

Prekindergarten students will:

General Skills

- Use sentences orally to express wants, needs and thoughts.
- Develop/increase oral language by participation in songs, rhymes, story retellings, and finger plays.
- Follow school rules, routines, safe practices and oral directions.
- Demonstrate print awareness; begin to match upper and lowercase alphabet letters; identify 10 or more letters of the alphabet, and begin to match letters with sounds.
- Write first name, attempt to write messages (during play, or as part of playful activity) and understand that writing communicates thoughts and ideas.
- Count to 20; identify the number of objects in a set up to 10; and match the appropriate numeral to the set.
- Sort groups of objects by attributes of shape, size, and color.
- Compare objects and sets using words such as more/less, big/little, short/long.
- Copy and extend basic mathematical patterns such as AB, ABB, ABC AABB. An example of an ABB pattern is a string of beads that are yellow, blue, blue, yellow, blue, blue.
- Demonstrate control of many large and fine motor skills such as hopping, running, cutting, pouring, drawing, and measuring.

Kindergarten students will:

Language Arts

- Phonemic Awareness – Orally demonstrate an understanding that spoken language is composed of sequences of sounds.
- Listening/Speaking – Listen to information, rhymes, songs, conversations, and stories; clearly request, retell, and/or describe stories and experiences; and listen responsively to contemporary and classic stories and other texts read aloud.
- Reading – Recognize upper and lower case letters in print and understand that print represents language; decode simple words using letter-sound knowledge; and learn new vocabulary words through selections read aloud. Read and comprehend simple text and retell story.
- Writing – Write name and each letter of the alphabet; write messages using knowledge of letters and sounds; and write labels, notes, and captions for illustrations, possessions, charts, and centers.

Mathematics

- Number and Operations – Use words and numbers to describe relative sizes; sequence events; name ordinal positions; separate a whole into equal parts and model addition and subtraction.
- Patterns and Relationships – Identify, extend and create patterns; use patterns to predict; and count to 100 by ones.
- Geometry – Describe one object in relation to another; place objects in given positions; describe, identify, compare and sort objects; and describe, identify and compare shapes and solids.
- Measurement – Compare and order objects by length, capacity, weight or area (use greater than, less than or equal to); compare temperatures and times; and read a calendar.
- Probability and Statistics – Construct real and picture graphs; and use graphs to answer questions.
- Problem Solving – Identify math in everyday situations; use a problem-solving model with guidance; select an appropriate problem-solving strategy; and communicate mathematical ideas.

Science

- Lab Investigations – Participate in simple experiments, follow safety rules and learn how to use/conserves resources.
- Scientific Inquiry – Use science tools including hand lenses, balances, cups and bowls to observe and collect information by asking questions, gathering data, constructing reasonable explanations and communicating findings about simple investigations.
- Critical thinking – Make, discuss and justify merits of decisions; and explain problems and propose solutions in own words.
- Patterns, Systems and Cycles – Describe patterns and their basic properties (ex. seasons, growth, day and night and predict what happens next); understand structures, interactions and processes found in systems; and identify parts of plants and animals.

- Change – Observe, describe, and record changes in systems, cycles and models; record changes in size, mass, color, position, temperature, sound and movement by observing weather changes and life cycles of organisms; know that heat causes change; and recognize changes in life cycles.
- Living Organisms and Non-living Objects – Know the difference between living and non-living objects; identify organisms and objects and their parts; know and give examples of basic needs of organisms and describe their dependence on each other; and identify how the earth provides resources for life.
- Understanding the Natural World – Observe and describe properties and usefulness of rocks, soil, and water.

Social Studies

- Name and describe authority figures in the home and school; identify the purpose of having rules.
- Identify and describe basic human needs of food, clothing, and shelter and the way people meet these needs, such as having a job.
- Identify the customs, symbols, holidays, celebrations, and traditions that represent the family and American beliefs, such as Columbus Day, Thanksgiving, and the 4th of July.
- Identify examples of technology used in the home and school.
- Identify family and community customs.
- Recognize and use social studies vocabulary terms, concepts and events.
- Locate places and describe their relative locations.
- Identify contributions of people, such as George Washington.

