

PHSSA Third Grade 2012-2013 SOL Roadmap

Quarter	Environmental	Language Arts	Math	Science	Social Studies
<p>First EQ: What role does diversity play in our community? Assessment: PALs DRA DSA Writing Portfolio Sample Making Meaning Checklist EOQ Benchmark Inquiry Project: Greece, Rome, Mali Investigation</p>	<p>ES 1: Ecological, Social, and Economic Systems</p> <p>ES 2: The Natural and Built Environment</p> <p>ES 3: Sustainability and Civic Responsibility</p>	<p>3.1 a-e 3.2 a-e 3.3 a-b 3.4 a-g 3.5 a-m 3.6 a,b,c,j,k,l 3.7 a,b 3.9 a-g 3.10 a-j 3.11 a-d</p>	<p>3.1 3.2 3.3 3.8 3.13 3.17</p> <p>Inquiry Unit Enriching Obj.: 3.1,3.17a-c</p>	<p>3.1 a-m 3.3 a-c 3.4 a,b 3.5 a-c 3.6 a-c</p>	<p>3.4 a,b,c 3.5 a,b,e 3.6 3.10 a 3.12</p>
<p>Second EQ: How does technology expand our horizons? Assessment: DRA DSA Writing Portfolio Sample EOQ Benchmark Inquiry Project: Animal Study and Habitat Construction</p>	<p>ES 1: Ecological, Social, and Economic Systems</p> <p>ES 2: The Natural and Built Environment</p> <p>ES 3: Sustainability and Civic Responsibility</p>	<p>3.1 a,b,c 3.2 a-e 3.3 a-b 3.4 a-g 3.5 a-m 3.6 a,b,c,d,g,h,j,k,l 3.7 a,b 3.8 3.9 a-g 3.10 a-j 3.11 a-d 3.12</p>	<p>3.2 3.4 3.5 3.6 3.8 3.18 3.20</p> <p>Inquiry Unit Enriching Obj.: 3.1,3.17a-c</p>	<p>3.1 a-m 3.4 a,b 3.5 a-c 3.6 a-c</p>	<p>3.4 a,b,c 3.7 3.8 3.9</p>

Quarterly Theme: How do living things interact within our community?
3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

ENVIRONMENT	<p>Standard 1: Ecological, Social, and Economic Systems</p> <p>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>Related Environmental Activities:</p> <p>PLT Activity 43 “ Have Seeds, Will Travel”</p> <ul style="list-style-type: none"> • TSW sort or classify plant seeds they have collected. • TSW identify varying methods of seed dispersal. <p>PLT Activity 21 “Adopt a Tree”</p> <ul style="list-style-type: none"> • TSW describe a chosen tree using personal observations and investigation and organize information about the tree. • TSW identify relationships between their tree and other organisms. <p>PLT Activity 22 “ Trees as Habitats</p> <ul style="list-style-type: none"> • TSW describe ways animals and plants depend on trees for survival and in turn influence the trees. • TSW identify interrelationships between the organisms using a tree. <p>PLT Activity 68 “Name That Tree”</p> <ul style="list-style-type: none"> • TSW identify several trees using various physical characteristics. <p>PLT Activity 7 “ Habitat Pen Pals”</p> <ul style="list-style-type: none"> • TSW identify similarities and differences between organisms by collecting pictures and categorizing them. • TSW comprehend the connection between diverse environments in which they live.
	<p>Standard 2: The Natural and Built Environment</p> <p>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</p> <p>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>	

Quarterly Theme: How do living things interact within our community?
3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

SCIENCE	<p>3.1 The student will plan and conduct investigations in which</p> <ol style="list-style-type: none"> a) predictions and observations are made; b) objects with similar characteristics are classified into at least two sets and two subsets; c) questions are developed to formulate hypotheses; d) volume is measured to the nearest milliliter and liter; e) length is measured to the nearest centimeter; f) mass is measured to the nearest gram; g) data are gathered, charted, and graphed (line plot, picture graph, and bar graph); h) temperature is measured to the nearest degree Celsius; i) time is measured to the nearest minute; j) inferences are made and conclusions are drawn; and k) natural events are sequenced chronologically. <p>3.3 The student will investigate and understand that objects are made of materials that can be described by their physical properties. Key concepts include</p> <ol style="list-style-type: none"> a) objects are made of one or more materials; b) physical properties remain the same as the material is changed in visible size; and c) visible physical changes are identified. <p>3.4 The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include</p> <ol style="list-style-type: none"> a) methods of gathering and storing food, finding shelter, defending themselves, and rearing young; and b) hibernation, migration, camouflage, mimicry, instinct, and learned behavior. 	<p>Related Environmental Objectives:</p> <ul style="list-style-type: none"> • TSW investigate and observe how parts of objects, plants and animals are connected. • TSW examine and distinguish characteristics of diverse plants and animals in the environment. • TSW categorize organisms according to their diverse environments, behavioral and physical adaptation. • TSW plant and/or maintain native gardens. <p>VDOE Enhanced Scope and Sequence</p> <p><i>3.5a Food Chains-“Producers and Consumers”</i> <i>3.5b “What’s for Dinner”</i> <i>3.5c “Are You a Predator of Prey?”</i> <i>3.6a,b “Animal Adaptation: Camouflage”</i> <i>3.6a,b “ Animal Adaptation: Physical Characteristics</i></p>
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SCIENCE cont.

- 3.5 The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include
- a) producer, consumer, decomposer;
 - b) herbivore, carnivore, omnivore; and
 - c) predator and prey.
- 3.6 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include
- a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments);
 - b) dry-land environments (desert, grassland, rain forest, and forest environments); and population and community.

Quarterly Theme: How do living things interact within our community?

3rd Grade Essential Question: What role does diversity play in our community? (People, plants and animals)

Standards of Learning:

SOCIAL STUDIES

- 3.2 Mali The student will study the early West African empire of Mali by describing its oral tradition (storytelling), government (kings), and economic development (trade).
- 3.4 The student will develop map skills by
 - a) locating Greece, Rome, and West Africa;
 - b) describing the physical and human characteristics of Greece, Rome, and West Africa;
 - c) explaining how the people of Greece, Rome, and West Africa adapted to and/or changed their environment to meet their needs.
- 3.5 The student will develop map skills by
 - a) positioning and labeling the seven continents and five oceans to create a world map;
 - b) using the equator and prime meridian to identify the Northern, Southern, Eastern, and Western Hemispheres;
 - e) locating specific places, using a simple letter-number grid system.
- 3.6 The student will read and construct maps, tables, graphs, and/or charts.
- 3.10 The student will recognize the importance of government in the community, Virginia, and the United States of America by
 - a) explaining the purpose of rules and laws
- 3.12 The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.

Related Integrated Objectives:

- TSW establish class rules and explain why rules and laws are important
- TSW describe the physical environments of Greece, Rome and West Africa
- TSW create a diarama depicting the environments of Greece, Rome and Mali
- TSW investigate ways in which the people of ancient Greece, Rome and Mali had to adapt to their environment
- TSW compare uses of natural resources in the ancient civilizations
- TSW construct a 3-dimensional map of the world using recycled materials
- TSW create a map of the Patrick Henry environment
- TSW describe and appreciate diversity among groups of people

Quarterly Theme: How do living things interact within our community?

3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

READING

- 3.1 The student will use effective communication skills in group activities.
- Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said.
 - Ask and respond to questions from teachers and other group members.
 - Explain what has been learned.
 - Use language appropriate for context.
 - Increase listening and speaking vocabularies
- 3.2 The student will present brief oral reports.
- Speak clearly.
 - Use appropriate volume and pitch.
 - Speak at an understandable rate.
 - Organize ideas sequentially or around major points of information.
 - Use grammatically correct language and specific vocabulary to communicate ideas.
- 3.3 The student will apply word-analysis skills when reading.
- Use knowledge of regular and irregular vowel patterns.
 - Decode regular multisyllabic words.
- 3.4 The student will expand vocabulary when reading.
- Use knowledge of homophones.
 - Use knowledge of roots, affixes, synonyms, and antonyms.
 - Apply meaning clues, language structure, and phonetic strategies.
 - Use context to clarify meaning of unfamiliar words.

Anchor Text Bibliography:

Sundiata: Lion King of Mali (folktale) by [David Wisniewski](#)

Explore Ancient Greece!: 25 Great Projects, Activities, Experiments

by [Carmella Van Vleet](#) and [Alex Kim](#)

Tales of Ancient Greece (folk tale) by [Enid Blyton](#)

“If I Were a Kid in Ancient Greece:Children of the Ancient World”
by Cobblestone Publishing

“ If I Were a Kid in Ancient Rome:Children of the Ancient World”
by Cobblestone Publishing

“Animal Relationships” by Michel Barre’

- “Claws, Coats, Camouflage” by Jason Goodman

- “Fur, Feathers, and Flipper: How Animals Live Where They Do” by Patricia Lauber

- “Do Not Disturb: The Mysteries of Animal Hibernation and Sleep” by Margery Facklam

- “The Magic School Bus Gets Eaten” by Scholastic

- “A Book About Food Chains” by Joanna Cole

READING cont.

- e) Discuss meanings of words and develop vocabulary by listening and reading a variety of texts.
- f) Use vocabulary from other content areas.
- g) Use word reference resources including the glossary, dictionary, and thesaurus.

3.5 The student will read and demonstrate comprehension of fictional text and poetry.

- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author’s purpose.
- f) Ask and answer questions about what is read.
- g) Draw conclusions about text.
- h) Identify the problem and solution.
- i) Identify the main idea.
- j) Identify supporting details.
- k) Use reading strategies to monitor comprehension throughout the reading process.
- l) Differentiate between fiction and nonfiction.
- m) Read with fluency and accuracy.

3.6 The student will continue to read and demonstrate comprehension of nonfiction texts.

- a) Identify the author’s purpose.
- b) Use prior and background knowledge as context for new learning.
- c) Preview and use text features.
- j) Use reading strategies to monitor comprehension throughout the reading process.
- k) Identify new information gained from reading.
- l) Read with fluency and accuracy.

- “Trout are Made of Trees” by April Pulley Sayre
- “Wolf Island” by Celia Godkin
- Animal Habitats: “Discovering How Animals Live in the Wild” by Tony Hare
- *English Standards of Learning Curriculum Framework* Web site, <http://www.pen.k12.va.us/VDOE/Instruction/English/englishCF.html>.
- *Phonological Awareness Literacy Screening (PALS)* Web site, <http://pals.virginia.edu>.
- *Virginia’s Early Intervention READING Initiative (EIRI)* Web site, <http://www.pen.k12.va.us/VDOE/Instruction/Reading/readinginitiative.html>.
- *Teaching Early Phonological Awareness Skills* Web site, <http://www.pen.k12.va.us/VDOE/Instruction/Reading/doc-pa.pdf>.

Quarterly Theme: How do living things interact within our community?

