

Quarterly Theme: How do living things interact within our community?
5th Grade Essential Question: What are the building blocks of communities?

Standards of Learning:

ENVIRONMENT

Standard 1:
Ecological, Social, and Economic Systems
 Students develop knowledge of the interconnections and interdependency of ecological, social, and economic systems. They demonstrate understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national, and global levels.

Standard 2:
The Natural and Built Environment
 Students engage in inquiry and systems thinking and use information gained through learning experiences in, about, and for the environment to understand the structure, components, and processes of natural and human-built environments.

Standard 3:
Sustainability and Civic Responsibility
 Students develop and apply the knowledge, perspective, vision, skills, and habits of mind necessary to make personal and collective decisions and take actions that promote sustainability.

Related Integrated Activities:

PLT Activity 22: Trees as Habitats
 Students will describe ways animals and plants depend on trees for survival and, in turn, influence the trees. Students will identify interrelationships between the organisms using a tree.

PLT 42: Sunlight and Shades of Green
 Students will test the effects of lack of sunlight on plant leaves. Students will describe the process of photosynthesis and how it enables a plant to survive.

PLT 45: Web of Life:
 Students will understand that ecosystems are made up of interdependent organisms and other components

PLT 95: Did You Notice
 Students will investigate changes in their local environment over the course of time. Students will summarize those changes in the form of a timeline.

PLT 59 & 60 Power of Print
 Students will analyze some of the ways that ideas are expressed through word choice. Students will understand and demonstrate the differences between objective and subjective writing.

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Standards of Learning:

SCIENCE

The learner will:

5.5 TLW: understand that organisms are made of one or more cells and have distinguishing characteristics that play a vital role in the organism’s ability to survive and thrive in its environment. Key concepts include

- a) basic cell structures and functions;
- b) classification of organisms using physical characteristics, body structures, and behavior of the organism; and
- c) traits of organisms that allow them to survive in their environment.

5.6 TLW: investigate and understand characteristics of the ocean environment. Key concepts include

- a) geological characteristics;
- b) physical characteristics; and
- c) ecological characteristics.

ON GOING

- 5.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting 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 an understanding of the nature of science is developed and reinforced.

Related Environmental Objectives:

The students will:

- Recognize that plants and animals, including humans, can be classified according to their characteristic.
- Recognize that all living things are made of the same basic structure.
- Describe the different parts of a cell

- Define ocean ecosystems as interacting assemblages of organisms, non-living components that support those organisms and the interactions among them.

- Explain potential consequences when a component of an ecosystem is changed or eliminated (e.g., when components of a food chain or food web are affected by competition for resources or other changes, whether natural or human-caused).

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Standards of Learning

SOCIAL STUDIES

USI.1 The student will demonstrate skills for historical and geographical analysis and responsible citizenship, 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 1865;
- b) make connections between the past and the present;
- c) sequence events in United States history from pre-Columbian times to 1865;
- 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;
- i) identify the costs and benefits of specific choices made, including the consequences, both intended and unintended, of the decisions and how people and nations responded to positive and negative incentives.

USI.2 The student will use maps, globes, photographs, pictures, or tables to

- a) locate the seven continents and five oceans;
- 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, St. Lawrence River, Atlantic Ocean, Pacific Ocean, and Gulf of Mexico;
- d) recognize key geographic features on maps, diagrams, and/or photographs.

Related Environmental Objectives:

The student will:

- Describe the differences among the various regions of the USA, providing examples of landforms, bodies of water, vegetation and climate in each.
- Give examples of the variety of ecosystems in the oceans of the USA .
- Provide examples of how water, landforms, vegetation and climate affected human activity in USA.
- Identify relationship of organelles and colonial society

SOCIAL STUDIES CONT'D

- USI.3 The student will demonstrate knowledge of how early cultures developed in North America by
- a) describing how archaeologists have recovered material evidence of ancient settlements, including Cactus Hill in Virginia.
 - b) locating where the American Indians lived, with emphasis on the Arctic (Inuit), Northwest (Kwakiutl), Plains (Lakota), Southwest (Pueblo), and Eastern Woodlands (Iroquois);
 - c) describing how the American Indians used the resources in their environment.
- USI.4 The student will demonstrate knowledge of European exploration in North America and West Africa by
- a) describing the motivations for, obstacles to, and accomplishments of the Spanish, French, Portuguese, and English explorations;
 - b) describing cultural and economic interactions between Europeans and American Indians that led to cooperation and conflict, with emphasis on the American Indian concept of land;
 - c) identifying the location and describing the characteristics of West African societies (Ghana, Mali, and Songhai) and their interactions with traders.

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Standards of Learning:

READING

- 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.
- 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.
- 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.
- 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.
- 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.

Anchor Text Bibliography:

A Million Fish More or Less O
Plant Life O
 Shark Lady O
 Where Have All the Pandas Gone P
 The Drum Beats On P
 G is for Googol P
 In the Rain Forest P
 Food Chain P
 If You Lived With the Cherokee Q
 If You Lived With the Indians of the Northwest Q
 Magic School Bus Food Chain Q

All About Sharks R
 Native American Art R
 Octopus, Squid, and Cuttlefish R
 Seahorses, Pipefish, and Their Kin S
 All About Turtles S
 Wacky Trees T
 The 10 Deadliest Plants T
 Lights, Camera, Amalee
 Brian's Winter T

READING CONT' D

- c) Use context to clarify meaning of unfamiliar words.
- 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.
- 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.