First grade students will:

Language Arts

- Phonics / Word Study / Spelling – Use conventional spelling of regular and irregular high frequency words, and identify multisyllabic words by using common syllable patterns.
- Listening / Speaking / Communication – Listen and speak appropriately to different audiences for different purposes and occasions; communicate clearly by putting thoughts and feelings into spoken words.
- Vocabulary – Develop an extensive vocabulary that identifies people, places, things; and develop vocabulary through meaningful/concrete experiences.
- Reading – Recognize the conventions of print (e.g., understand that print moves left to right, involves upper and lower case letters, and represents spoken language); manipulate sounds in spoken words (phonemic awareness) and understand that letters represent sounds (phonics); read and comprehend first-grade-level text fluently; and draw conclusions from information gathered.
- Writing – Gain increasing control of penmanship and punctuation; write for different purposes, such as composing lists, letters, stories; and engage in the writing process by generating ideas before writing and developing and polishing drafts.
- Inquiry – Develop questions for investigation; draw conclusions from information; interpret different sources of data (charts, graphs, etc.).

Mathematics

- Number and Operations – Read, write, describe, compare and order whole numbers to 99; create sets of tens and ones; describe values of coins and their relationships; separate a whole into parts; describe the parts of a set; model and write addition and subtraction sentences; and learn and apply addition facts.
- Patterns and Relationships – Find patterns such as odd and even; identify fact families for addition and subtraction; identify, describe and extend patterns to solve problems; and skip count by twos, fives and tens.
- Geometry – Sort objects by attributes; identify shapes and solids; and combine shapes to make a new shape.
- Measurement – Estimate and measure using non-standard units; relate the unit to size of object; compare and order length, area, capacity, weight/mass and temperature; read time to the hour and half hour on a clock; and order events by length of time.
- Probability and Statistics – Collect and sort data; construct real, picture and bar graphs; draw conclusions from graphs; and identify events as certain or impossible.
- Problem Solving – Identify math in everyday situations; use a problem-solving model with guidance; select or develop an appropriate problem-solving strategy; and communicate mathematical ideas.

Science

- Lab Investigations – Conduct simple experiments, follow safety rules and learn how to use/conserve resources.

- Scientific Inquiry – Use science tools including hand lenses, clocks, computers, thermometers and balances to ask questions and gather and record data, construct reasonable explanations and communicate explanations about simple investigations; and measure using non-standard units.
- Critical Thinking – Make, discuss and justify merits of decisions; and explain problems and propose solutions in own words.
- Properties, Patterns and Systems – Identify, predict and create patterns and their basic properties; know that systems have parts and are composed of organisms and objects (parts of plants and animals); and manipulate parts so that parts are separated from the whole, which may result in the part or whole not working.
- Change – Observe, measure and record changes in size, mass, color, position, quantity, time, temperature, sound and movement by observing weather changes and life cycles of organisms.
- Living Organisms and Non-living Objects – Group and compare living and non-living objects; identify characteristics of organisms that allow their basic needs to be met; compare ways that living things depend on each other; and identify how the earth provides resources for life.
- Processes of the Natural World – Describe natural resources of water; observe and describe differences in rock and soil samples; and identify uses of rocks, soil and water and how they can be recycled.

Social Studies

- Describe the concepts of time and chronology by distinguishing among yesterday, today, tomorrow, past, present, and future events.
- Describe the concepts of goods and services and the value of work.
- Name and describe historic people who have exhibited good citizenship, such as Eleanor Roosevelt, Clara Barton, and Nathan Hale.
- Create simple maps to identify the location of places in the classroom, school, and community.
- Locate community, state and nation on maps and globes.
- Identify and recognize symbols, anthems and mottos of the United States and Texas such as the Pledge of Allegiance, the United States flag, and the Texas flag.
- Recognize and use social studies vocabulary terms, concepts, and events.
- Identify and describe the roles of leaders in the community, state and nation.