3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

WRITING

- 3.8 The student will write legibly in cursive.
- 3.9 The student will write descriptive paragraphs.
 - a) Develop a plan for writing.
 - b) Focus on a central idea.
 - c) Group related ideas.
 - d) Include descriptive details that elaborate the central idea.
 - e) Revise writing for clarity.
- 3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.
 - a) Use a variety of planning strategies.
 - b) Organize information according to the type of writing.
 - e) Use available technology.
- 3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.
 - a) Use complete and varied sentences.
 - b) Use the word *I* in compound subjects.
 - c) Use past and present verb tense.
 - d) Use singular possessives.
 - e) Use commas in a simple series.
 - f) Use simple abbreviations.
 - g) Use apostrophes in contractions with pronouns.
 - h) Use correct spelling for high-frequency sight words, including irregular plurals.

Related Integrated Activities:

The students will:

- Write a descriptive paper “ If I Lived in Greece, Rome or Mali” .
- Write penpal letters to students attending other schools with an environmental focus.
- Create a travel brochure highlighting the physical characteristics of ancient Greece, Rome or Mali.
- Write journal entries tracking the growth of plants in butterfly gardens.

Quarterly Theme: How do living things interact within our community?

3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

MATHEMATICS

- 3.1 The student will
- a) read and write six-digit numerals and identify the place value and value of each digit;
 - b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and
 - c) compare two whole numbers between 0 and 9,999, using symbols ($>$, $<$, or $=$) and words (*greater than*, *less than*, or *equal to*).
- 3.17 The student will
- a) collect and organize data, using observations, measurements, surveys, or experiments;
 - b) construct a line plot, a picture graph, or a bar graph to represent the data; and
 - c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

Related Integrated Activities:

The student will:

- Construct a picture, bar, line graph of types of trees of immediate environment.
- Create a mock farmer's market and price produce to be sold.
- Collect data on the organisms in the environment and arrange in charts and graphs.
- Create a picture graph to display kinds of trees seen on nature walk.

Quarterly Theme: How do living things interact within our community?

3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

ART

3.1 The student will identify innovative solutions used by artists to solve visual problems.

3.2 The student will use various art processes and techniques to produce works of art that demonstrate craftsmanship.

3.3 The student will develop art ideas from a variety of sources, including print, non-print, and technology.

3.6 The student will create a functional object that reflects the contributions of Greco-Roman civilizations, as found in artifacts.

3.9 The student will identify and use architectural forms (e.g., cube, cylinder, sphere, pyramid, cone).

3.10 The student will produce a work of art that communicates feelings.

3.11 The student will create a work of art in clay, using the coil-building process.

Related Integrated Objectives:

The students will:

- Use geometric figures to create a model reflecting the contributions on ancient Greeks and Romans.
- Create visual displays to evidence comprehension on contributions of ancient civilizations.
- Design 3-dimensional representations of diversity among plants, animals or people.

Related Integrated Activities:

The student will:

- Create a pictorial tree journal.
- Create a collage of plant and animals in their environment.
- Create a diorama depicting the environment of an ancient civilization and adaptations made by its people.

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Standards of Learning:

MUSIC

- 3.1 The student will sing a repertoire of songs in tune with a clear tone quality.
 - 1. Sing melodies within the range of an octave.
 - 2. Perform in a two-part music ensemble.
 - 3. Accompany singing with rhythm and/or melody instruments.
 - 4. Use music terminology to interpret a music selection.

- 3.4 The student will respond to music with movement.
 - 1. Perform line and circle dances.
 - 2. Perform dances and games from various cultures.
 - 3. Dramatize songs, stories, and poems.
 - 4. Perform choreographed and non-choreographed movements.

- 3.7 The student will create music through a variety of experiences.
 - 1. Create accompaniments and ostinatos for songs and chants.
 - 2. Create movement to illustrate meter and form.
 - 3. Create lyrics to familiar melodies.
 - 4. Create new verses to songs.

Related Environmental Objectives:

The student will:

- Listen to sounds in nature and relate to music.
- Create songs as evidence of learning.
- Listen to traditional music from diverse cultures.
- Observe and imitate dances from diverse cultures.

Related Integrated Activities:

The student will:

- Write a short song about diversity (people, plants or animals).
- Listen to nature’s “music” on a walking fieldtrip and describe in a journal.
- Watch videos of traditional songs and dance of diverse cultures.

Quarterly Theme: How do living things interact within our community?
3rd Grade Essential Question: What role does diversity play in our community?

Standards of Learning:

HEALTH & PE

3.1 The student will explain that health habits impact personal growth and development. Key concepts/skills include

- a) food and beverage choices based on nutritional content;
- b) the benefits of physical activity and personal fitness;
- c) safe and harmful behaviors;
- d) positive interaction with family, peers, and other individuals.

3.2 The student will use decision-making skills to promote health and personal wellness. Key concepts/skills include

- a) goal setting for personal health;
- b) the process of resolving conflicts peacefully;
- c) strategies for solving problems related to health.

Information Access and Use

3.4 The student will demonstrate the ability to use health information to improve personal health. Key concepts/skills include

- a) the use of health services and agencies to gain information;
- b) the ways in which health care has improved as a result of technology;
- c) the use of a variety of print, audiovisual, and electronic media resources.

Community Health and Wellness

3.5 The student will explain that customs and traditions may impact community health decisions. Key concepts/skills include

- a) dietary customs and practices;
- b) recreational activities;
- c) celebrations and traditions.

Related Integrated Objectives:

The student will:

- Discuss the importance of salt to ancient empire of Mali.
- Investigate the environment’s contributions to health.
- Take nature walks to promote physical interaction with the environment.

Related Integrated Activities:

The student will:

- Explain the importance of the gardens and their impact on health.
- Take nature walks and hikes in Forest Hill Park, James River Park, Reedy Creek.
- Create recipes using vegetables and herbs from the garden.

INSTRUCTIONAL ELEMENTS

Key Vocabulary	Instructional Strategies	Instructional Materials	Technology
<p><u>Science</u> adapt aquatic behavioral camouflage carnivore consumer decayed defend diversity dormancy energy environment food chain food web gather habitat herbivore hibernation hunt instinct learned behavior migration mimicry omnivore organism predator prey producer relationship sequence</p> <p><u>Social Science</u> contributions columns aqueduct sculpture arch direct democracy parthenon olympic colosseum representative democracy mosaic</p> <p><u>Math</u> approximate chart equal to equivalent estimate estimation even number expanded form front-end greater than hundreds less than number lines odd number ones ordinal numbers place value rounded standard form tens word form</p>	<ul style="list-style-type: none"> • Small Groups • Guided Practice • Cooperative Groups • Peer Tutoring • Direct Instruction • Exploration 	<ul style="list-style-type: none"> • Project Learning Tree (PLT) • VA DOE Enhanced Scope and Sequence • “Discovering Nature in Your Backyard with Step-by-Step Projects for the Young Scientists” by Sally Hewitt <p>Field Trips:</p> <ul style="list-style-type: none"> • Science Museum of Virginia • Mathematics and Science Innovation Center • Nature Walk/ Observation Walk • Richmond Metro Zoo • Maymont Nature Center/ Wildlife Exhibit • Three Lakes Park Nature Center • Virginia Museum of Fine Arts 	<ul style="list-style-type: none"> • http://www.bbc.co.uk/schools/ks2bitesize/index.shtml • http://kids.nationalgeographic.com/kids/games/geographygames/geospy/ • www.solpass.org • Civilizations: Greece and Rome http://chalk.richmond.edu/education/projects/webunits/greecerome/ • Roman Life For Kids http://www.bbc.co.uk/schools/primaryhistory/romans/ • Daily Life In Early Civilization http://www.mrdonn.org/index.html

INQUIRY PROJECT & CULMINATING ACTIVITY

Goal:

The third grade classes will work together to research the role diversity plays in our community. Then plan and execute presentations to show how the countries of Greece, Mali, and Rome have influenced our way of life.

Elements:

- a) The students will plan and design a presentation related to the diversity of Greece, Rome, or Mali.
- b) The students will use pictures, maps, graphs, charts, text, and or models to create a poster showing the diversity.
- c) The students will provide an oral presentation to accompany their display.
- d) The students will be able to locate their respective countries on a world map and identify the continent on which each is located.
- e) The student will include physical, human, and citizen adaptations in their presentations.
- f) The student will identify the arts and architecture seen and created from each country's respective culture.
- g) The students will identify and explain the form of government/leadership practiced in each country and how it affects our country.

Pacing:

This project will be executed in 9 weeks. In-class work will be completed during the investigations 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</p> <p>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</p> <p>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>	<ul style="list-style-type: none"> ✓ The way people live is shaped by their environment. ✓ The environment consists of diverse types of plants and animals. 	<ul style="list-style-type: none"> • TSW sort or classify plant seeds they have collected. • TSW identify varying methods of seed dispersal. • TSW describe a chosen tree using personal observations and investigation and organize information about the tree. • TSW identify relationships between their tree and other organisms. • TSW describe ways animals and plants depend on trees for survival and in turn influence the trees. • TSW identify interrelationships between the organisms using a tree. • TSW identify similarities and differences between organisms by collecting pictures and categorizing them. • TSW comprehend the connection between diverse environments in which they live. 	<ul style="list-style-type: none"> ➤ How can animals use trees for survival?

**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.

SCIENCE

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>Standard 3.1</p> <p>The student will plan and conduct investigations in which</p> <ul style="list-style-type: none"> ❖ a.) predictions and observations are made; ❖ b.) objects with similar characteristics are classified into at least two sets and two subsets; ❖ g.) data are gathered, charted, and graphed (line plot, picture graph, and bar graph); ❖ c.) questions are developed to formulate hypotheses; ❖ d.) volume is measured to the nearest milliliter and liter; e.) length is measured to the nearest centimeter; ❖ f.) mass is measured to the nearest gram; ❖ h.) temperature is measured to the nearest degree Celsius; 	<ul style="list-style-type: none"> ✓ Complete observations are made using all of the senses. Simple instruments can help extend the senses. ✓ Predictions are statements of what is expected to happen in the future based on past experiences and observations. ✓ In order for data from an investigation to be most useful, it must be organized so that it can be examined more easily. ✓ Charts and graphs are powerful tools for reporting and organizing data. ✓ It is sometimes useful to organize objects according to similarities and differences. By organizing objects in sets and subsets, it may be easier to determine a specific type of characteristic. ✓ Putting natural events in a sequence allows us to notice change over time. ✓ Metric measures, including centimeters, grams, milliliters, and degrees Celsius, are a standard way to record measurements. The metric system is recognized everywhere around the world. Framework, Standard 3.21, page 32.) 	<ul style="list-style-type: none"> • Make and communicate careful observations. • Communicate results of investigations by displaying data in the form of tables, charts, and graphs. Students will construct bar and picture graphs and line plots to display data. (Example: 3.7 – comparison of types of soil and their effect on plant growth) • Classify objects into at least two major sets and subsets based on similar characteristics, such as predator/prey and herbivore, carnivore, and omnivore • Make and explain bar and pie graphs. • Draw maps of familiar objects or areas. • Construct and explain simple charts. • In order to meet this standard, it is expected that students should be able to • Develop hypotheses from simple questions. These questions should be related to the concepts in the third grade standards. Hypotheses should be stated in terms such as: “If an object is cut into smaller pieces, then the physical properties of the object and its smaller pieces will remain the same.” 	<ul style="list-style-type: none"> ➤ Which senses help us study the diversity of different countries? ➤ What characteristics could we use to classify information about Greece, Mali, and Rome?