Related Integrated Activities:

Students will be able to:

- Role-play and discuss the importance of maintaining appropriate posture and eye contact with listeners.
- Demonstrate appropriate gestures to use in oral presentations.
- Read aloud daily from stories, rhymes, poetry, fairy tales, legends, and other informational text.
- Track print when reading big books, charts, and poems.
- Participate in whole-group activities, such as songs and rhymes with a repeated pattern
- Model using knowledge of alphabetical order to locate words in a picture dictionary.
- Have students line up in alphabetical order by first or last name.
- Model previewing, predicting, and setting a purpose during teacher Read-Alouds.
- Use before-reading strategies, such as concept webs, KWL charts, and sharing personal experiences.
- Reread familiar texts.
- Provide time for independent reading.
- Read from a variety of genres and identify whether the text is fiction or nonfiction.
- Model Think-Aloud comprehension strategies during teacher Read-Alouds.

READING CONT'D

- 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.

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Standards of Learning:

WRITING

- 5.8 The student will write for a variety of purposes: to describe, to inform, to entertain, and to explain.
- Choose planning strategies for various writing purposes.
 - Organize information.
 - Demonstrate awareness of intended audience.
 - Use precise and descriptive vocabulary to create tone and voice.
 - Vary sentence structure.
 - Revise writing for clarity.

Use available technology to access information

- 5.9 The student will edit writing for correct grammar, capitalization, spelling, punctuation, and sentence structure.
- Use plural possessives.
 - Use adjective and adverb comparisons.
 - Identify and use interjections.
 - Use apostrophes in contractions and possessives.
 - Use quotation marks with dialogue.
 - Use commas to indicate interrupters and in the salutation and closing of a letter.
 - Use a hyphen to divide words at the end of a line.
 - Edit for clausal fragments, run-on sentences, and excessive coordination.

g) Use a hyphen to divide words at the end of a line.

Related Integrated Activities:

The students will:

- Write journal entries from the perspective of European Explorers
- Use content specific vocabulary to describe organisms in Forest Hill Park
- Compare their development as a writer to the development of plants – marking milestones in their writing life
- Make observations in nature and use appropriate articles to describe each

Nature: Writing Prompts

Prompt 1: Writers have referred to nature as “the great outdoors.” Why do you think they’ve talked about it like that? What are some of the things that make nature “great?”

Prompt 2: One author, named Henry David Thoreau stayed out in nature for a long time and wrote a book about his experiences out there. Imagine that you were spending a year or two out in nature. How would you live there? What are the things you would miss about living in your house? What are the things you wouldn’t miss?

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Standards of Learning:

MATHEMATICS

- 5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.
- 5.2 The student will
 - a) recognize and name fractions in their equivalent decimal form and vice versa; and
 - b) compare and order fractions and decimals in a given set from least to greatest and greatest to least.
- 5.4 The student will create and solve single-step and multi-step practical problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.
- 5.5 The student will
 - a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and
 - c) create and solve single-step and multi-step practical problems involving decimals.
- 5.7 The student will evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.
- 5.10 The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.
- 5.19 The student will investigate and recognize the distributive property of multiplication over addition.

Related Integrated Activities:

The students will:

- [Planting Trees](#) examines data on how many trees would be needed to undo the carbon dioxide emissions of a single family car, given the yearly mileage.
- [Math Hunt: Earth Day](#) uses mathematical data to explore environmental issues.
- Scholastic's [Think Green Cyberhunt](#) develops environmental awareness in young students.
- Consult [Earth Day Network's Lesson Plans k](#) for some mathematical suggestions to enrich Earth Day celebrations.
- [Compact Fluorescent Bulb \(CFL\) Fact Sheet](#) prompts math problems and solutions.
- [The Trash We Pass](#) challenges students to examine the environmental implications of trash disposal in our country. It begins with this question:
 - *Did you know that only 2 man-made structures on Earth are large enough to be seen from space? Can anyone guess what they are?*
 - The answers are the Great Wall of China, and the Fresh Kills Landfill!
- Check [EPA Teacher Resources](#) for activities and printed materials to use with students.
- Visit [EPA's Climate Change for Kids](#) for information on this current hot topic
- Consider using some of these activities to incorporate earth-friendly data and practices into enriching math activities.

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Standards of Learning:

ART

- 5.1 The student will synthesize information to produce works of art.
- 5.6 The student will develop ideas for works of art by brainstorming, conducting research, and making preliminary sketches.
- 5.7 The student will collaborate with others to produce a work of art that characterizes a historical time period.

Related Environmental Objectives:

The students will:

- Use charts and pictures to provide examples and describe the diverse architectural styles and transportation systems in various California communities and show how they are influenced by local natural systems.
- Give examples of ecosystems in the oceans.
- Give examples of how organelles work as a community.
- Describe and classify different organism.

Provide examples of how the functioning of structures plants and animals (including humans) have for growth, survival, and reproduction depends on the health of those plants and animals and the health of natural systems

Related Integrated Activities:

The students will:

- Create a model of a cell
- Create a model of the ocean floor and its ecosystem

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Standards of Learning:

MUSIC

- 5.1 The student will sing a repertoire of songs in tune with a clear tone quality.
 1. Demonstrate beginning choral behaviors and skills in group singing.
 2. Participate in group singing involving two-part or three-part harmony.
 3. Develop age-appropriate ability in singing skills.

- 5.2 The student will notate and perform rhythmic patterns that include sixteenth notes, a dotted eighth followed by a sixteenth note, single eighth notes, eighth rests, paired eighth notes, quarter notes, quarter rests, half notes, half rests, dotted half notes, whole notes, and whole rests, using body percussion, voice, pitched instruments, or non-pitched instruments.

- 5.3 The student will notate and perform melodies from the treble staff, using traditional notation.
 1. Use voice or instruments.
 2. Use computer technology.

- 5.4 The student will respond to music with movement.
 1. Perform choreographed and non-choreographed movements.
 2. Perform dances and games from various cultures, including traditional folk dances.
 3. Use body percussion.

Related Environmental Objectives:

The student will:

- Write songs and sing songs related to environmental topics.
- Choreograph movements related to environmental songs.
- Listen and identify the sounds of nature on walking trails in the park.