Second grade students will:

Language Arts

- Phonics/ Word Study/ Spelling – Use a variety of word identification strategies; use conventional spelling of regular and irregular high-frequency words; identify multisyllabic words by using common syllable patterns; and use structural cues to identify words in text.
- Listening/Speaking – Listen responsively to stories and other texts read aloud; choose and adapt spoken language according to the audience, purpose, and occasion; identify rhymes, repeated sounds or instances of onomatopoeia; gain increasing control of grammar, such as subject-verb agreement; and use complete sentences and correct tense usage.
- Vocabulary – Develop an extensive vocabulary through reading; discuss the meanings of words; and use resources, references and context to build word meanings and to confirm pronunciation of words.
- Reading – Decode using all letter sound correspondences; use knowledge of word order and word meaning to identify unfamiliar words; read and comprehend a variety of second-grade-level texts fluently; make and explain important inferences in a story; gather important information using resources and references; and read silently for increasing periods of time.
- Writing – Write to record ideas and reflections for a variety of audiences; compose complete sentences in written texts and use appropriate end punctuation; engage in the writing process by generating ideas and developing and polishing final copies of compositions; and take simple notes from relevant sources, such as classroom guests, information books, and media sources.
- Inquiry – Develop questions for investigation; draw conclusions from information; interpret different sources of data; use multiple sources to locate information that addresses questions; and interpret and use graphic sources of information.

Mathematics

- Number and Operations – Use models to represent, compare and order whole numbers; read numbers through 999; name fractional parts of a whole or set of objects; recall and apply basic addition and subtraction facts; add and subtract with two-digit numbers; determine the value of a collection of coins; and model multiplication and division.
- Patterns and Relationships – Find patterns in a hundreds chart; use place value to compare and order numbers; use patterns to remember addition and subtraction facts; use fact families; generate ordered pairs from real-life situations; identify and extend a list of ordered pairs; and identify, describe and extend patterns to predict and solve problems.
- Geometry – Identify attributes of shapes and solids; compare shapes and solids using attributes; cut geometric shapes apart and identify the new shapes made; and locate and name whole numbers on a number line.
- Measurement – Identify models for standard units of length, capacity and weight/mass; measure using non-standard units; describe length of an activity; read a thermometer; and describe time on a clock.
- Probability and Statistics – Collect and sort data; construct real, picture and bar graphs; draw conclusions and answer questions from graphs; and describe an event as more likely or less likely.
- Problem Solving – Identify math in everyday situations; use a problem-solving model; select or develop an appropriate problem-solving strategy; relate informal language to math language and symbols; and communicate mathematical ideas.

Science

- Lab Investigations – Conduct simple experiments; follow safety rules; and learn how to use and conserve resources.
- Scientific Inquiry – Use science tools including hand lenses, rulers, measuring cups, clocks, computers, thermometers and balances to ask questions; plan, conduct and gather information about the world; construct reasonable explanations, draw conclusions and communicate explanations about investigations; measure objects using metric units and non-standard units; and use graphs to present data.
- Critical Thinking – Make, discuss and justify merits of decisions; and explain problems and identify a task and a solution related to the problem.
- Properties, Patterns and Systems – Classify organisms, objects and events based on properties and patterns; manipulate and identify parts that, when put together, can do things they don't do alone, such as a guitar and guitar strings; and observe functions of plant and animal parts.
- Change – Observe, measure and analyze changes in size, mass, color, position, quantity, time, temperature, sound and movement by observing weather changes, the night sky, and seasons; identify how heat causes change and show change in motion of objects that are pushed or pulled.
- Living Organisms and Non-living Objects – Identify characteristics of living and non-living objects; identify characteristics of organisms that allow their basic needs to be met; compare ways that living things depend on each other; and identify how the earth provides resources for life.
- Basic Needs of Organisms – Identify external characteristics of plants and animals that allow their needs to be met; and compare and give examples of ways organisms depend on each other and their environments.
- Processes of the Natural World – Describe and illustrate the water cycle, and identify uses of natural resources.

Social Studies

- Describe the concepts of time and chronology by measuring calendar time by days, weeks, months, and years.
- Identify and describe the functions of the mayor, governor, and president; and identify ways public officials are selected.
- Explain choices people have in a free enterprise system.
- Identify and describe American customs, symbols, and celebrations, such as the Statue of Liberty, the Bald Eagle, and the Liberty Bell.
- Identify and explain the concepts of consumers and producers such as cutting down trees to make lumber and paper and producing wood to sell; and describe the relationship between the physical environment and human activities such as cutting down trees.
- Identify and explain how technology innovations have changed transportation and communication.
- Recognize and use social studies vocabulary terms, concepts, and events.
- Use symbols, find locations, and determine directions on maps and globes.
- Identify major landforms and bodies of water on maps and globes.