<ul style="list-style-type: none"> ❖ i.) time is measured to the nearest minute; ❖ j.) inferences are made and conclusions are drawn; and ❖ k.) natural events are sequenced chronologically. ❖ Standard 3.2 The student will investigate and understand simple machines and their uses. Key concepts include ❖ types of simple machines (lever, screw, pulley, wheel and axle, inclined plane, and wedge); ❖ how simple machines function; ❖ compound machines (scissors, wheelbarrow, and bicycle); and ❖ examples of simple and compound machines found in the school, home, and work environment. ❖ Standard 3.4 The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include ❖ a.) methods of 		<ul style="list-style-type: none"> • Make and communicate predictions about the outcomes of investigations. • make and communicate careful observations. • communicate results of investigations by displaying data in the form of tables, charts, and graphs. Students will construct bar and picture graphs and line plots to display data. (Example: 3.7 – comparison of types of soil and their effect on plant growth) • classify objects into at least two major sets and subsets based on similar characteristics, such as predator/prey and herbivore, carnivore, and omnivore. • sequence natural events chronologically. (Example: 3.9 – plant and animal life cycles, phases of the moon, the water cycle, and tidal change) <p>Essential Knowledge, Skills, and Processes</p> <ul style="list-style-type: none"> • measure length to the nearest centimeter, mass to the nearest gram, volume to the nearest milliliter, temperature to the nearest degree Celsius, and time to the nearest minute, using the appropriate instrument. • identify and differentiate the six types of simple machines: lever, screw, pulley, wheel and axle, inclined plane, and wedge. • analyze the application of and explain the function of each of the six types of simple machines. An example would be that an 	
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<p>gathering and storing food, finding shelter, defending themselves, and rearing young; and</p> <ul style="list-style-type: none"> ❖ b.) hibernation, migration, camouflage, mimicry, instinct, and learned behavior. ❖ The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include ❖ producer, consumer, decomposer; ❖ herbivore, carnivore, omnivore; and ❖ predator and prey. ❖ Standard 3.6 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments); b) dry-land environments (desert, grassland, rain forest, and forest 		<p>inclined plane is a ramp to make it easier for a heavy object to be moved up or down.</p> <ul style="list-style-type: none"> • differentiate and classify specific examples of simple machines found in school and household items. These include a screwdriver, nutcracker, screw, flagpole pulley, ramp, and seesaw. • design and construct an apparatus that contains a simple machine. • identify and classify the simple machines which compose a compound machine, such as scissors, wheelbarrow, and bicycle. • describe and explain the terms hibernation, migration, camouflage, mimicry, instinct, and learned behavior. • give examples of methods that animals use to gather and store food, find shelter, defend themselves, and rear young. • compare the physical characteristics of animals, and explain how the animals are adapted to a certain environment. • explain how an animal's behavioral adaptations help it live in its specific habitat. • design and construct a model of a habitat for an animal with a specific adaptation. • Distinguish between physical and behavioral adaptations of animals. • Create (model) a camouflage 	
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<p>environments); and c) population and community.</p>		<p>pattern for an animal living in a specific dry-land or water-related environment. (Relates to 3.6.)</p> <ul style="list-style-type: none"> • Compare and contrast instinct and learned behavior. • Distinguish among producers, consumers, herbivores, omnivores, carnivores, and decomposers. • Create and interpret a model of a food chain showing producers and consumers. • Explain how a change in one part of a food chain might affect the rest of the food chain. • Identify sequences of feeding relationships in a food chain. • Differentiate between predators and prey. • Infer that most food chains begin with a green plant. • Describe major water-related environments and examples of animals and plants that live in each. • Describe major dry-land environments and examples of animals and plants that live in each. • Compare and contrast water-related and dry-land environments. • distinguish between a population and a community. • explain how animals and plants use resources in their environment. • analyze models or diagrams of different water-related environments in order to describe the community of 	
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		<p>organisms each contains and interpret how the organisms use the resources in that environment.</p> <ul style="list-style-type: none">• analyze models or diagrams of different dry-land environments in order to describe the community of organisms each contains and interpret how the organisms use the resources in that environment.• predict what would occur if a population in a specific environment were to die	
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SOCIAL STUDIES

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.4 Map Skills The student will develop map skills by a) locating Greece, Rome, and West Africa; b) describing the physical and human characteristics of Greece, Rome, and West Africa; c) explaining how the people of Greece, Rome, and West Africa adapted to and/or changed their environment to meet their needs.</p> <p>3.5a Map Skills The student will position and label the seven continents and five oceans to create a world map;</p> <p>3.5b Map Skills using the equator and prime meridian to identify the Northern, Southern, Eastern, and Western Hemispheres</p> <p>3.5e locating specific places, using a simple letter-number grid system.</p> <p>3.6 The student will read and construct Maps, Charts, Graphs</p> <p>3.12 Diversity The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.</p>	<ul style="list-style-type: none"> ✓ Ancient Greece and Rome were located on land near the Mediterranean Sea. The empire of Mali was located in the western region of the continent of Africa. ✓ Physical characteristics ✓ Ancient Greece: Located on a peninsula with many islands, mountains, and hills; surrounded by the Mediterranean Sea; had limited rich soil ✓ Ancient Rome: Located next to a river; built on many hills; had limited rich soil ✓ Empire of Mali: Located in West Africa near rivers and in a grassland region; had gold mines ✓ Human characteristics ✓ Ancient Greece: Farmers, shipbuilders, traders ✓ Ancient Rome: Farmers, road builders, traders ✓ Empire of Mali: Farmers, miners, traders ✓ Ways people adapted to their environments ✓ Ancient Greece: They farmed on hillsides; trading took place on the Mediterranean Sea; small, independent communities developed because of the many mountains. ✓ Ancient Rome: They farmed on hillsides; trading took 	<ul style="list-style-type: none"> • Identify and locate features on a map and globe. • Locate and use information from print and nonprint sources. <p>Maps, tables, graphs, charts, and pictures are visual aids used to gather, display, and classify geographic information.</p> <p>Parts of a map</p> <ul style="list-style-type: none"> • Map title • Map legend • Compass rose <ul style="list-style-type: none"> • Maps may include a compass rose with the intermediate directions of northeast, southeast, northwest, and southwest. • Differentiate between points of view by self and others. • Participate in groups and democratic society. • Make generalizations about data. • Locate places on maps, using a simple letter-number grid system. • Identify and locate continents, oceans, and major features on maps and globes. • Draw maps of familiar areas. 	<ul style="list-style-type: none"> ➤ Where were ancient Greece, ancient Rome, and the empire of Mali located? ➤ What were the physical and human characteristics of ancient Greece and Rome and West Africa (Mali)? ➤ How did the people of ancient Greece, ancient Rome, and Mali adapt to and/or change their environment to meet their needs? ➤ What visual aids can be used to gather, display, and classify information? ➤ What unites the people of the United States? ➤ What are some benefits of diversity in the United States? ➤ What imaginary lines are used to define hemispheres? ➤ What are the names of the four hemispheres? ➤ On which continents are England, Spain, France, and the United States located? ➤ Where are the countries of

<p>SOL 3.10 The student will recognize the importance of government in the community, Virginia, and the United States of America by a) explaining the purpose of rules and laws;</p>	<p>place on the Mediterranean Sea.</p> <ul style="list-style-type: none"> ✓ Empire of Mali: Salt was an important natural resource needed in Mali. Gold from Mali was traded for salt. ✓ Maps, tables, graphs, charts, and pictures can be read and constructed to gather and display information. ✓ Maps are used to display information geographically. ✓ Maps, tables, graphs, charts, and pictures are visual aids used to gather, display, and classify geographic information. <p>Parts of a map</p> <ul style="list-style-type: none"> • Map title • Map legend • Compass rose <ul style="list-style-type: none"> ✓ Maps may include a compass rose with the intermediate directions of northeast, southeast, northwest, and southwest. ✓ The equator and the prime meridian divide the globe into four hemispheres. ✓ The four hemispheres are Northern, Southern, Eastern, and Western. ✓ A simple letter-number grid system on maps is used to locate places. ✓ The American people come 	<ul style="list-style-type: none"> • Compare and contrast differing sets of ideas, values, personalities, behaviors, and institutions. • Gather, classify, and interpret information. • Explain cause-and-effect relationships. 	<p>England, Spain, and France located on a world map?</p> <ul style="list-style-type: none"> ➤ Where are the regions (general areas) of San Salvador in the Bahamas; St. Augustine, Florida; Québec, Canada; and Jamestown, Virginia, located on a map? ➤ How is a simple letter-number grid system used to locate places on maps?
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	<p>from diverse ethnic and national origins and are united as Americans by basic American principles.</p> <ul style="list-style-type: none"> ✓ Being an American is defined by the shared basic principles of the republican form of government. ✓ Terms to know ✓ Republican form of government: A representative democracy ✓ The American people come from different ethnic origins and different countries, but are united as Americans by the basic principles of a republican form of government, including individual rights to life, liberty, and the pursuit of happiness; and equality under the law. ✓ Benefits of diversity ✓ Food ✓ Clothing ✓ Music ✓ The physical shapes of the continents (North America, South America, Europe, Asia, Africa, Australia, Antarctica) and the positions of the five oceans (Arctic, Atlantic, Indian, Pacific, and Southern) may be located on a world map. ✓ The equator and the prime meridian are used to create the Northern, Southern, Eastern, and Western Hemispheres. ✓ England, Spain, and France 		
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	<p>are located on the continent of Europe. The United States is located on the continent of North America.</p> <ul style="list-style-type: none">✓ San Salvador is located in the general area of the Bahamas. St. Augustine is located in northern Florida. Québec is located in Canada. Jamestown is located in Virginia.✓ The letter (on the left) and number (at the bottom) coordinates of a grid system identify the approximate location of a place.✓ The purpose of rules and laws is to keep people safe and maintain order.		
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Math

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>SOL 3.1 Number and Number Sense The student will</p> <ul style="list-style-type: none"> a) read and write six-digit numerals and identify the place value and value of each digit; b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and c) compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (<i>greater than</i>, <i>less than</i>, or <i>equal to</i>). <p>SOL 3.17 Data The student will</p> <ul style="list-style-type: none"> a) collect and organize data, using observations, measurements, surveys, or experiments; 	<ul style="list-style-type: none"> ✓ Understand how data can be collected and organized. ✓ Understand that data can be displayed in different types of graphs depending on the data. 	<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> • Formulate questions to investigate. • Design data investigations to answer formulated questions, limiting the number of categories for data collection to four. • Collect data, using surveys, polls, questionnaires, scientific experiments, and observations. 	<ul style="list-style-type: none"> ➤ How can graphing data help us compare and organize information? ➤ How can information on diverse organisms be organized? ➤ How can using charts, graphs and tables be used to organize data on the plant growth in garden?