Related Integrated Activities:

The students will:

- [The Earthman Project](http://www.songsforteaching.com/environmentsongs.htm?url=Environment.html) - Uses the power of music, video, the arts, and integrated web design promoting environmental protection. Songs include "Earth Anthem," "Earthman Blues," "H2O," and a music video with wonderful photographs of the Everglades in "River of Grass" - a tribute to environmentalist Marjorie Stoneman Douglas. Home page includes a built-in flash music player with streaming audio of the featured songs. Songs feature a calypso beat, with positive themes about world peace and environmental protection. Sponsored by Miami-Dade Public Schools and several south Florida environmental agencies.
<http://www.songsforteaching.com/environmentsongs.htm?url=Environment.html>

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Standards of Learning:

HEALTH & PE

5.1 The student will demonstrate the interpersonal skills necessary to build healthy relationships. Key concepts/skills include:

- a) the development of positive social skills; the use of refusal and conflict-resolution skills; effective verbal and nonverbal communication skills that convey care, consideration, and respect for self and others.

5.2 The student will demonstrate responsibility for developing personal health habits and practicing behaviors that promote an active, healthy lifestyle. Key concepts/skills include

- b) the relationship between health promotion and disease prevention; the connection between nutritional guidelines and weight management; strategies for managing stress; the importance of exercise and recreation; the effects of personal health habits on cardiovascular fitness; the importance of developing and maintaining a positive self-

image.

5.5 The student will participate in establishing and maintaining a safe environment for learning physical activities.

- a) Work independently and with others to improve learning during physical activity.
- b) Display appropriate cooperative and competitive behaviors.

Related Environmental Objectives:

The students will develop team building skills when engaged in environmental activities. The students will:

- Demonstrate an understanding and awareness of team building.
- Learn to exercise self-affirmation and the affirmation of others.
- Develop the ability to collaborate and contribute within a team

Healthy Environment:

- Recognize ways to prevent disease by keeping th home school and community clean.

Related Environmental Activities:

- My World is Your World
- If a Tree Could Talk
- Invention Time
- Take Charge
- Write-n-Tell
- Bag It
- Spread the Word

<http://www.epa.gov/region4/air/pesticides/hlthyenvcur.pdf>

INSTRUCTIONAL ELEMENTS

Key Vocabulary	Instructional Strategies	Instructional Materials	Technology
<ul style="list-style-type: none"> • INUIT • KWAKIUTL • LAKOTA • PUEBLO • IROQUOIS • OBSTACLES • ACCOMPLISHMENTS • EXPLORATIONS • TRADE • DISTRIBUTIVE PROPERTY • PRIME NUMBER • COMPOSITE • ODD NUMBERS • EVEN NUMBERS • DIVISIBLE • EQUALLY • GCF • LCM • CELL • VACUOLE • NUCLEOUS • CELL WALL • CELL MEMBRANE • VASCULAR • NONVASCULAR • VERTEBRATE • INVERTEBRATE • KINGDOMS • MONERA • ANIMALIA • PLANTEA • PROTIST • BACTERIA • FUNGI • SLINITY • CURRENTS • OCEAN FLOORS 	<ul style="list-style-type: none"> • Integrating content into • Language Arts activities • Author/Illustrator studies • Book talks • Web-based inquiry • Experiential learning (projectbased) • Direct instruction • Small group work • Reflective discussions • Comparing/contrasting • Peer partner learning • Field Trips <ul style="list-style-type: none"> ❖ Science museum ❖ Park activities ❖ Virginia Aquarium 	<ul style="list-style-type: none"> • Websites referenced in VDOE • Natural materials from Forest Hill Park • Related texts • Assessment resources • Graphic organizers • Project Learning Tree guide • Computers • Digital Cameras • City, state, region, and country maps. • Journals • Charts and Graphs • LCD Projector • Crayons, markers, paints • Rulers • White boards and markers • Sorts • Index cards • stick notes • reusable materials • Guest Speaker (reporter) 	<ul style="list-style-type: none"> • Web resources • United Streaming • Powerpoint • Publisher • Word • Evernote • Wikis • Audacity • Webquest • Blogspots

INQUIRY PROJECT & CULMINATING ACTIVITY

Goal:

The 5th grade classes will work together to research the relationship between environment and human culture then plan and execute news broadcast.

Elements:

TLW:

- A) write scripts and present them orally
- B) identify and classify organisms at the park
- C) Create charts and other visual arts (food webs, plants, cells..)
- D) develop grammatically correct interview questions and answers
- E) Create a map as a visual for broadcast
- F) Read fictional accounts of US. History of the time period

Pacing:

This project will be executed in 9 weeks. In class work will be completed during the inquiry block. Component pieces may be executed as home-based projects at the discretion of the classroom teacher.

Evaluation and Assessment:

Component pieces will be evaluated with assignment specific, standards related rubric. Scores for each standard will be entered into Kickboard and averaged as part of the quarterly student mastery grade. An SOL-aligned teacher-created rubric will assess the culminating activity.

ENVIRONMENT			
Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>Standard 1: Ecological, Social, and Economic Systems Students develop knowledge of the interconnections and interdependency of ecological, social, and economic systems. They demonstrate understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national, and global levels.</p> <p>Standard 2: The Natural and Built Environment Students engage in inquiry and systems thinking and use information gained through learning experiences in, about, and for the environment to understand the structure, components, and processes of natural and human-built environments.</p> <p>Standard 3: Sustainability and Civic Responsibility Students develop and apply the knowledge, perspective, vision, skills, and habits of mind necessary to make personal and collective decisions and take actions that promote sustainability.</p>	<ul style="list-style-type: none"> ✓ All organisms depend on their environment to meet their basic needs. ✓ Humans have always used their environment to meet their needs and wants. ✓ There are accepted rules of language that must be employed to communicate effectively. ✓ Archeologists and anthropologist communicate their ideas about the past. 	<ul style="list-style-type: none"> • Identify relationships found within various habitats • Effectively communicate ideas concerning the environment and other local interest using appropriate terminology. • Describe how people have used their environments to meet their needs and wants • Making observations to support opinions and predications • Reading a variety of maps (population, topical, and political) 	<ul style="list-style-type: none"> ➤ How do people interact with their environment? ➤ How do people learn about the past? ➤ In what ways do humans impact their environment? ➤ What evidence can be used to show what life was like in the past? ➤ How do the geographic regions of Virginia vary?