Third grade students will:

Language Arts

- Phonics/ Wordy Study/ Spelling – Use conventional spelling of regular and irregular high frequency words; identify multisyllabic words by using common syllable patterns; and use root words and other structural cues such as prefixes and suffixes to recognize words.
- Listening/ Speaking/ Communication – Listen to solve problems, gather information or appreciate stories; listen to identify the musical elements of literary language, such as rhymes, repeated sounds or instances of onomatopoeia; and gain increasing control of grammar, such as subject-verb agreement, complete sentences, and correct tense usage.
- Vocabulary – Develop an extensive vocabulary through reading; develop vocabulary through meaningful/ concrete experiences; use resources and references, and context to build word meanings and to confirm pronunciation of words; and demonstrate knowledge of synonyms, antonyms, and multi-meaning words.
- Reading – Read and comprehend a variety of third-grade-level texts fluently; read for enjoyment, to solve problems, to gather information, and to extend vocabulary; make and explain important inferences in a story; demonstrate knowledge of synonyms, antonyms, and multi-meaning words; gather important information using resources and references; analyze the literary elements of narrative text; and read silently for increasing periods of time.
- Writing – Write to record ideas and reflections for a variety of audiences; use increasingly complex capitalization, punctuation, and spelling; develop, revise, and edit writing and compositions using established criteria based on traits of good writing; use available technology for word processing, spell checking, and printing; and compile notes into reports, outlines, and summaries.
- Inquiry – Show connections among ideas; develop questions for investigation; draw conclusions from information; interpret different sources of data; and demonstrate learning through productions, displays, written and oral reports, and dramatization.

Mathematics

- Number and Operations – Use place value to read, write and describe numbers through 999,999; compare and order numbers through 9,999; determine value of a collection of coins and bills; construct fractional models and compare fractions; name fractional parts of a whole or set; construct models of equivalent fractions; add and subtract with numbers through 999; learn and apply multiplication facts; multiply using a one-digit multiplier; model division and record solutions; round numbers to tens and hundreds; and estimate sums and differences.
- Patterns and Relationships – Make predictions and solve problems using patterns; identify patterns in multiplication facts; identify fact families for multiplication and division; generate tables of ordered pairs; and identify and extend patterns of ordered pairs.
- Geometry – Identify, classify, describe and compare shapes and solids; identify congruent shapes; create and identify lines of symmetry; and locate and name whole numbers and fractions on a number line.
- Measurement – Estimate and measure length using metric and customary units; find the perimeter of a figure; determine area using concrete models; tell and write time on digital and traditional clocks; measure length, area, capacity, weight/mass, temperature and time; and determine volume with models.

- Probability and Statistics – Collect, organize, record and display data in pictograph and bar graphs; interpret information from graphs; and describe events as more likely, less likely or equally likely to occur.
- Problem Solving – Identify math in everyday situations; use a problem-solving model; select or develop an appropriate problem-solving strategy; use tools to solve problems; explain and record observations; make generalizations from patterns; and justify why an answer is reasonable and explain the solution process.

Science

- Lab Investigations – Conduct simple experiments and follow safety rules including the use of safety goggles; and make wise choices in use and conservation of resources and disposal or recycling of materials.
- Scientific Inquiry – Use science tools including calculators, rulers, meter sticks, microscopes, cameras, sound recorders, hand lenses, magnets, computers, balances, and thermometers to collect and analyze data; plan and implement investigations that include questions and hypotheses; communicate valid conclusions using charts and graphs to evaluate information; measure objects using metric units; and demonstrate that repeated investigations may increase reliability of results.
- Critical Thinking – Evaluate strengths and weaknesses of scientific explanations; evaluate the impact of research on scientific thought; and study the history of science and the contributions of scientists.
- Systems – Observe simple systems and describe the role of various parts.
- Forces Cause Change – Measure changes in an object's position when a force is applied and identify forces that can change the surface of the earth.
- Physical Properties – Gather data about physical properties of matter including temperature, magnetism, hardness and mass; and identify matter as solids, liquids, and gases.
- Needs and Traits of Living Organisms – Know that organisms need food, water, light, air and habitat; observe organisms with similar needs that compete for resources; analyze how adaptive characteristics help species survive; and identify inherited traits of plants and animals.
- Processes of the Natural World – Describe importance of earth materials in local area and classify as renewable, nonrenewable or inexhaustible resources; identify planets of our solar system and their position in relation to the sun; and describe characteristics of the sun.