Reading

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<ul style="list-style-type: none"> ❖ 3.1 The student will use effective communication skills in group activities. ❖ a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said. ❖ b) Ask and respond to questions from teachers and other group members. ❖ c) Explain what has been learned. ❖ 3.2 The student will present brief oral reports. ❖ a) Speak clearly. ❖ b) Use appropriate volume and pitch. ❖ c) Speak at an understandable rate. ❖ d) Organize ideas sequentially or around major points of information. ❖ e) Use grammatically correct language and specific vocabulary to communicate ideas. 	<ul style="list-style-type: none"> ✓ participate effectively in group activities by taking turns in conversations and moving group discussions forward ✓ cluster or sequence information on a topic when presenting an oral report ✓ speak clearly at an understandable rate and volume. ✓ understand ways to select the best resource for gathering information on a given topic. 	<ul style="list-style-type: none"> • Engage in taking turns in conversations by • Make certain all group members have an opportunity to contribute • Listen attentively by making eye contact while facing the speaker • Elicit information or opinions from others • Support opinions with appropriate ideas, examples, and details • Indicate disagreement in a constructive manner • Take initiative in moving a group discussion forward by • Contribute information that is on topic • Answer questions • Ask clarifying questions of the speaker • Summarize the conclusions reached in the discussion • Explain what has been learned. • Deliver oral presentations in an engaging manner that maintains audience interest by <ul style="list-style-type: none"> ◦ presenting information with expression and confidence ◦ varying tone, pitch, and volume to convey meaning ◦ using grammatically correct language ◦ speaking at an understandable rate ◦ using specific vocabulary 	<ul style="list-style-type: none"> ➤ In what ways can you effectively capture the attention of audience? ➤ How can you make your presentation a learning experience for other students? ➤ How can using different resources help you find and gather information on different topics? ➤ How can ideas be organized around major points of information? ➤ What verbal skills promote effective oral communication? ➤ How can informative print be used to research a given topic? ➤ How does technology impact research?

<ul style="list-style-type: none"> ❖ 3.7 The student will demonstrate comprehension of information from a variety of print resources. ❖ a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials. ❖ b) Use available technology. 		<p>appropriate for the audience and the topic</p> <ul style="list-style-type: none"> • Stay on topic during presentations • Organize ideas sequentially or around major points of information • Answer questions from the audience • Evaluate their own presentations, using class-designed criteria • Make decisions about which resource is best for locating a given type of information • Locate selected information in glossaries, dictionaries, thesauruses, encyclopedias, atlases, and other print and online reference materials • Retrieve information from electronic sources • Use the Internet to find information on a given topic • Use a printer to create hard copies of information retrieved from electronic sources. 	
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Writing

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.9 The student will write descriptive paragraphs.</p> <ul style="list-style-type: none"> a) Develop a plan for writing. b) Focus on a central idea. c) Group related ideas. d) Include descriptive details that elaborate the central idea. e) Revise writing for clarity. <p>3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.</p> <ul style="list-style-type: none"> a) Use a variety of planning strategies. b) Organize information according to the type of writing. c) Identify the intended audience. d) Revise writing for specific vocabulary and information. e) Use available technology. 	<ul style="list-style-type: none"> ✓ Understand how to plan and compose a descriptive paragraph. ✓ Understand how to plan and compose stories, friendly letters, simple explanations, and short reports ✓ Understand that grammatically correct language and mechanics contribute to the meaning of writing. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • Generate ideas and develop a plan for writing • Focus on a central topic and group related ideas • Select specific details of sight, sound, touch, taste, and smell in order to paint a verbal picture of a person, place, thing, or event • Use examples from their reading as models to imitate in their writing • Create verbal pictures, using precise nouns, verbs, and adjectives, that elaborate ideas within a sentence • Describe events, ideas, and personal stories with accurate details and sequence • Read their own writing orally to check for sentence rhythm (sentence variety) • Select information that the audience will find interesting or entertaining • Revise to eliminate details that do not develop the central idea • Incorporate transitional (signal) words that clarify sequence, such as <i>first</i>, <i>next</i>, and <i>last</i> 	<ul style="list-style-type: none"> ➤ In what ways can you organize your facts to make your information interesting and understandable for your audience? ➤ What are the steps in the writing process? ➤ How can writing support communication with students in other communities?

3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.

- a) Use complete and varied sentences.
- b) Use the word *I* in compound subjects.
- c) Use past and present verb tense.
- d) Use singular possessives.
- e) Use commas in a simple series.
- f) Use simple abbreviations
- g) Use apostrophes in contractions with pronouns.
- h) Use correct spelling for high-frequency sight words, including irregular plurals.

- Apply knowledge of the writing domains of composing, written expression, and usage/mechanics.
- Generate ideas and plan writing by
 - using ideas from class brainstorming activities
 - making lists of information
 - talking to classmates about what to write
 - reading texts by peer and professional authors
 - using a cluster diagram, story map, or other graphic organizer
 - selecting an appropriate writing form for nonfiction writing (such as explanation, directions, simple report), expressive writing (such as narrative, reflection, and letter), and creative writing (such as fiction and poetry)
- Identify the intended audience
- Follow the organization of particular forms of writing for
 - stories – beginning, middle, and end
 - letters – date, greeting, body, and closing
 - explanations – opening; information presented in a way to show the relationship of ideas, such as chronological order; and closing
 - short reports – opening, grouping of like information

		<p>into clear paragraphs, ordering of paragraphs so that there is a logical flow of information, and closing</p> <ul style="list-style-type: none"> • Clarify writing when revising by including specific vocabulary and information <p>-use available technology to write.</p> <ul style="list-style-type: none"> • use complete sentences • use the word <i>I</i> in compound subjects • use past and present verb tenses • use singular possessives • use simple abbreviations • use correct spelling for frequently used words, including irregular plurals, e.g., <i>men, children</i> • Punctuate correctly <ul style="list-style-type: none"> ◦ commas in a simple series ◦ apostrophes in contractions with pronouns, e.g., <i>I'd, we've.</i> 	
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References

VA DOE Science Enhanced Scope & Sequence

VA DOE History/ Social Science Enhanced Scope & Sequence

VA DOE Math Enhanced Scope & Sequence

Richmond City Public Schools Learning Portal

www.solpass.org

www.unitedstreaming.com

Quarterly Theme: How does technology change our lives?
Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

ENVIRONMENT	<p>Standard 1: Ecological, Social, and Economic Systems</p> <p>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><u>Related Integrated Activities:</u></p> <p>PLT Activity 95: “Did You Notice” (adapted to Grade 3)</p> <ul style="list-style-type: none"> • TSW investigate changes in their local environment over the course of time. • TSW summarize those changes in the form of a time line. <p>PLT Activity 40 :“Then and Now” (adapted to Grade 3)</p> <ul style="list-style-type: none"> • TSW describe the environmental changes that have occurred in their community <p>VA DOE Science Enhanced Scope and Sequence – Grade 3</p> <ul style="list-style-type: none"> • “ Simple and Compound Machines” <p>Design an animal given specific details to its environment, survival needs, special adaptations, prey and/or predators</p>
	<p>Standard 2: The Natural and Built Environment</p> <p>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</p> <p>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>	

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

SCIENCE

- 3.1 The student will plan and conduct investigations in which
- a) predictions and observations are made;
 - b) objects with similar characteristics are classified into at least two sets and two subsets;
 - c) questions are developed to formulate hypotheses;
 - d) volume is measured to the nearest milliliter and liter;
 - e) length is measured to the nearest centimeter;
 - f) mass is measured to the nearest gram;
 - g) data are gathered, charted, and graphed (line plot, picture graph, and bar graph);
 - h) temperature is measured to the nearest degree Celsius;
 - i) time is measured to the nearest minute;
 - j) inferences are made and conclusions are drawn; and
 - k) natural events are sequenced chronologically.
- 3.2 The student will investigate and understand simple machines and their uses. Key concepts include
- a) types of simple machines (lever, screw, pulley, wheel and axle, inclined plane, and wedge);
 - b) how simple machines function;
 - c) compound machines (scissors, wheelbarrow, and bicycle);
 - d) examples of simple and compound machines found in the school, home, and work environment.
- 3.4 The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include
- a) methods of gathering and storing food, finding shelter, defending themselves, and rearing young; and
 - b) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.

Related Integrated Objectives:

The student will:

- Conduct scientific investigations to investigate the impact of technology on our lives

- Explain how simple machines make work easier.

- Use technology to research and design an animal with specific adaptations
http://www.vtea.org/ESTE/technology/Exploring_Animal_Environments.pdf. Offers a lesson on creating animals that can live in different environments.

SCIENCE continued

- 3.5 The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include
 - a) producer, consumer, decomposer;
 - b) herbivore, carnivore, omnivore; and predator and prey
- 3.6 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include
 - a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments); dry-land environments (desert, grassland, rain forest, and forest environments); and
 - b) population and community.

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

SOCIAL STUDIES

- 3.4 The student will develop map skills by
 - a) locating Greece, Rome, and West Africa;
 - b) describing the physical and human characteristics of Greece, Rome, and West Africa;
 - c) explaining how the people of Greece, Rome, and West Africa adapted to and/or changed their environment to meet their needs.
- 3.7 The student will explain how producers in ancient Greece, Rome, and the West African empire of Mali used natural resources, human resources, and capital resources in the production of goods and services.
- 3.8 The student will recognize that because people and regions cannot produce everything they want, they specialize in what they do best and trade for the rest.
- 3.9 The student will identify examples of making an economic choice and will explain the idea of opportunity cost (what is given up when making a choice).

Related Integrated Objectives:

The students will:

- Identify technology created in the ancient civilizations
- Discuss the impact ancient advances in technology has on life today
- (aqueducts, roads, columns, arches, trade routes, shipbuilding)
- Relate developments in technology to economics in present day and ancient times
- Give example of economic specialization in ancient civilizations
- Use restaurant menus to make economic and healthy choices

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

READING

3.1 The student will use effective communication skills in group activities.

- a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said
- b) Ask and respond to questions from teachers and other group members.
- c) Explain what has been learned.

3.2 The student will present brief oral reports.

- a) Speak clearly.
- b) Use appropriate volume and pitch.
- c) Speak at an understandable rate.
- d) Organize ideas sequentially or around major points of information.
- e) Use grammatically correct language and specific vocabulary to communicate ideas.

3.3 The student will apply word-analysis skills when reading.

- a) Use knowledge of all vowel patterns.
- b) Use knowledge of homophones.
- c) Decode regular multisyllabic words.