SCIENCE

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>5.1 The student will plan and conduct investigations in which</p> <ul style="list-style-type: none"> h) rocks, minerals, and organisms are identified using a classification key; i) estimations of length, mass, and volume are made; j) appropriate instruments are selected and used for making quantitative observations of length, mass, volume, and elapsed time; k) accurate measurements are made using basic tools (thermometer, meter stick, balance, graduated cylinder); l) data are collected, recorded, and reported using the appropriate graphical representation (graphs, charts, diagrams); m) predictions are made using patterns, and simple graphical data are extrapolated; n) manipulated and responding variables are identified; and o) an understanding of the nature of science is developed and reinforced. 	<ul style="list-style-type: none"> • Living things are made of cells. Cells carry out all life processes. New cells come from existing cells. Cells are too small to be seen with the eye alone. By using a microscope, many parts of a cell can be seen. • Though plant and animal cells are similar, they are also different in shape and in some of their parts. Plant cells tend to be rectangular, while animal cells tend to be spherical or at times irregular. • Organisms that share similar characteristics can be organized into groups in order to help understand similarities and differences. • Plants can be categorized as vascular (having special tissues to transport food and water – for example, trees and flowering plants) and nonvascular (not having tissues to transport food and water – for example, moss, liverworts, and hornworts). Most plants are vascular. • Animals can be categorized as vertebrates (having backbones) or invertebrates (not having backbones). • Oceans cover about 70 percent of the surface of Earth. • Important features of the ocean floor near the continents are the continental shelf, the continental slope, and the continental rise. These 	<ul style="list-style-type: none"> • draw, label, and describe the essential structures and functions of plant and animal cells. For plants, include the nucleus, cell wall, cell membrane, vacuole, chloroplasts, and cytoplasm. For animals, include the nucleus, cell membrane, vacuole, and cytoplasm. • design an investigation to make observations of cells. • compare and contrast plant and animal cells and identify their major parts and functions. • group organisms into categories, using their characteristics: plants (vascular and nonvascular) and animals (vertebrates or invertebrates). Name and describe two common examples of each group. • compare and contrast the distinguishing characteristics of groups of organisms. • identify and explain traits of organisms that allow them to survive in their environment. • create and interpret a model of the ocean floor and label and describe each of the major features. • research and describe the variation in depths associated with ocean features, including 	<ul style="list-style-type: none"> • What is the formula for calculating volume? • How can the mass of an object be calculated? • What are the differences between metamorphic, igneous and sedimentary rocks? • How can living cells be described? • What is the difference between a plant cell and an animal cell? • How can organism be classified? • How can plants be classified? • How can animals be classified? • What is the difference between a vertebrate and an invertebrate animal? Give examples of vertebrates and invertebrates. • What is the difference between an independent variable and a dependent variable? • What is the control in an experiment? • What are the basic motions of the ocean water? • What are the basic cell structures: vacuoles, cell membrane, cell wall, and nucleus? • How are cell organelles different? • What percentage of the Earth is covered by water?

Patrick Henry School of Science and Arts Fifth Grade First Quarter Curriculum Plan

<p>5.5 TLW: understand that organisms are made of one or more cells and have distinguishing characteristics that play a vital role in the organism’s ability to survive and thrive in its environment. Key concepts include</p> <ul style="list-style-type: none"> a) basic cell structures and functions; b) classification of organisms using physical characteristics, body structures, and behavior of the organism; and c) traits of organisms that allow them to survive in their environment. <p>5.6 TLW: investigate and understand characteristics of the ocean environment. Key concepts include</p> <ul style="list-style-type: none"> a) geological characteristics; b) physical characteristics; and c) ecological characteristics. 	<p>areas are covered with thick layers of sediments (sand, mud, rocks).</p> <ul style="list-style-type: none"> • The depth of the ocean varies. Ocean trenches are very deep, and the continental shelf is relatively shallow. • Ocean water is a complex mixture of gases (air) and dissolved solids (salts, especially sodium chloride). Marine organisms are dependent on dissolved gases for survival. The salinity of ocean water varies in some places depending on rates of evaporation and amount of runoff from nearby land. • The basic motions of ocean water are the waves, currents, and tides. • Ocean currents, including the Gulf Stream, are caused by wind patterns and the differences in water densities (due to salinity and temperature differences). Ocean currents affect the mixing of ocean waters. This can affect plant and animal populations. Currents also affect navigation routes. • As the depth of ocean water increases, the temperature decreases, the pressure increases, and the amount of light decreases. These factors influence the type of life forms that are present at a given depth. • Plankton are tiny free-floating organisms that live in water. Plankton may be animal-like or plant-like. Animal-like plankton are called zooplankton. Plant-like plankton (phytoplankton) carry out most of the photosynthesis on Earth. Therefore, they provide much of Earth’s oxygen. Phytoplankton form the base of the ocean food web. Plankton flourish in areas where nutrient-rich water up-wells 	<p>the continental shelf, slope, rise, the abyssal plain, and ocean trenches.</p> <ul style="list-style-type: none"> • design an investigation (including models and simulations) related to physical characteristics of the ocean environment (depth, salinity, formation of waves, causes of tides, and currents, such as the Gulf Stream). • interpret graphical data related to physical characteristics of the ocean. • explain the formation of ocean currents and describe and locate the Gulf Stream. • design an investigation (including models and simulations) related to ecological relationships of the ocean environment. • interpret graphical data related to the ecological characteristics of the ocean, such as the number of organisms vs. the depth of the water. • analyze how the physical characteristics (depth, salinity, and temperature) of the ocean affect where marine organism can live. <p>create and interpret a model of a basic marine food web, including floating organisms (plankton), swimming organisms, and organisms living on the ocean floor.</p>	<ul style="list-style-type: none"> • What are some important features of the ocean floor? • What is the difference between the continental shelf, the continental slope and the continental rise? • What are the differences between the three states of matter? • What is the amplitude of a wave? • How can one measure the amplitude of a wave? • What is the wavelength? How can it be measured?
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	from the deep.		
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SOCIAL STUDIES