Social Studies

- Explain the effects that Christopher Columbus, Meriweather Lewis, and William Clark had on communities past and present such as exploring new places.
- Describe and name heroic men and women who made important choices, overcame obstacles, sacrificed for the betterment of others, and embarked on journeys that resulted in new ideas, new inventions, and new communities, such as Helen Keller, Harriet Tubman, and Dr. Martin Luther King, Jr.
- Name government officials who make a difference, the mayor, the city council, the governor, and the president; and describe their roles in the community, state, and nation.

- Name and describe people who made economic, cultural, and scientific contributions, such as Henry Ford, Jane Addams, and Jonas Salk.
- Recognize and use social studies vocabulary terms, concepts, and events.
- Retell the heroic deeds of real and fictional heroes who have helped to shape the community.
- Explain how supply and demand affect price and how cost of production and selling prices affect profits.
- Explain the importance of civic participation and identify examples of action people can take to improve the community.

Fourth grade students will:

Language Arts

- Phonics/ Word Study/ Spelling – Use conventional spelling of regular and irregular high-frequency words; identify multisyllabic words by using common syllable patterns; and use structural cues to identify words in text.
- Listening/Speaking /Communication – Monitor understanding of a spoken message and appropriately seek clarification; and interpret speaker’s messages (both verbal and nonverbal), purposes and perspectives.
- Vocabulary – Develop an extensive vocabulary through reading; and use resources, references, and context to build word meanings and to confirm pronunciation of words.
- Reading – Read and comprehend a variety of fourth-grade-level texts; adjust reading rate according to the purpose for reading; use multiple reference aids, including software, to clarify and seek information; study word meanings across content areas and through current events; paraphrase and summarize text; and represent text information by generating outlines, timelines, and graphics.
- Writing – Evaluate a piece of writing using criteria generated by the teacher and class based on traits of good writing; conduct research and raise new questions for further investigation; write to express, discover, record, develop, reflect on ideas, and problem solve; and compose journals, letters, reviews, poems, narratives, and instructions.
- Inquiry – Develop questions for investigation; draw conclusions from information; interpret different sources of data; use multiple sources, to locate information that addresses questions; and demonstrate learning through productions, displays, written and oral reports, and dramatization.
- Viewing/Representing – Understand and interpret visual messages and media, and analyze and critique media.

Mathematics

- Number and Operations – Read, write, describe, compare and order whole numbers and decimals; model fractions greater than one; generate equivalent fractions; compare and order fractions using models; relate fractions and decimals; add and subtract whole numbers and decimals; model factors and products; represent multiplication and division, recall and apply multiplication and division facts; multiply with two-digit multipliers; divide with a one-digit divisor; round to ten, hundred or thousand; and estimate products and quotients.
- Patterns and Relationships – Use patterns to remember multiplication facts; solve division problems using fact families; use patterns to multiply by 10 and 100; and describe the relationship between two sets of data.
- Geometry – Use formal language for angles; identify parallel and perpendicular lines; describe shapes and solids with vertices, edges and faces; verify congruence and symmetry; and locate and name whole numbers, fractions and decimals on a number line.
- Measurement – Estimate and measure weight and capacity; and measure length, perimeter, time, temperature and area.
- Probability and Statistics – Interpret bar graphs; list possible outcomes of a probability experiment; and use a pair of numbers to describe the probability of an event.

- Problem Solving – Identify math in everyday situations; use a problem-solving model; select or develop an appropriate problem-solving strategy; use tools to solve problems; explain and record observations; make generalizations from patterns; and justify why an answer is reasonable and explain the solution process.