3.4 The student will use strategies to read a variety of fiction and nonfiction materials.

- a) Preview and use text formats.
- b) Set a purpose for reading.
- c) Apply meaning clues, language structure, and phonetic strategies.
- d) Use context to clarify meaning of unfamiliar words.
- e) Read fiction and nonfiction fluently and accurately.
- f) Reread and self-correct when necessary.

Anchor Text Bibliography:

- Novel Study: (suggested)
Magic Tree House # 8 : Midnight on the Moon” by Mary Pope Osborne
- “City: A Story of Roman Planning and Construction” by David Macaulay (Houghton Mifflin Company, 1974)
- “Tools of the Ancient Greeks: A Kid’s Guide to History & Science of Life in Ancient Greece” by Kris Bordessa
- “Simple Machines” (Starting with Science) by Deborah Hodge and Ray Boudreau
- “Machines We Use” (It's Science!) by Sally Hewitt (Sep 1998)
- Technology of Ancient Rome (Primary Sources of Ancient Civilizations) by Daniel C. Gedacht (Aug 2004)
- Ancient Agriculture: From Foraging to Farming (Ancient Technology) by Michael Woods and Mary B. Woods (Sep 1999)
- The Technology of Ancient Rome (The Technology of the Ancient World) by Charles W. Maynard (Jan 30, 2006)
- Ancient Machines: From Wedges to Waterwheels (Ancient Technology) by Michael Woods and Mary B. Woods (Sep 1999)
- Ancient Science: 40 Time-Traveling, World-Exploring, History-Making Activities for Kids, by Jim Wiese (2003).

Reading continued

3.5 The student will read and demonstrate comprehension of fiction.

- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author.s purpose.
- f) Ask and answer questions.
- g) Draw conclusions about character and plot.
- h) Organize information and events logically.

3.6 The student will continue to read and demonstrate comprehension of nonfiction.

- a) Identify the author.s purpose.
- b) Make connections between previous experiences and reading selections.
- c) Ask and answer questions about what is read.

3.7 The student will demonstrate comprehension of information from a variety of print resources.

- a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials.
- b) Use available technology.

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

WRITING

- 3.9 The student will write descriptive paragraphs.
- a) Develop a plan for writing.
 - b) Focus on a central idea.
 - c) Group related ideas.
 - d) Include descriptive details that elaborate the central idea.
 - e) Revise writing for clarity.

- 3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.
- a) Use a variety of planning strategies.
 - b) Organize information according to the type of writing.
 - e) Use available technology.

- 3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.
- a) Use complete and varied sentences.
 - b) Use the word *I* in compound subjects.
 - c) Use past and present verb tense.
 - d) Use singular possessives.
 - e) Use commas in a simple series.
 - f) Use simple abbreviations.
 - g) Use apostrophes in contractions with pronouns.
 - h) Use correct spelling for high-frequency sight words, including irregular plurals.

3.12 The student will use available technology for reading and writing.

Related Integrated Activities:

The student will :

- Write track the activity in the garden by writing journal entries
- Write letters to students in Washington /California to compare environments (pen pals)
- Write a short play explaining how the technology of the ancient civilizations impact our lives today
- Write a description of their designer animal

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

MATHEMATICS

- 3.2 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. The student will use these relationships to solve problems.
- 3.4 The student will estimate solutions to and solve single-step and multistep problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping.
- 3.5 The student will recall multiplication facts through the twelves table, and the corresponding division facts.
- 3.6 The student will represent multiplication and division, using area, set, and number line models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.
- 3.8 The student will determine, by counting, the value of a collection of bills and coins whose total value is \$5.00 or less, compare the value of the bills and coins, and make change.
- 3.18 The student will investigate and describe the concept of probability as chance and list possible results of a given situation.
- 3.20 The student will
 - a) investigate the identity and the commutative properties for addition and multiplication; and
 - b) identify examples of the identity and commutative properties for addition and multiplication.

Related Integrated Activities:

The student will:

- Measure plant growth to the nearest centimeter
- Graph the growth of plants in garden
- Use data from graph to compare growth among plants using <,>
- Use metric measures to design simple machine
- Use metric measures to design animal
- Chart and graph step counts from the pedometers
- Use <,>= to compare step counts

MATH cont.

*3.1 c The student will compare two whole numbers between 0 and 9,999, using symbols ($>$, $<$, or $=$) and words (*greater than*, *less than*, or *equal to*).

- *3.17 The student will
- a) collect and organize data, using observations, measurements, surveys, or experiments;
 - b) construct a line plot, a picture graph, or a bar graph to represent the data; and
 - c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

ART

- 3.9 The student will identify and use architectural form (e.g.cube, cylinder, sphere, pyramid, cone).
- 3.10 The student will produce a work of art that communicates feelings.
- 3.11 The student will create a work of art in clay, using the coil building process.

Related Integrated Objectives:

The student will:

- Use recycled materials to create works of art display evidence of technology use in their lives
- Express reaction to nature and environment with artist mediums
- Design a simple machine that might make a job in the environment easier

Related Integrated Activities:

The students will:

- Design Greek and Roman architecture using recycled materials
- Create a garden journal with pictures of plants ,care and growth data/charts
- Use recycled materials to create an ancient African drum

Quarterly Theme: How does technology change our lives?
Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

MUSIC	<p>3.4 The student will respond to music with movement.</p> <ol style="list-style-type: none">1. Perform line and circle dances.2. Perform dances and games from various cultures.3. Dramatize songs, stories, and poems.4. Perform choreographed and non-choreographed movements.	<p><u>Related Integrated Objectives:</u> The student will:</p> <ul style="list-style-type: none">• Investigate musical contributions of ancient civilization• Study the impact technology has had on music • Listen to non-traditional forms of music <p><u>Related Integrated Activities:</u> The student will:</p> <ul style="list-style-type: none">• Investigate and perform traditional dances from various cultures• Use various instruments to create music
	<p>3.11 The student will explore the music of world cultures through song, dance, and movement.</p> <ol style="list-style-type: none">1. Study folk tales and musical settings of folk tales.2. Listen to examples of instruments not traditionally found in bands or orchestras.3. Interpret music through movement.4. Perform traditional dances.	
	<p>3.12 The student will identify the four orchestral families (woodwind, string, brass, and percussion), using sight and sound.</p>	

Quarterly Theme: How does technology change our lives?

Third Grade Essential Question: How does technology expand our horizons?

Standards of Learning:

HEALTH & PE

3.2 The student will use decision-making skills to promote health and personal wellness. Key concepts/skills include

- a) goal setting for personal health;
- b) the process of resolving conflicts peacefully;
- c) strategies for solving problems related to health.

3.4 The student will demonstrate the ability to use health information to improve personal health. Key concepts/skills include

- a) the use of health services and agencies to gain information;
- b) the ways in which health care has improved as a result of technology;
- c) the use of a variety of print, audiovisual, and electronic media resources.

3.5 The student will explain that customs and traditions may impact community health decisions. Key concepts/skills include

- a) dietary customs and practices;
- b) recreational activities;
- c) celebrations and traditions.

Related Integrated Objectives:

The student will :

- Exercise daily to various genres of music
- Keep calorie count of lunch items
- Plan a meal using the food pyramid

Related Integrated Activities:

The student will:

- Use pedometers to monitor steps in a week
- Make healthy meal selections from restaurant menus

INSTRUCTIONAL ELEMENTS

Key Vocabulary	Instructional Strategies	Instructional Materials	Technology
<p><u>Science</u> compound machine construct direction force fulcrum function inclined plane lever pulley screw simple machine tools wedge wheel and axle work</p> <p><u>Social Science</u> capital resources consumers human resources producers natural resources decision opportunity cost spend economics economic specialization economic interdependence</p> <p><u>Reading</u> language narrative oral paraphrase respond vowel patterns closed sorts open sorts homophones root words affixes synonyms antonyms</p>	<ul style="list-style-type: none"> • Integrating content into • Language Arts activities • Author/Illustrator studies • Literature Circles • Web-Quest • Experiential learning (project-based) • Direct instruction • Small Group • Reflective discussions • Comparing/contrasting • Peer partner editing 	<ul style="list-style-type: none"> • “Explore Ancient Rome!” 25 Projects, Activities and Experiments by Carmella Van Vleet ISBN 978-09792268-4-7 • Tools of the Ancient Greeks: A Kid’s Guide to the History & Science of Life in Ancient Greece by Kris Bordessa ISBN 0-9749344-6-4 • “Simple Machines” by Cindy Davis, Jo Ellen Moore and Evan-Moor Educational Publishers (Nov 1, 1998) • Machines We Use (It's Science!) by Sally Hewitt (Sep 1998) • 	<p>www.solpass.org</p> <p>www.readinga-z.com</p> <p>www.brainpop.com</p> <p>United Streaming</p> <p>Smart Exchange</p>

Patrick Henry School of Science and Arts Third Grade Second Quarter Curriculum Plan

<p>context clues suffix narrative poetry autobiography setting compare details cause-effect glossary technology thesaurus table of contents Internet research</p>	<p>prefix fiction nonfiction biography main idea historical facts contrast caption dictionary resource encyclopedia reference index</p>		<p>Field Trips:</p> <ul style="list-style-type: none"> • Science Museum of Virginia • Mathematics and Science Center • Science Museum of Virginia • Richmond Metro Zoo • Maymont Nature Center/ Wildlife Exhibit • Three Lakes Park Nature Center
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INQUIRY PROJECT & CULMINATING ACTIVITY

Goal:

The third grade classes will work together to research how technology expands our horizons. Then plan and execute a model or design of a habitat for an original animal that they create through the use of technology.

Elements:

- a) The students will research the various habitats and animals that live in each.
- b) The students will create and design a new animal based on their developed knowledge.
- c) The students will use technology to design and enhance an animal and its habitat.
- d) Students will include physical adaptations that will enable the animal to survive in the chosen habitat.
- e) Students will research learned behavior and instinct to develop their animal in a realistic manner.
- f) Creations will be presented to classmates and displayed for the school to view.
- g) Students will include a typed report to accompany their model or design.
- h) Students may use materials collected from the school community during park visits to include in their habitat models.