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>USI.1 The student will demonstrate skills for historical and geographical analysis and responsible citizenship, including the ability to</p> <ul style="list-style-type: none"> a) identify and interpret primary and secondary source documents to increase understanding of events and life in United States history to 1865; b) make connections between the past and the present; c) sequence events in United States history from pre-Columbian times to 1865; d) interpret ideas and events from different historical perspectives; e) evaluate and discuss issues orally and in 	<ul style="list-style-type: none"> ❖ Continents are large land masses surrounded by water. ❖ Geographic regions have distinctive characteristics ❖ The United States has access to numerous and varied bodies of water. ❖ Bodies of water support interaction among regions, form , borders, and create links to other areas. ❖ It is important to recognize key geographic features on maps, diagrams, and/or photographs. ❖ Landforms and water features set the stage for and influence the course of events in United States history. ❖ Archaeology is the recovery of material evidence remaining from the past. ❖ Archaeological discoveries of early Indian settlements have been made in southeastern Virginia. ❖ Archaeological discoveries of early Indian settlements have been made in southeastern Virginia. ❖ Prior to the arrival of Europeans, American Indians were dispersed across the different environments in North America. 	<p>Analyze and interpret maps to explain relationships among landforms and water features. (USI.1f)</p> <p>Distinguish between parallels of latitude and meridians of longitude. (USI.1g)</p> <p>Analyze and interpret maps to explain relationships among landforms. (USI.1f)</p> <p>Distinguish between parallels of latitude and meridians of longitude. (USI.1g)</p> <p>Identify and interpret primary and secondary source documents to increase understanding of events and life in United States history. (USI.1a)</p> <p>Sequence events in United States history. (USI.1c)</p> <p>Analyze and interpret maps to explain relationships among landforms, water features, and historical events. (USI.1f)</p> <ul style="list-style-type: none"> ❖ Make connections between 	<ul style="list-style-type: none"> ❖ Why is archaeology important? ❖ Where is one of the oldest archeological sites in the United States located? ❖ In which areas did the American Indians live? ❖ Where do American Indians live today? ❖ How did geography and climate affect the way American Indian groups met their basic needs? ❖ How did American Indians use natural, human, and capital resources? ❖ How did the American Indians and Europeans interact with each other? ❖ What was the importance of Ghana, Mali and Songhai? ❖ Why did European countries compete for power in North America?