Science

- Lab Investigations – Follow safety rules including the use of safety goggles; and make wise choices in use and conservation of resources and disposal or recycling of materials.
- Scientific Inquiry – Use science tools, including calculators, rulers, meter sticks, microscopes, cameras, sound recorders, hand lenses, stopwatches, compasses, computers, balances, and thermometers to collect and analyze data; plan and implement investigations that include questions and hypotheses; construct reasonable explanations from direct and indirect evidence; communicate valid conclusions using charts and graphs to evaluate information; measure objects using metric units; and demonstrate that repeated investigations may increase reliability of results.
- Critical Thinking – Evaluate strengths and weaknesses of scientific explanations; evaluate the impact of research on scientific thought; draw inferences based on promotional materials; represent the natural world using models and identify their limitations; and study the history of science and the contributions of scientists.
- Systems, Cycles, Patterns, and Change – Identify and describe roles of organisms in living systems and parts in nonliving objects and predict and draw conclusions when part of a system is removed; and identify patterns of change and recognize the symmetry of objects using reflection.
- Matter and Physical Properties – Observe changes in the states of matter caused by the addition or reduction of heat; and conduct tests and draw conclusions about matter based on physical properties including states of matter, conduction, density and buoyancy.
- Adaptations – Identify characteristics that allow survival and reproduction of species; compare adaptive characteristics of species and compare species that lived in the past to existing species; and distinguish between, identify and give examples of inherited traits and learned characteristics.
- Past, Present, and Future Events – Identify and observe effects of events that require time for change to become noticeable including growth, erosion, dissolving, weathering, and flow; and draw conclusions about “what happened before” using fossils.
- Processes of the Natural World – Test properties of soils including texture, ability to retain water and ability to support life; summarize the effects of oceans on land; and identify the sun as the major source of energy for the earth and understand its role in the growth of plants, in the creation of winds, and in the water cycle.

Social Studies

- Identify regions in Texas and the Western Hemisphere that result from physical features and from human activity, including location, distribution, patterns of economic activities, and settlement.
- Name the methods that early Native Americans in Texas and the Western Hemisphere used to meet their government and basic economic needs, such as the Caddo, Karankawa, Jumano, and Comanche Indians.
- Explain the basic functions of the three branches of state government.

- Name and describe the important issues, events, and individuals of various racial, ethnic and religious groups of the 19th and 20th centuries such as Barbara Jordan, Henry Cisneros, and Audie Murphy.
- Describe the characteristics and benefits of the free enterprise system in Texas and how Texas, the United States, and the world are economically interdependent.
- Describe the impact of science and technology on life in Texas, such as the aerospace industry and oil and gas exploration.
- Recognize and use social studies vocabulary terms, concepts, and events.
- Identify major eras in Texas history from early civilization to the present.
- Identify important ideas in historic documents, such as the Texas Declaration of Independence.

Fifth grade students will:

Language Arts

- Phonics/ Word Study/ Spelling – Identify multisyllabic words by using common syllable patterns; and use structural cues to identify words in text.
- Listening/Speaking /Communication – Analyze a speaker's message for content, persuasive technique, and tone; and distinguish between a speaker's opinion and verifiable fact.
- Vocabulary – Develop an extensive vocabulary through reading; and use resources, references, and context to build word meanings and to confirm pronunciation of words.
- Reading – Read and comprehend a variety of fifth-grade-level texts; draw inferences from text and support these conclusions and generalizations with evidence from the text; offer observations, make connections, react, speculate, interpret, and raise questions in response to text; generate relevant research using multiple sources of information; and use a thesaurus, synonym finder, dictionary, and software to clarify meanings and usage.
- Writing – Compose original texts applying the conventions of capitalization, punctuation, grammar, and correct spelling; use suspense, dialogue, and figurative language in original compositions; write to persuade, argue, and request; and engage in the writing process and refine selected drafts to publish for general and specific audiences.
- Inquiry – Show connections among ideas; develop questions for investigation; draw conclusions from information; interpret different sources of data; use multiple sources to locate information that addresses questions; interpret and use graphic sources of information; and locate and use important areas of the library media center.
- Viewing/Representing – Describe, interpret, and use visual media to compare ideas and points of view; analyze, critique, and contrast the messages found in visual media; and produce class newspapers, multimedia reports, and/or short films.