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</p> <p>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</p> <p>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>	<ul style="list-style-type: none"> ✓ TSW investigate changes in their local environment over the course of time. ✓ TSW summarize those changes in the form of a time line. ✓ TSW describe the environmental changes that have occurred in their community ✓ TSW recognize the impact technology has on the environment. 	<ul style="list-style-type: none"> • Use various forms of technology at home and school. • Identify technological contributions of the past and their impact on present day. • Investigate how technology is used in the community to sustain the environment. • 	<ul style="list-style-type: none"> ➤ What role can students play in sustaining the environment? ➤ Evaluate changes in the environment ➤

**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.

SCIENCE

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>Standard 3.1 The student will plan and conduct investigations in which</p> <ul style="list-style-type: none"> ❖ a.) predictions and observations are made; ❖ b.) objects with similar characteristics are classified into at least two sets and two subsets; ❖ c.) questions are developed to formulate hypotheses; ❖ j.) inferences are made and conclusions are drawn; <p>Standard 3.4 The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs.</p>	<ul style="list-style-type: none"> ✓ Complete observations are made using all of the senses. Simple instruments can help extend the senses. ✓ Predictions are statements of what is expected to happen in the future based on past experiences and observations. ✓ It is sometimes useful to organize objects according to similarities and differences. By organizing objects in sets and subsets, it may be easier to determine a specific type of characteristic. ✓ An inference is a conclusion based on evidence. ✓ Physical adaptations help animals survive in their environment. Examples include camouflage and mimicry. ✓ Behavioral adaptations allow animals to respond to life needs. Examples include hibernation, migration, instinct, and learned behavior. ✓ In order to survive, animals act in different ways to gather and store food, find shelter, defend themselves, and rear their young. ✓ Some animals go into a deep winter sleep in which their body activities slow down and they can live off stored food (hibernation). 	<ul style="list-style-type: none"> • Make and communicate careful observations. • Classify objects into at least two major sets and subsets based on similar characteristics, such as predator/prey and herbivore, carnivore, and omnivore • Develop hypotheses from simple questions. These questions should be related to the concepts in the third grade standards. Hypotheses should be stated in terms such as: “If an object is cut into smaller pieces, then the physical properties of the object and its smaller pieces will remain the same.” • Make and communicate predictions about the outcomes of investigations. • Describe and explain the terms hibernation, migration, camouflage, mimicry, instinct, and learned behavior. • Give examples of methods that animals use to gather and store food, find shelter, defend themselves, and rear young. 	<ul style="list-style-type: none"> ➤ How can observing animal habitats help you understand what adaptations promote survival? ➤ What is the difference between a physical and behavioral adaptation? ➤ How do the limited resources in an environment affect the population and community of that environment?

<p>❖ a.) methods of gathering and storing food, finding shelter, defending themselves, and rearing young;</p> <p>❖ b.) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.</p> <p>3.6 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources.</p> <p>Key concepts include</p> <p>a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments);</p> <p>b) dry-land environments (desert, grassland, rain forest, and forest environments); and</p> <p>c) population and community.</p>	<p>✓ Some animals go on a long-distance journey from one place to another as seasons change (migration).</p> <p>✓ Various animals blend into their environments to protect themselves from enemies (camouflage).</p> <p>✓ Some animals look like other animals to avoid being eaten (mimicry). This adaptation helps protect them from their predators. (For example, the viceroy butterfly tastes good to birds, but the monarch butterfly tastes bad. Because the viceroy looks like the monarch butterfly, it is safer from predators.)</p> <p>✓ Water-related environments include those with fresh water or salt water. Examples include ponds, marshes, swamps, streams, rivers, and oceans.</p> <p>✓ Dry-land environments include deserts, grasslands, rain forests, and forests.</p> <p>✓ There are distinct differences among pond, marshland, swamp, stream, river, ocean, desert, grassland, rainforest, and forest environments.</p> <p>✓ A <i>population</i> is a group of organisms of the same kind that lives in the same place. Examples of a population are a group of swans in a pond, a school of fish in a river, and a</p>	<ul style="list-style-type: none"> • Compare the physical characteristics of animals, and explain how the animals are adapted to a certain environment. • Explain how an animal’s behavioral adaptations help it live in its specific habitat. • Design and construct a model of a habitat for an animal with a specific adaptation. • Distinguish between physical and behavioral adaptations of animals. • Create (model) a camouflage pattern for an animal living in a specific dry-land or water-related environment. (Relates to 3.6.) • Compare and contrast instinct and learned behavior. • Describe major water-related environments and examples of animals and plants that live in each. • Describe major dry-land environments and examples of animals and plants that live in each. • Compare and contrast water-related and dry-land environments. • Distinguish between a population and a community. 	
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	<p>herd of cattle in the grassland.</p> <ul style="list-style-type: none"> ✓ A <i>community</i> is all of the populations that live together in the same place. An example of a dry-land community would be a forest made up of trees, squirrels, worms, rabbits, and hawks. An example of a water-related community would be an ocean made up of fish, crabs, and seaweed. ✓ Organisms compete for the limited resources in their specific environment. 	<ul style="list-style-type: none"> • Explain how animals and plants use resources in their environment. • Analyze models or diagrams of different water-related environments in order to describe the community of organisms each contains and interpret how the organisms use the resources in that environment. • Analyze models or diagrams of different dry-land environments in order to describe the community of organisms each contains and interpret how the organisms use the resources in that environment. • Predict what would occur if a population in a specific environment were to die. 	
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SOCIAL STUDIES

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>Standard 3.7 The student will explain how producers in ancient Greece, Rome, and the West African empire of Mali used natural resources, human resources, capital resources in the production of goods and services.</p> <p>Standard: 3.8 The student will recognize that because people and regions cannot produce everything they want, they specialize in producing some things and trade for the rest.</p> <p>Standard: 3.9 The student will identify examples of making an economic choice and will explain the idea of opportunity cost (what is given up when making a choice).</p>	<ul style="list-style-type: none"> ✓ Resources are used to produce goods and services. ✓ Producers of goods and services are influenced by natural, human, and capital resources. ✓ Ancient Greece and Rome had access to the sea (natural resource), so they used their human and capital resources to produce ships(goods) which they used for transportation (service) in trading. ✓ Mali used human and capital resources to mine gold (natural resource). ✓ The students will use this standard to relate to selecting a pet for their home based on the type of habitat they would be able to provide for that animal. ✓ Economic decision-making requires comparing both the opportunity cost and the monetary cost of choices with the benefits. <p style="text-align: center;">Terms to know:</p> <ul style="list-style-type: none"> • <i>Economic choice:</i> The choice of or decision among alternatives or possibilities • <i>Opportunity cost:</i> The next best choice that is given up when a decision is made. • <i>Specialization</i> occurs when people focus on the production of selected goods and services. 	<ul style="list-style-type: none"> • Gather, classify, and interpret information. • Make decisions. • Explain cause-and-effect relationships. 	<ul style="list-style-type: none"> ➤ Why does an economic choice involve giving up something else? ➤ What are some of the goods and services produced in ancient Greece, Rome, and the West African empire of Mali? ➤ What are the resources (natural, human, capital) that were used to produce goods and services in ancient Greece, Rome and the West African empire of Mali.

Math

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.17The student will</p> <ul style="list-style-type: none"> a) collect and organize data, using observations, measurements, surveys, or experiments; b) construct a line plot, a picture graph, or a bar graph to represent the data; and c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data. 	<ul style="list-style-type: none"> ✓ Formulate questions to investigate. ✓ Design data investigations to answer formulated questions, limiting the number of categories for data collection to four. ✓ Collect data, using surveys, polls, questionnaires, scientific experiments, and observations. ✓ Construct a line plot with no more than 30 data points. ✓ Read, interpret and analyze information from line plots by writing at least one statement. ✓ Label each axis on a bar graph and give the bar graph a title. ✓ Investigate, understand, and apply basic concepts of probability. ✓ Understand that probability is the chance of an event happening. 	<ul style="list-style-type: none"> • Define probability as the chance that an event will happen. • List all possible outcomes for a given situation (e.g., heads and tails are the two possible outcomes of flipping a coin). • Identify the degree of likelihood of an outcome occurring using terms such as <i>impossible</i>, <i>unlikely</i>, <i>as likely as</i>, <i>equally likely</i>, <i>likely</i>, and <i>certain</i>. 	<ul style="list-style-type: none"> ➤ How can data be presented in a graph or table? ➤ How can we determine the probability of finding an animal in a particular habitat? ➤ What is the probability of finding a fish in the forest?

Reading

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.1 The student will use effective communication skills in group activities.</p> <ul style="list-style-type: none"> ❖ a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said. ❖ b) Ask and respond to questions from teachers and other group members. ❖ c) Explain what has been learned. <p>3.2 The student will present brief oral reports.</p> <ul style="list-style-type: none"> ❖ a) Speak clearly. ❖ b) Use appropriate volume and pitch. ❖ c) Speak at an understandable rate. ❖ d) Organize ideas sequentially or around major points of information. ❖ e) Use grammatically correct language and specific vocabulary to communicate ideas. <p>3.7 The student will demonstrate comprehension of information from a variety of print resources.</p>	<ul style="list-style-type: none"> ✓ participate effectively in group activities by taking turns in conversations and moving group discussions forward ✓ cluster or sequence information on a topic when presenting an oral report ✓ speak clearly at an understandable rate and volume. ✓ understand ways to select the best resource for gathering information on a given topic. 	<ul style="list-style-type: none"> • engage in taking turns in conversations by • making certain all group members have an opportunity to contribute • listening attentively by making eye contact while facing the speaker • eliciting information or opinions from others • supporting opinions with appropriate ideas, examples, and details • indicating disagreement in a constructive manner • take initiative in moving a group discussion forward by • contributing information that is on topic • answering questions • asking clarifying questions of the speaker • summarizing the conclusions reached in the discussion • explaining what has been learned. • deliver oral presentations in an engaging manner that maintains audience interest by: <ul style="list-style-type: none"> ◦ presenting information with expression and confidence ◦ varying tone, pitch, and volume to convey meaning ◦ using grammatically correct 	<ul style="list-style-type: none"> ➤ In what ways can you effectively capture the attention of audience? ➤ How can you make your presentation a learning experience for other students? ➤ How can using different resources help you find and gather information on different topics? ➤ What are some effective oral language practices? ➤

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<ul style="list-style-type: none"> ❖ a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials. ❖ b) Use available technology. 		<p>language</p> <ul style="list-style-type: none"> ◦ speaking at an understandable rate ◦ using specific vocabulary appropriate for the audience and the topic <ul style="list-style-type: none"> • stay on topic during presentations • organize ideas sequentially or around major points of information • answer questions from the audience • evaluate their own presentations, using class-designed criteria • make decisions about which resource is best for locating a given type of information • locate selected information in glossaries, dictionaries, thesauruses, encyclopedias, atlases, and other print and online reference materials • retrieve information from electronic sources • use the Internet to find information on a given topic • use a printer to create hard copies of information retrieved from electronic sources. 	
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Writing

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.9 The student will write descriptive paragraphs.</p> <ul style="list-style-type: none"> a) Develop a plan for writing. b) Focus on a central idea. c) Group related ideas. d) Include descriptive details that elaborate the central idea. e) Revise writing for clarity. <p>3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.</p> <ul style="list-style-type: none"> a) Use a variety of planning strategies. b) Organize information according to the type of writing. c) Identify the intended audience. d) Revise writing for specific vocabulary and information. e) Use available technology. <p>3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.</p> <ul style="list-style-type: none"> a) Use complete and varied sentences. b) Use the word <i>I</i> in compound 	<ul style="list-style-type: none"> ✓ Understand how to plan and compose a descriptive paragraph. ✓ Understand how to plan and compose stories, friendly letters, simple explanations, and short reports ✓ Understand that grammatically correct language and mechanics contribute to the meaning of writing. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • generate ideas and develop a plan for writing • focus on a central topic and group related ideas • select specific details of sight, sound, touch, taste, and smell in order to paint a verbal picture of a person, place, thing, or event • use examples from their reading as models to imitate in their writing • create verbal pictures, using precise nouns, verbs, and adjectives, that elaborate ideas within a sentence • describe events, ideas, and personal stories with accurate details and sequence • read their own writing orally to check for sentence rhythm (sentence variety) • select information that the audience will find interesting or entertaining • revise to eliminate details that do not develop the central idea • incorporate transitional (signal) 	<ul style="list-style-type: none"> ➤ In what ways can you organize your facts to make your information interesting and understandable for your audience? ➤ In what ways can technology enhance writing experiences? ➤ What are the steps to the writing process?