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<p>US1.2 The student will use maps, globes, photographs, pictures, or tables to</p> <p>a) locate the seven</p> <p>f) writing; analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events;</p> <p>g) distinguish between parallels of latitude and meridians of longitude;</p> <p>h) interpret patriotic slogans and excerpts from notable speeches and documents;</p> <p>i) identify the costs and benefits of specific choices made, including the consequences, both intended and unintended, of the decisions and how people and nations responded to positive and negative incentives.</p>	<ul style="list-style-type: none"> ❖ Geography and climate affected how the various American Indian groups met their basic needs. ❖ Resources influenced what was produced and how it was produced. ❖ Major European countries were in competition to extend their power into North America and claim the land as their own. ❖ The interactions between American Indians and Europeans sometimes led to cooperation and other times resulted in conflict. ❖ Ghana, Mali, and Songhai each dominated West Africa in sequence from 300 to 1600 A.D. ❖ African people and African goods played an important role in European interest in world resources. ❖ Archaeologists study human behavior and cultures of the past through the recovery and analysis of artifacts. ❖ Scientists are not in agreement about when and how people first arrived in the Western Hemisphere. ❖ Cactus Hill is located on the Nottoway River in southeastern Virginia. Evidence that humans lived at Cactus Hill as early as 18,000 years ago makes it one of the oldest archaeological sites in North America. ❖ American Indians lived in all areas of North America. 	<p>the past and the present. (USI.1b)</p> <ul style="list-style-type: none"> ❖ Sequence events in United States history. (USI.1c) ❖ Interpret ideas and events from different historical perspectives. (USI.1d) ❖ Sequence events in United States history. (USI.1c) ❖ Analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events. (USI.1f) ❖ Identify and interpret primary and secondary source documents to increase understanding of events and life in United States history. (USI.1a) ❖ Interpret ideas and events from different historical perspectives. (USI.1d) ❖ Analyze and interpret maps. (USI.1f) <p>Obstacles to the explorations</p> <ul style="list-style-type: none"> • Poor maps and navigational tools • Disease and starvation • Fear of the unknown • Lack of adequate supplies 	<ul style="list-style-type: none"> ❖ What were the obstacles faced by the explorers? ❖ What were some accomplishments of the explorers? ❖ What are the seven continents? ❖ What are the five oceans? ❖ Where are the geographic regions of North America? ❖ What are some physical characteristics of the geographical regions of North America? ❖ Make connections between the past and the present. (USI.1b) ❖ Sequence events in United States history. (USI.1c) ❖ Interpret ideas and events from different historical perspectives. (USI.1d) ❖ Sequence events in United States history. (USI.1c) ❖ Analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events. (USI.1f)
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<p>continents and five oceans;</p> <p>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;</p> <p>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, St. Lawrence River, Atlantic Ocean, Pacific Ocean, and Gulf of Mexico;</p> <p>d) recognize key geographic features on maps, diagrams, and/or photographs.</p> <p>US1.3</p> <p>a) describing how archaeologists have recovered</p>	<ul style="list-style-type: none"> • Inuit inhabited present-day Alaska and northern Canada. They lived in Arctic areas where the temperature is below freezing much of the year. • Kwakiutl homeland includes the Pacific Northwest coast, characterized by a rainy, mild climate. • Lakota people inhabited the interior of the United States, called the Great Plains, which is characterized by dry grasslands. • Pueblo tribes inhabited the Southwest in present-day New Mexico and Arizona, where they lived in desert areas and areas bordering cliffs and mountains. • Iroquois homeland includes northeast North America, called the Eastern Woodlands, which is heavily forested. <ul style="list-style-type: none"> ❖ Members of these tribes live in their homelands and in many other areas of North America today. ❖ In the past, American Indians fished, hunted, and grew crops for food. They made clothing from animal skins and plants. They constructed shelters from resources found in their environment (e.g., sod, stones, animal skins, wood). <p>Types of resources</p> <ul style="list-style-type: none"> • Natural resources: Things that come directly from nature • Human resources: People working to produce goods and services • Capital resources: Goods produced and used to make other goods and services 	<p>Accomplishments of the explorations</p> <ul style="list-style-type: none"> • Exchanged goods and ideas • Improved navigational tools and ships • Claimed territories (see countries below) <p>Regions of North America explored by Spain, France, and England</p> <ul style="list-style-type: none"> • Spain: Francisco Coronado claimed the Southwest of the present-day United States for Spain. • France: Samuel de Champlain established the French settlement of Québec. Robert La Salle claimed the Mississippi River Valley for France. • England: John Cabot explored eastern Canada. <p>Regions explored by Portugal The Portuguese made voyages of discovery along the coast of West Africa. Cultural interaction</p> <ul style="list-style-type: none"> • Spanish <ul style="list-style-type: none"> – Conquered and enslaved American Indians – Brought Christianity to the New World – Brought European diseases to American Indians • French <ul style="list-style-type: none"> – Established trading posts – Spread Christian religion • English 	<ul style="list-style-type: none"> ❖ Identify and interpret primary and secondary source documents to increase understanding of events and life in United States history. (USI.1a) ❖ Interpret ideas and events from different historical perspectives. (USI.1d) ❖ Analyze and interpret maps. (USI.1f) ❖
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<p>material evidence of ancient settlements, including Cactus Hill in Virginia.</p> <p>b) locating where the American Indians lived, with emphasis on the Arctic (Inuit), Northwest (Kwakiutl), Plains (Lakota), Southwest (Pueblo), and Eastern Woodlands (Iroquois);</p> <p>c) describing how the American Indians used the resources in their environment.</p>	<p>Natural resources The fish American Indians caught, wild animals they hunted, and crops they grew were examples of natural resources.</p> <p>Human resources People who fished, made clothing, and hunted animals were examples of human resources.</p> <p>Capital resources The canoes, bows, and spears American Indians made were examples of capital resources.</p> <p>Motivations for the explorations</p> <ul style="list-style-type: none"> • Economic—Gold, natural resources, and trade • Religious—Spread Christianity • Competitions for empire and belief in superiority of own culture 	<ul style="list-style-type: none"> – Established settlements and claimed ownership of land – Learned farming techniques from American Indians – Traded with American Indians <ul style="list-style-type: none"> • American Indians <ul style="list-style-type: none"> – Taught farming techniques to European settlers – Believed that land was to be used and shared but not owned <p>Areas of cooperation in economic interactions</p> <ul style="list-style-type: none"> • Europeans brought weapons and metal farm tools. • Trade • Crops <p>Areas of conflict</p> <ul style="list-style-type: none"> • Land • Competition for trade • Differences in cultures • Diseases <p>Language differences</p>	
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READING

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>5.1 The student will listen, draw conclusions, and share responses in subject-related group learning activities.</p> <p>a.) Participate in and contribute to discussions across content areas.</p> <p>b.) Organize information to present reports of group activities.</p> <p>c.) Summarize information gathered in group activities.</p>	<p>All students should</p> <ul style="list-style-type: none"> participate effectively in subject-related group learning activities use their organizational skills in preparing, presenting, and summarizing information gathered in group activities. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> participate as active listeners in group learning activities by listening for main ideas listening for sequence of ideas taking notes participate as informed contributors in group learning activities by asking and answering questions at appropriate times clarifying confusing points 	<p>What is the difference between a synonym and antonym?</p>
<p>5.2 The student will use effective nonverbal communication skills.</p> <p>a.) Maintain eye contact with listeners.</p> <p>b.) Use gestures to support, accentuate, and dramatize verbal message.</p> <p>c.) Use facial expressions to support and dramatize verbal message.</p> <p>d.) Use posture appropriate for communication setting</p>	<p>All students should</p> <ul style="list-style-type: none"> understand how gestures, facial expressions, posture, and body language affect delivery of the message. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> demonstrate appropriate eye contact with listeners use acceptable posture according to the setting and the audience use dramatic gestures to support, accentuate, or dramatize the message use appropriate facial expressions to support, accentuate, or dramatize presentations. 	<p>Can you recognize when two or more different words are being used orally to mean contrasting or opposite things?</p>