Mathematics

- Number and Operations – Read, write, compare and order whole numbers and decimals; generate equivalent fractions; compare and order fractions; relate fractions and decimals; add, subtract, multiply and divide whole numbers; add and subtract decimals; identify prime and common factors; model adding and subtracting fractions with like denominators; round whole numbers and decimals; and estimate to solve problems.
- Patterns and Relationships – Determine relationship between sets of data; use patterns to make generalization; identify prime and composite numbers; and select and use diagrams and number sentences.
- Geometry – Identify essential attributes of geometric figures or solids; use critical attributes to define shapes and solids; graph ordered pairs of whole numbers; and sketch and identify transformations on a coordinate plane.
- Measurement – Measure volume in cubic units using models; measure length, perimeter, time, temperature and area to solve problems; convert between units in the same system; and connect models for perimeter, area and volume with their formulas.

- Probability and Statistics – Construct line graphs; describe characteristics of a set of data; graph data using the appropriate representation; use fractions to describe results of an experiment; use results to make predictions; and list all possible outcomes.
- Problem Solving – Identify math in everyday situations; use a problem-solving model; select or develop an appropriate problem-solving strategy; use tools to solve problems; explain and record observations; relate informal language to math language and symbols; make generalizations from patterns; and justify why an answer is reasonable and explain the solution process.

Science

- Lab Investigations – Follow safety rules including the use of safety goggles. Make wise choices in use and conservation of resources and disposal or recycling of materials.
- Scientific Inquiry – Use science tools including calculators, rulers, meter sticks, microscopes, cameras, sound recorders, hand lenses, stopwatches, hot plates, magnets, collecting nets, compasses, computers, triple-beam balances, and thermometers to collect and analyze data; plan and implement investigations that include questions and hypotheses; communicate valid conclusions using charts and graphs to evaluate information; measure objects using metric units; and demonstrate that repeated investigations may increase reliability of results.
- Critical Thinking – Evaluate strengths and weaknesses of scientific explanations; evaluate the impact of research on scientific thought; draw inferences based on promotional materials; represent the natural world using models and identify their limitations; and study the history of science and the contributions of scientists.
- Systems, Cycles, Patterns, and Change – Describe cycles, structures, interactions, and processes found in systems and life cycles; identify events and describe changes that occur on a regular basis and the significance of water, carbon, and nitrogen cycles.
- Matter and Energy – Classify matter based on physical properties; analyze mixtures and solutions; measure boiling and melting points of substances; differentiate forms of energy including light, heat, electrical, and solar energy; recognize common examples of how light is reflected and refracted; know that electricity can flow in a circuit and produce heat, light, sound and magnetism; and show that vibrating an object can produce sound.
- Adaptations – Compare, analyze and predict adaptive characteristics of species that aid in survival and a unique niche in an ecosystem; identify and give examples of inherited traits and learned characteristics that are influenced by the environment.
- Past, Present and Future Events – Observe that growth, erosion, dissolving, weathering, and flow are examples of events that require time for changes to be measurable; draw conclusions about “what happened before” using data such as tree rings and rock sequences; and identify past events that led to formation of Earth’s renewable, nonrenewable, and inexhaustible resources.
- Processes of the Natural World - Earth and Sky – Interpret how landforms are a result of constructive and destructive forces; describe processes that lead to formation of coal, oil, gas and minerals; compare physical characteristics of the earth and moon; and identify gravity as the force that keeps planets in orbit around the sun, and the moon in orbit around the earth.

Social Studies

- Identify and describe the regions of the United States that result from physical features and human activity.

- Explain how people adjusted to and changed their environment such as cutting down forests, mining, and building cities, dams, tunnels, railroads and highways.
- Explain the importance of individual participation in the democratic process.
- Describe the roots and structure of representative government in the U.S.
- Identify and explain the important ideas in the Declaration of Independence, the Bill of Rights, and the U.S. Constitution.
- Explain the relationship between the arts and the times during which they were created.
- Describe various customs and celebrations of various racial, ethnic, cultural, and religious groups in America.
- Recognize and use social studies vocabulary terms, concepts, and events.
- Describe the development of the free enterprise system and the impact of industrialization in America.
- Study the history of the United States from the early exploration through the 21st century.