth; and c) compare the values of two decimals through thousandths, using the symbols >, <, or =.
FIFTH GRADE	MATHEMATICS	Number and Number Sense	5.2	The student will a) recognize and name commonly used fractions (halves, fourths, fifths, eighths, and tenths) in their equivalent decimal form and vice versa; and b) order a given set of fractions and decimals from least to greatest. Fractions will include like and unlike denominators limited to 12 or less, and mixed numbers.
FIFTH GRADE	MATHEMATICS	Computation and Estimation	5.3	The student will create and solve problems involving addition, subtraction, multiplication, and division of whole numbers, using paper and pencil, estimation, mental computation, and calculators.
FIFTH GRADE	MATHEMATICS	Computation and Estimation	5.4	The student will find the sum, difference, and product of two numbers expressed as decimals through thousandths, using an appropriate method of calculation, including paper and pencil, estimation, mental computation, and calculators.
FIFTH GRADE	MATHEMATICS	Computation and Estimation	5.5	The student, given a dividend of four digits or fewer and a divisor of two digits or fewer, will find the quotient and remainder.
FIFTH GRADE	MATHEMATICS	Computation and Estimation	5.6	The student, given a dividend expressed as a decimal through thousandths and a single-digit divisor, will find the quotient.
FIFTH GRADE	MATHEMATICS	Computation and Estimation	5.7	The student will add and subtract with fractions and mixed numbers, with and without regrouping, and express answers in simplest form. Problems will include like and unlike denominators limited to 12 or less.

FIFTH GRADE	MATHEMATICS	Measurement	5.8	The student will describe and determine the perimeter of a polygon and the area of a square, rectangle, and right triangle, given the appropriate measures.
FIFTH GRADE	MATHEMATICS	Measurement	5.9	The student will identify and describe the diameter, radius, chord, and circumference of a circle.
FIFTH GRADE	MATHEMATICS	Measurement	5.1	The student will differentiate between perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.
FIFTH GRADE	MATHEMATICS	Measurement	5.11	The student will choose an appropriate measuring device and unit of measure to solve problems involving measurement of a) length — part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers; b) weight/mass — ounces, pounds, tons, grams, and kilograms; c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters; d) area — square units; and e) temperature — Celsius and Fahrenheit units. Problems also will include estimating the conversion of Celsius and Fahrenheit units relative to familiar situations (water freezes at 0°C and 32°F, water boils at 100°C and 212°F, normal body temperature is about 37°C and 98.6°F).
FIFTH GRADE	MATHEMATICS	Measurement	5.12	The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.
FIFTH GRADE	MATHEMATICS	Measurement	5.13	The student will measure and draw right, acute, and obtuse angles and triangles, using appropriate tools.
FIFTH GRADE	MATHEMATICS	Geometry	5.14	The student will classify angles and triangles as right, acute, or obtuse.
FIFTH GRADE	MATHEMATICS	Geometry	5.15	The student, using two-dimensional (plane) figures (square, rectangle, triangle, parallelogram, rhombus, kite, and trapezoid) will a) recognize, identify, describe, and analyze their properties in order to develop definitions of these figures; b) identify and explore congruent, noncongruent, and similar figures; c) investigate and describe the results of combining and subdividing shapes; d) identify and describe a line of symmetry; and e) recognize the images of figures resulting from geometric transformations such as translation (slide), reflection (flip), or rotation (turn).
FIFTH GRADE	MATHEMATICS	Geometry	5.16	The student will identify, compare, and analyze properties of three-dimensional (solid) geometric shapes (cylinder, cone, cube, square pyramid, and rectangular prism).
FIFTH GRADE	MATHEMATICS	Probability and Statistics	5.17	The student will a) solve problems involving the probability of a single event by using tree diagrams or by constructing a sample space representing all possible results; b) predict the probability of outcomes of simple experiments, representing it with fractions or decimals from 0 to 1, and test the prediction; and c) create a problem statement involving probability and based on information from a given problem situation. Students will not be required to solve the created problem statement.
FIFTH GRADE	MATHEMATICS	Probability and Statistics	5.18	The student will, given a problem situation, collect, organize, and display a set of numerical data in a variety of forms, using bar graphs, stem-and-leaf plots, and line graphs, to draw conclusions and make predictions.
FIFTH GRADE	MATHEMATICS	Probability and Statistics	5.19	The student will find the mean, median, mode, and range of a set of data.
FIFTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	5.2	The student will analyze the structure of numerical and geometric patterns (how they change or grow) and express the relationship, using words, tables, graphs, or a mathematical sentence. Concrete materials and calculators will be used.
FIFTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	5.21	The student will a) investigate and describe the concept of variable; b) use a variable expression to represent a given verbal quantitative expression involving one operation ; and c) write an open sentence to represent a given mathematical relationship, using a variable.
FIFTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	5.22	The student will create a problem situation based on a given open sentence using a single variable.
SIXTH GRADE	MATHEMATICS	Number and Number Sense	6.1	The student will identify representations of a given percent and describe orally and in writing the equivalence relationships among fractions, decimals, and percents.
SIXTH GRADE	MATHEMATICS	Number and Number Sense	6.2	The student will describe and compare two sets of data, using ratios, and will use appropriate notations, such as a/b, a to b, and a:b.
SIXTH GRADE	MATHEMATICS	Number and Number Sense	6.3	The student will a) find common multiples and factors, including least common multiple and greatest common factor; b) identify and describe prime and composite numbers; and identify and describe the characteristics of even and odd integers.