READING

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>5.3 The student will make planned oral presentations.</p> <p>a) Determine appropriate content for audience.</p> <p>b) Organize content sequentially or around major ideas.</p> <p>c) Summarize main points before or after presentation.</p> <p>d) Incorporate visual aids to support the presentation.</p> <p>e) Use grammatically correct language and specific vocabulary.</p>	<p>All students should</p> <ul style="list-style-type: none"> • select and organize information when preparing for an oral presentation • use visual aids when preparing for an oral presentation. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • select information that develops the topic and is appropriate for the audience • organize content sequentially and group together related information • put information in order, providing an overview of the information at the beginning or a summary of the information at the end • use grammatically correct language • use specific vocabulary to enhance oral presentations 	<p>Did you use connectors such as and, so, because, and if during the oral presentation?</p>
<p>5.4 The student will read fiction and nonfiction with fluency and accuracy.</p> <p>a) Use context to clarify meaning of unfamiliar words.</p> <p>b) Use knowledge of root words, prefixes, and suffixes.</p> <p>c) Use dictionary, glossary, thesaurus, and other word-reference materials.</p>	<p>All students should</p> <ul style="list-style-type: none"> • apply knowledge of word structure and context clues to determine the meanings of unfamiliar words a.) read with fluency and accuracy. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • use context to infer the correct meanings of unfamiliar words • apply knowledge of root words, prefixes, and suffixes • continue to learn about Greek and Latin affixes. 	<p>What clues does the title give me about the story?"</p> <p>"Is this a real or imaginary story?"</p> <p>"Why am I reading this?"</p> <p>"What do I already know about ___?"</p> <p>"What predictions can I make?"</p>

READING

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>5.5 The student will read and demonstrate comprehension of fiction.</p> <p>a) Describe the relationship between text and previously read materials.</p> <p>b) Describe character development in fiction and poetry selections.</p> <p>c.) Describe the development of plot and explain how conflicts are resolved.</p> <p>d) Describe the characteristics of free verse, rhymed, and patterned poetry.</p> <p>e) Describe how an author's choice of vocabulary and style contributes to the quality and enjoyment of selections.</p>	<p>All students should</p> <ul style="list-style-type: none"> choose from a variety of comprehension strategies describe character and plot development. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> understand that characters are developed by <ul style="list-style-type: none"> what is directly stated in the text their speech and actions what other characters in the story say or think about them understand that some characters change during the story or poem and some characters stay the same understand that the main character has a problem that usually gets resolved identify the problem of the plot understand that plot is developed through a series of events identify the events in sequence that lead to resolution of the conflict discuss why an author might have used particular words and phrases discuss the similarities and differences between a text and previously read materials identify the characteristics of free verse (poetry with neither regular meter nor rhyme scheme), rhymed poetry, and patterned poetry. 	<p>What is the meaning of what I have read?"</p> <p>"Why did the author end the paragraph (or chapter, or book) in this way?"</p> <p>"What was the author's purpose in writing this?"</p>

READING

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>5.6 The student will read and demonstrate comprehension of nonfiction.</p> <ul style="list-style-type: none"> 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. 	<p>All students should</p> <ul style="list-style-type: none"> • preview, pose questions, and make predictions before reading • understand how the organizational patterns make the information easier to comprehend. • make connections between what they read in the selection and their prior knowledge. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • read nonfiction print materials and trade books that reflect the Virginia Standards of Learning in English, history and social science, science, and mathematics • apply prior knowledge to make predictions • use text set in special type styles (e.g., boldfaced, italics) and color, captions under pictures and graphics, and headings of sections and chapters, to predict and categorize information • identify specific information in text that supports predictions • understand how text features (e.g. formatting, graphics, diagrams, illustrations, charts, maps) make information accessible and usable • skim material to develop a general overview or to locate specific information • distinguish between fact and opinion • form opinions and draw conclusions from the selection • locate details to support opinions, predictions, and conclusions • identify structural and organizational patterns such as cause-and-effect, comparison/contrast, and chronological order • identify new information learned from reading. 	<p>What is this story about?"</p> <p>"What does the main character want?"</p> <p>"Will she/he get it?" "If so, how?"</p>

<p>5.6 The student will read and demonstrate comprehension of nonfiction.</p> <ul style="list-style-type: none">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.			
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READING

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>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.</p>	<p>All students should</p> <ul style="list-style-type: none"> organize and record information in order to blend ideas from a variety of print resources. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> take notes from a variety of print resources identify source of information summarize important concepts organize information, using visual representations, such as charts, maps, and graphs. 	

WRITING

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>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</p>	<p>All students should</p> <ul style="list-style-type: none"> plan and organize information as they write for a variety of purposes use precise, descriptive vocabulary and vary sentence structure as they revise for clarity. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> apply knowledge of the writing domains of composing, written expression, and usage/mechanics create a plan, and organize thoughts before writing focus, organize, and elaborate to construct an effective message for the reader purposefully shape and control language to demonstrate an 	<p>What are the steps for writing a narrative speech?</p> <p>Is there a well-defined introduction body and</p>

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<p>clarity. g) Use available technology to access information.</p>		<p>awareness of the intended audience</p> <ul style="list-style-type: none"> • select specific information to guide readers more purposefully through the piece • choose precise descriptive vocabulary and information to create tone and voice • include sentences of various lengths and beginnings to create a pleasant, informal rhythm • clarify writing when revising <p>use available technology to gather information and to aid in writing</p>	<p>conclusion?</p>
<p>5.9The 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.</p>	<p>All students should</p> <ul style="list-style-type: none"> • understand that editing for correct sentence formation, grammar, capitalization, spelling, and punctuation makes the meaning of the writing clearer to the reader. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • punctuate correctly • apostrophes in contractions, such as <i>isn't</i>, and possessives, such as <i>Jan's</i>. • commas • quotation marks • commas in the salutation and closing of a letter • hyphens to divide words at the end of a line • use adverb comparisons, such as <i>fast, faster, fastest</i> • use adjective comparisons, such as <i>big, bigger, biggest</i> • use adverbs instead of adjectives where appropriate, e.g., "He played <i>really</i> well." instead of 	<p>Was vocabulary used that is precise with an awareness of the audience and the purpose?</p> <p>Did the writing have supporting</p>

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<p>h) Edit for clausal fragments, run-on sentences, and excessive coordination.</p>		<p>“He played <i>real</i> well.”</p> <ul style="list-style-type: none"> • use plural possessives, e.g., “The <i>books’</i> covers are torn.” • identify and use interjections, e.g., such as “<i>Oh my, look at the size of that bug!</i>” • avoid fragments (Use of clausal fragments, such as “<i>Although he was not supposed to go out of the house.</i>”, is not penalized in direct writing at this level.) • avoid run-ons, e.g., “<i>I opened the door, the dog went out.</i>” • avoid excessive coordination, e.g., “I opened the door and the dog went out and he chased the cat and then he came back inside.”. 	<p>details?</p>
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MATHEMATICS