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SIXTH GRADE	MATHEMATICS	Number and Number Sense	6.4	The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.
SIXTH GRADE	MATHEMATICS	Number and Number Sense	6.5	The student will identify, represent, order, and compare integers.
SIXTH GRADE	MATHEMATICS	Computation and Estimation	6.6	The student will a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form; and b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.
SIXTH GRADE	MATHEMATICS	Computation and Estimation	6.7	The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).
SIXTH GRADE	MATHEMATICS	Computation and Estimation	6.8	The student will solve multistep consumer-application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included.
SIXTH GRADE	MATHEMATICS	Measurement	6.9	The student will compare and convert units of measure for length, area, weight/mass, and volume within the U.S. Customary system and the metric system and estimate conversions between units in each system: a) length — part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers; b) weight/mass — ounces, pounds, tons, grams, and kilograms; c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters; and d) area — square units. * * The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.
SIXTH GRADE	MATHEMATICS	Measurement	6.1	The student will estimate and then determine length, weight/mass, area, and liquid volume/capacity, using standard and nonstandard units of measure.
SIXTH GRADE	MATHEMATICS	Measurement	6.11	The student will determine if a problem situation involving polygons of four or fewer sides represents the application of perimeter or area and apply the appropriate formula.
SIXTH GRADE	MATHEMATICS	Measurement	6.12	The student will a) solve problems involving the circumference and/or area of a circle when given the diameter or radius; and b) derive approximations for pi (p) from measurements for circumference and diameter, using concrete materials or computer models.
SIXTH GRADE	MATHEMATICS	Measurement	6.13	The student will a) estimate angle measures, using 45°, 90°, and 180° as referents, and use the appropriate tools to measure the given angles; and b) measure and draw right, acute, and obtuse angles and triangles.
SIXTH GRADE	MATHEMATICS	Geometry	6.14	The student will identify, classify, and describe the characteristics of plane figures, describing their similarities, differences, and defining properties.
SIXTH GRADE	MATHEMATICS	Geometry	6.15	The student will determine congruence of segments, angles, and polygons by direct comparison, given their attributes. Examples of noncongruent and congruent figures will be included.
SIXTH GRADE	MATHEMATICS	Geometry	6.16	The student will construct the perpendicular bisector of a line segment and an angle bisector.
SIXTH GRADE	MATHEMATICS	Geometry	6.17	The student will sketch, construct models of, and classify solid figures (rectangular prism, cone, cylinder, and pyramid).
SIXTH GRADE	MATHEMATICS	Probability and Statistics	6.18	The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including a) line, bar, and circle graphs; b) stem-and-leaf plots; and c) box-and-whisker plots. Circle graphs will be limited to halves, fourths, and eighths.
SIXTH GRADE	MATHEMATICS	Probability and Statistics	6.19	The student will describe the mean, median, and mode as measures of central tendency, describe the range, and determine their meaning for a set of data.
SIXTH GRADE	MATHEMATICS	Probability and Statistics	6.2	The student will a) a) make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram; and b) determine and interpret the probability of an event occurring from a given sample space and represent the probability as a ratio, decimal or percent, as appropriate for the given situation.
SIXTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	6.21	The student will investigate, describe, and extend numerical and geometric patterns, including triangular numbers, patterns formed by powers of 10, and arithmetic sequences.

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SIXTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	**6.22**	The student will investigate and describe concepts of positive exponents, perfect squares, square roots, and, for numbers greater than 10, scientific notation. Calculators will be used to develop exponential patterns.
SIXTH GRADE	MATHEMATICS	Patterns, Functions, and Algebra	**6.23**	The student will a) model and solve algebraic equations, using concrete materials; b) solve one-step linear equations in one variable, involving whole number coefficients and positive rational solutions; and c) use the following algebraic terms appropriately: variable, coefficient, term, and equation.

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