MATHEMATICS		
Driving Objectives	Essential Understanding	Essential Skills
<p>5.1 The student, given a decimal through thousandths, will round to the nearest whole number, tenth, or hundredth.</p>	<p style="text-align: center;">All students should</p> <ul style="list-style-type: none"> • Understand that decimals are rounded in a way that is similar to the way whole numbers are rounded. • Understand that decimal numbers can be rounded to estimate when exact numbers are not needed for the situation at hand. 	<p style="text-align: center;">The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Round decimal numbers to the nearest whole number, tenth, or hundredth.
<p>5.2 The student will</p> <ol style="list-style-type: none"> a) recognize and name fractions in their equivalent decimal form and vice versa; and b) compare and order fractions and decimals in a given set from least to greatest and greatest to least. 	<p style="text-align: center;">All students should</p> <ul style="list-style-type: none"> • Understand the relationship between fractions and their decimal form and vice versa. • Understand that fractions and decimals can be compared and ordered from least to greatest and greatest to least 	<p style="text-align: center;">The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Represent fractions (halves, fourths, fifths, eighths, tenths, and twelfths) in their equivalent decimal form and vice versa. • Recognize and name equivalent relationships between decimals and fractions with denominators up to 12. • Compare and order from least to greatest and greatest to least a given set of no more than five numbers written as decimals, fractions, and mixed numbers with denominators of 12 or less.
<p>5.4 The student will create and solve single-step and multistep practical problems</p>	<p style="text-align: center;">All students should</p>	

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<p>involving addition, subtraction, multiplication, and division with and without remainders of whole numbers.</p>	<ul style="list-style-type: none"> • Understand the meaning of mathematical operations and how these operations relate to one another when creating and solving single-step and multistep word problems 	<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Select appropriate methods and tools from among paper and pencil, estimation, mental computation, and calculators according to the context and nature of the computation in order to compute with whole numbers. • Create single-step and multistep problems involving the operations of addition, subtraction, multiplication, and division with and without remainders of whole numbers, using practical situations. • Estimate the sum, difference, product, and quotient of whole number computations. • Solve single-step and multistep problems involving addition, subtraction, multiplication, and division with and without remainders of whole numbers, using paper and pencil, mental computation, and calculators in which <ul style="list-style-type: none"> • sums, differences, and products will not exceed five digits; • multipliers will not exceed two digits; • divisors will not exceed two digits; or • dividends will not exceed four digits. • Use two or more operational steps to solve a multistep problem. Operations can be the same or different. •
<p>5.5 The student will</p> <p>a) find the sum, difference, product, and quotient of two numbers expressed as decimals through thousandths (divisors with only one nonzero digit); and</p> <p>b) create and solve single-step and</p>	<p>All students should</p> <ul style="list-style-type: none"> • Use similar procedures as those developed for whole number computation and apply them to decimal place values, giving careful attention to the placement of the decimal point in the solution. • Select appropriate methods and tools from 	<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Determine an appropriate method of calculation to find the sum, difference, product, and quotient of two numbers

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<p>multistep practical problems involving decimals</p>	<p>among paper and pencil, estimation, mental computation, and calculators according to the context and nature of the computation in order to compute with decimal numbers.</p> <ul style="list-style-type: none"> • Understand the various meanings of <i>division</i> and its effect on whole numbers. • Understand various representations of division, i.e., $\text{dividend} \div \text{divisor} = \text{quotient}$ quotient $\text{divisor} \overline{) \text{dividend}}$ $\frac{\text{dividend}}{\text{divisor}} = \text{quotient}.$	<p>expressed as decimals through thousandths, selecting from among paper and pencil, estimation, mental computation, and calculators.</p> <ul style="list-style-type: none"> • Estimate to find the number that is closest to the sum, difference, and product of two numbers expressed as decimals through thousandths. • Find the sum, difference, and product of two numbers expressed as decimals through thousandths, using paper and pencil, estimation, mental computation, and calculators. • Determine the quotient, given a dividend expressed as a decimal through thousandths and a single-digit divisor. For example, 5.4 divided by 2 and 2.4 divided by 5. • Use estimation to check the reasonableness of a sum, difference, product, and quotient. • Create and solve single-step and multistep problems. • A multistep problem needs to incorporate two or more operational steps (operations can be the same or different).
<p>5.7 The student will evaluate whole number numerical expressions, using the order of operations limited to parentheses, addition, subtraction, multiplication, and division.</p>	<p>All students should</p> <ul style="list-style-type: none"> • Understand that the order of operations describes the order to use to simplify expressions containing more than one operation. 	<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Simplify expressions by using the order of operations in a demonstrated step-by-step approach. • Find the value of numerical expressions, using the order of operations. • Given an expression involving more than one operation, describe which operation is completed first, which is second, etc.

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<p>5.19 The student will investigate and recognize the distributive property of multiplication over addition.</p>	<p>All students should</p> <ul style="list-style-type: none"> • Understand that the distributive property states that multiplying a sum by a number gives the same result as multiplying each addend by the number and then adding the products. • Understand that using the distributive property with whole numbers helps with understanding mathematical relationships. • Understand when and why the distributive property is used. 	<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Investigate and recognize the distributive property of whole numbers, limited to multiplication over addition using diagrams and manipulatives. • Investigate and recognize an equation that represents the distributive property, when given several whole number equations, limited to multiplication over addition.
<p>5.10 The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.</p>	<p>All students should</p> <ul style="list-style-type: none"> • Understand that elapsed time can be found by counting on from the beginning time to the finishing time. 	<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Determine elapsed time in hours and minutes within a 24-hour period.