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<p>subjects.</p> <p>c) Use past and present verb tense.</p> <p>d) Use singular possessives.</p> <p>e) Use commas in a simple series.</p> <p>f) Use simple abbreviations</p> <p>g) Use apostrophes in contractions with pronouns.</p> <p>h) Use correct spelling for high-frequency sight words, including irregular plurals.</p> <p>3.12 The student will use available technology for reading and writing.</p>		<p>words that clarify sequence, such as <i>first</i>, <i>next</i>, and <i>last</i></p> <ul style="list-style-type: none"> • apply knowledge of the writing domains of composing, written expression, and usage/mechanics. • generate ideas and plan writing by: <ul style="list-style-type: none"> ◦ using ideas from class brainstorming activities ◦ making lists of information ◦ talking to classmates about what to write ◦ reading texts by peer and professional authors ◦ using a cluster diagram, story map, or other graphic organizer ◦ selecting an appropriate writing form for nonfiction writing (such as explanation, directions, simple report), expressive writing (such as narrative, reflection, and letter), and creative writing (such as fiction and poetry) • identify the intended audience • follow the organization of particular forms of writing for <ul style="list-style-type: none"> ◦ stories – beginning, middle, and end ◦ letters – date, greeting, body, and closing ◦ explanations – opening; information presented in a way to show the relationship of ideas, such as 	
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		<p>chronological order; and closing</p> <ul style="list-style-type: none">◦ short reports – opening, grouping of like information into clear paragraphs, ordering of paragraphs so that there is a logical flow of information, and closing <ul style="list-style-type: none">• clarify writing when revising by including specific vocabulary and information <p>-use available technology to write.</p> <ul style="list-style-type: none">• use complete sentences• use the word <i>I</i> in compound subjects• use past and present verb tenses• use singular possessives• use simple abbreviations• use correct spelling for frequently used words, including irregular plurals, e.g., <i>men, children</i>• punctuate correctly<ul style="list-style-type: none">◦ commas in a simple series <p>apostrophes in contractions with pronouns, e.g., <i>I'd, we've.</i></p>	
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References

VA DOE Science Enhanced Scope & Sequence

VA DOE History/ Social Science Enhanced Scope & Sequence

VA DOE Math Enhanced Scope & Sequence

Richmond City Public Schools Learning Portal

www.solpass.org

www.unitedstreaming.com

Quarterly Theme: How do our choices influence the future?
Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

ENVIRONMENT	<p>Standard 1: Ecological, Social, and Economic Systems</p> <p>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><u>Related Integrated Activities:</u></p> <p>Project Wet: <i>“Branching Out”</i></p> <ul style="list-style-type: none"> • <i>TSW predict where water will flow in watersheds.</i> • <i>TSW describe drainage patterns in watersheds.</i> <p><i>“Capture, Store and Release”</i></p> <ul style="list-style-type: none"> • <i>TSW recognize that ground water, surface water and precipitation can contribute water to wetlands.</i> • <i>TSW describe how wetlands capture, store and release water.</i> <p><i>“A-Maze-ing Water”</i></p> <ul style="list-style-type: none"> • <i>TSW describe urban forms of pollution.</i> • <i>TSW provide reasons why people should monitor what they put on their lawns or in streets.</i> • <i>TSW identify ways to treat urban runoff.</i> <p>Va. DOE Science Enhanced Scope & Sequence:</p> <ul style="list-style-type: none"> • 3.9c “A-Reservoiring” We Will Go • 3.9c “Aquatic Water” • 3.9a,b “Around and Around It Goes” • 3.9d “ Every Drop Count” • 3.9d “Pollution Perils” <p>Make an informational video of the James River watershed.</p> <p>Plant a class tree that is native to the environment.</p>
	<p>Standard 2: The Natural and Built Environment</p> <p>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</p> <p>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>	

Quarterly Theme: How do our choices influence the future?
Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

SCIENCE	<p>3.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which</p> <ul style="list-style-type: none"> a) observations are made and are repeated to ensure accuracy; b) predictions are formulated using a variety of sources of information; c) objects with similar characteristics or properties are classified into at least two sets and two subsets; d) natural events are sequenced chronologically; e) length, volume, mass, and temperature are estimated and measured in metric and standard English units using proper tools and techniques; f) time is measured to the nearest minute using proper tools and techniques; g) questions are developed to formulate hypotheses; h) data are gathered, charted, graphed, and analyzed; i) unexpected or unusual quantitative data are recognized; j) inferences are made and conclusions are drawn; k) data are communicated; l) models are designed and built; and m) current applications are used to reinforce science concepts <p>3.7 The student will investigate and understand the major components of soil, its origin, and its importance to plants and animals including humans. Key concepts include</p> <ul style="list-style-type: none"> a) soil provides the support and nutrients necessary for plant growth; b) topsoil is a natural product of subsoil and bedrock; c) rock, clay, silt, sand, and humus are components of soils; and d) soil is a natural resource and should be conserved. 	<p><i>PLT 70: "Soil Stories"</i></p> <ul style="list-style-type: none"> • TSW explore differences in soil types and what those differences mean to people and to plants. <p><i>PLT 79: "TreeLifecycle"</i></p> <ul style="list-style-type: none"> • TSW discover that trees have a lifecycle that is similar to that of other living things. • TSW investigate a tree's role in the ecosystem at each stage of its life. <p><i>Project Wet: "Imagine!"</i></p> <ul style="list-style-type: none"> • TSW identify changes in states of water that enable water to move through the water cycle. • TSW describe the water cycle. <p><i>VA DOE Science Enhanced Scope & Sequence</i></p> <p><i>"Digging In"</i></p> <ul style="list-style-type: none"> • TSW analyze and describe the different components of soil; • TSW comprehend the key terminology related to soil; • TSW see, interpret, and illustrate the major soil layers.
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Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

SCIENCE cont.

3.8 The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include

- a) patterns of natural events such as day and night, seasonal changes, simple phases of the moon, and tides;
- b) animal life cycles

3.9 The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include

- a) there are many sources of water on Earth;
- b) the energy from the sun drives the water cycle;
- c) the water cycle involves several processes;
- d) water is essential for living things

Related Integrated Objectives:

The student will:

- Determine the relationship between choices made today and the future.
- Make decisions that support sustaining the environment.
- Determine how choices impact the natural cycles of living things.

Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

SOCIAL STUDIES

3.1 The student will explain how the contributions of ancient Greece and Rome have influenced the present world in terms of architecture, government (direct and representative democracy), and sports.

3.3 The student will study the exploration of the Americas by
 a) describing the accomplishments of Christopher Columbus, Juan Ponce de León, Jacques Cartier, and Christopher Newport;
 b) identifying the reasons for exploring, the information gained, the results of the travels, and the impact of the travels on American Indians.

3.5 The student will develop map skills by
 d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de León (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia);
 e) locating specific place

3.10 The student will recognize the importance of government in the community, Virginia, and the United States of America by
 a) explaining the purpose of rules and laws;
 b) explaining that the basic purposes of government are to make laws, carry out laws, and decide if laws have been broken;
 c) explaining that government protects the rights and property of individuals, using a simple letter-number grid system.

3.12 The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.

Related Integrated Objectives:

- Use blank maps to locate each sponsoring European country and draw the exploration route of each explorer.
- Compare and contrast two different explorers' motivations and successes using a Venn Diagram.
- Create a graphic organizer of the different explorers.
- Investigate the impact of Earth's cycles on the explorers' voyages.
- Determine how the choices made in the past impact the future.
- Investigate the impact our choice today has on the James River Watershed.
- Explain how the contributions of the ancient civilizations impact our present.
- Recognize the historical contributions to government.

Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

READING

- 3.1** The student will use effective communication skills in group activities.
- a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said.
 - b) Ask and respond to questions from teachers and other group members.
 - c) Explain what has been learned.
- 3.2** The student will present brief oral reports using visual media.
- a) Speak clearly.
 - b) Use appropriate volume and pitch.
 - c) Speak at an understandable rate.
 - d) Organize ideas sequentially or around major points of information.
 - e) Use contextually appropriate language and specific vocabulary to communicate ideas.
- 3.3** The student will apply word-analysis skills when reading.
- a) Use knowledge of regular and irregular vowel patterns.
 - b) Decode regular multisyllabic words.
- 3.4** The student will expand vocabulary when reading.
- a) Use knowledge of homophones.
 - b) Use knowledge of roots, affixes, synonyms, and antonyms.
 - c) Apply meaning clues, language structure, and phonetic strategies.
 - d) Use context to clarify meaning of unfamiliar words.
 - e) Discuss meanings of words and develop vocabulary by listening and reading a variety of texts.
 - f) Use vocabulary from other content areas.

Anchor Text Bibliography:

Novel Study: (suggested)

“Class Clown” by Johanna Hurwitz

“Love Your World : How to Take Care of the Plants, the Animals, and the Planet” by Dawn Sirett

“The Adventures of a Plastic Bottle: A Story about Recycling” by Alison Inches and Pete Whitehead

“The Lorax” by Dr.Seuss

“Just a Dream” by Chris Van Allsburg

READING Continued

3.5 The student will read and demonstrate comprehension of fictional text and poetry.

- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author's purpose.
- f) Ask and answer questions about what is read.
- g) Draw conclusions about text.
- h) Identify the problem and solution.
- i) Identify the main idea.
- j) Identify supporting details.
- k) Use reading strategies to monitor comprehension throughout the reading process.
- l) Differentiate between fiction and nonfiction.
- m) Read with fluency and accuracy.

3.6 The student will continue to read and demonstrate comprehension of nonfiction texts.

- a) Identify the author's purpose.
- b) Use prior and background knowledge as context for new learning.
- c) Preview and use text features.
- j) Use reading strategies to monitor comprehension throughout the reading process.
- k) Identify new information gained from reading.
- l) Read with fluency and accuracy.

3.7 The student will demonstrate comprehension of information from a variety of print and electronic resources.

- a) Use encyclopedias and other reference books, including online reference materials.
- b) Use table of contents, indices, and charts.

Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

WRITING

3.8 The student will write legibly in cursive.

3.9 The student will write for a variety of purposes.

- a) Identify the intended audience.
- b) Use a variety of prewriting strategies.
- c) Write a clear topic sentence focusing on the main idea.
- d) Write a paragraph on the same topic.
- e) Use strategies for organization of information and elaboration according to the type of writing.
- g) Revise writing for clarity of content using specific vocabulary and information.

3.10 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.

- a) Use complete sentences.
- b) Use transition words to vary sentence structure.
- e) Use singular possessives.
- h) Use apostrophes in contractions with pronouns and in possessives.
- j) Use correct spelling for frequently used sight words, including irregular plurals.

3.11 The student will write a short report.

- a) Construct questions about the topic.
- b) Identify appropriate resources.
- c) Collect and organize information about the topic into a short report.
- d) Understand the difference between plagiarism and using own words.

Related Inquiry Unit Texts:

“The Discovery of the Americas” by Betsy Maestro

Related Integrated Activities:

The student will:

- Write pen pal letters describing their environment and the choices they are making to protect the environment.
- Create a research report on a specific explorer.
- Write a chapter book about the European explorers. Each chapter will highlight the life of one explorer.
- Write rules and laws for their imaginary community.

Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

MATHEMATICS

3.9 The student will estimate and use U.S. Customary and metric units to measure

- a) length to the nearest $\frac{1}{2}$ -inch, inch, foot, yard, centimeter, and meter;
- b) liquid volume in cups, pints, quarts, gallons, and liters;
- c) weight/mass in ounces, pounds, grams, and kilograms; and
- d) area and perimeter.

3.12 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.

3.17 The student will

- a) collect and organize data, using observations, measurements, surveys, or experiments;
- b) construct a line plot, a picture graph, or a bar graph to represent the data; and
- c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

Related Integrated Activities:

The student will:

- Organize data collected during experiment in charts and tables.
- Use measurement skill to collect data on their environment.
- Measure the amount of water evaporated in a cup water and compare it to the water cycle.
- Measure the area and perimeter of the third grade garden
- Identify equivalent time periods in relation to earth cycle (*i.e. days in month, year*).

Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

ART

3.3 The student will develop art ideas from a variety of sources, including print, non-print, and technology.

3.10 The student will produce a work of art that communicates feelings.

3.11 The student will create a work of art in clay, using the coil-building process.

Related Integrated Objectives:

- TSW communicate feelings about human interaction with the environment in the form of visual art.
- TSW use clay to create a model that displays learning.

Related Integrated Activities:

The students will:

- Design a stamp or postcard featuring an explorer.
- Create a collage that expresses feelings about human interaction with the environment.
- Draw and label a map of Reedy Creek/ Forest Hill Park.
- Use clay to create models of the phases of the moon.

Quarterly Theme: How do our choices influence the future?

Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

MUSIC

3.1 The student will sing a repertoire of songs in tune with a clear tone quality.

1. Sing melodies within the range of an octave.
2. Perform in a two-part music ensemble.
3. Accompany singing with rhythm and/or melody instruments.
4. Use music terminology to interpret a music selection.

3.4 The student will respond to music with movement.

1. Perform line and circle dances.
2. Perform dances and games from various cultures.
3. Dramatize songs, stories, and poems.
4. Perform choreographed and non-choreographed movements.

3.7 The student will create music through a variety of experiences.

1. Create accompaniments and ostinatos for songs and chants.
2. Create movement to illustrate meter and form.
3. Create lyrics to familiar melodies.
4. Create new verses to songs.

Related Integrated Objectives:

The student will:

- Explore music genres from diverse cultures.
- Create lyrics about cycles in nature.
- Sing various songs.

Related Integrated Activities:

The student will:

- Sing the Explorers' Songs (*Va DOE Enhanced Scope and Sequence*).
- Listen to compare music from the ancient civilizations.

Quarterly Theme: How do our choices influence the future?
Third Grade Essential Question: How did the geography of the James River Watershed shape our culture?

Standards of Learning:

HEALTH & PE	<p>3.5 The student will explain that customs and traditions may impact community health decisions. Key concepts/skills include</p> <ul style="list-style-type: none"> a) dietary customs and practices; b) recreational activities; c) celebrations and traditions. <p>3.2 The student will use decision-making skills to promote health and personal wellness. Key concepts/skills include</p> <ul style="list-style-type: none"> a) goal setting for personal health; b) the process of resolving conflicts peacefully; c) strategies for solving problems related to health. <p>3.3 The student will identify the effects of drugs, alcohol, tobacco, and other harmful substances on personal health. Key concepts/skills include</p> <ul style="list-style-type: none"> a) improper use of medicines; b) the use of refusal skills to counter negative influences; c) the effects of nicotine, alcohol, and other drugs on body systems; d) the use of common household items as inhalants; e) the effects of mind-altering drugs on behavior. 	<p><u>Related Integrated Objectives:</u></p> <p>The student will:</p> <ul style="list-style-type: none"> • Recognize how food choices impact health. • Compare dietary customs of various diverse cultures. • Determine the importance of salt to the people of the ancient empire of Mali. <p><u>Related Integrated Activities:</u></p> <p>The students will:</p> <ul style="list-style-type: none"> • Create a week long menu that reflects healthy choices. • Make fitness goals and work toward completion. • Create posters about the impact of drugs, alcohol, tobacco and harmful substances on personal health.
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INSTRUCTIONAL ELEMENTS

Key Vocabulary	Instructional Strategies	Instructional Materials	Technology
<p><u>Science</u> conservation disease erosion fire flood interdependency naturalevents survival resource renewal adult axis cycle first quarter full moon gravity life cycle moon phases nature new moon organism pattern revolve rotate seasons seed sequence tide tilt</p>	<ul style="list-style-type: none"> • Integrating content into • Language Arts activities • Author/Illustrator studies • Literature Circles • Experiential learning (project-based) • Direct instruction • Small Group • Reflective discussions • Comparing/contrasting • Peer partner editing • Inquiry based learning 	<ul style="list-style-type: none"> • <i>Virginia Naturally: Linking Virginians to the Environment.</i> http://www.vanaturally.com/. (Offers environmental resources for teachers) • 	<ul style="list-style-type: none"> • http://www.epa.gov/recyclecity/mainmap.htm • United Streaming • Brain Pop • www.solpass.org • www.readinga-z.com • http://www.projectwild.org/ • http://www.rockingham.k12.va.us/resources/elementary/ • http://geographyworldonline.com/mapgames.html <p style="text-align: center;"><u>Fieldtrips</u></p> <ul style="list-style-type: none"> • Jamestown Settlement • Lewis Ginter Botanical Gardens • Tredegar Ironworks “River Walks” tour

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<p><u>Social Science</u> explorer America European Jamestown Spain France ChristopherColumbus ChristopherNewport Juan Ponce de Leon Jacques Cartier</p>			
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INQUIRY PROJECT & CULMINATING ACTIVITY

Goal:

The third grade classes will work together to research How the geography of the James River Watershed shaped our culture. Then plan and execute a 3-D or life like model of an Earth cycle studied in class.

Elements:

- a) The students will choose an Earth cycle from those discussed in class to create a 3-D/life like model or presentation. The cycles include: water, phases of the moon, tides, and the life cycles of a plant, frog, or butterfly.
- b) The students will research and gather information on each stage of the Earth cycles studied in class.
- c) The students will collect materials to represent each phase of the cycle they choose which will be used as part of their model.
- d) The students will correctly sequence each stage of the cycle they are representing and present their model to the class and display for school viewing.
- e) Students will provide a written presentation to assist with their explanation of the Earth cycle.
- f) Students will identify how the cycle affects the James River watershed in their written presentation.

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"> ✓ People have to make choices between wants and needs ✓ Economic systems are influenced by laws, values and customs ✓ Geography, natural resources, climate and available labor contribute to the sustainability of the economy in Virginia ✓ Technology and ideas affect the way people lived and changed their values, beliefs, and attitudes in the past. 	<ul style="list-style-type: none"> • TSW explore differences in soil types and what those differences mean to people and to plants • TSW predict where water will flow in watersheds. • TSW describe drainage patterns in watersheds. • TSW describe urban forms of pollution. • TSW provide reasons why people should monitor what they put on their lawns or in streets. • TSW identify ways to treat urban runoff. • TSW recognize that ground water, surface water and precipitation can contribute water to wetlands. • TSW describe how wetlands capture, store and release water. 	<ul style="list-style-type: none"> ➤ How does choice made by people impact the environment? ➤ What impact do drainage patterns have on the watershed? ➤ How is the Reedy Creek related to the James River? ➤ What larger bodies of water are affected by the James River? ➤ What role does the government play in the sustainability of the environment? ➤ How do choices made today impact the future?

SCIENCE

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.1 The student will plan and conduct investigations in which</p> <p>a.) predictions and observations are made; b.) objects with similar characteristics are classified into at least two sets and two subsets; c.) questions are developed to formulate hypotheses; j.) inferences are made and conclusions are drawn;</p> <p>3.7 The student will investigate and understand the major components of soil, its origin, and its importance to plants and animals including humans. Key concepts include: a) soil provides the support and nutrients necessary for plant growth; b) topsoil is a natural product of subsoil and bedrock;</p>	<ul style="list-style-type: none"> ✓ Complete observations are made using all of the senses. Simple instruments can help extend the senses. ✓ Predictions are statements of what is expected to happen in the future based on past experiences and observations. ✓ It is sometimes useful to organize objects according to similarities and differences. By organizing objects in sets and subsets, it may be easier to determine a specific type of characteristic. ✓ An inference is a conclusion based on evidence. ✓ A cycle is a repeated pattern. A sequence is a series of events that occur in a natural order. ✓ Soil is important because many plants grow in soil, and it provides support and nutrients for the plants. ✓ Over many years, weather, water, and living organisms help break down rocks and create soil (weathering). ✓ Nutrients are materials that plants and animals need to live and grow. 	<ul style="list-style-type: none"> • Make and communicate careful observations. • Classify objects into at least two major sets and subsets based on similar characteristics, such as predator/prey and herbivore, carnivore, and omnivore • Develop hypotheses from simple questions. These questions should be related to the concepts in the third grade standards. Hypotheses should be stated in terms such as: “If an object is cut into smaller pieces, then the physical properties of the object and its smaller pieces will remain the same.” • Analyze and describe the different components of soil, including rock fragments, clay, silt, sand, and humus. • Explain how soil forms over time. • Design an investigation to compare how different types of soil affect plant growth. This includes organizing data in tables and constructing simple graphs. 	<ul style="list-style-type: none"> ➤ What impact do the Earth’s cycles have on the of future? ➤ What impact do human choices have on the environment? ➤ How is the earth’s water affected by the choices of human beings? ➤ What water conservation practices impact the future? ➤ Why is it important to conserve soil? ➤ How do people, plants and animals benefit from soil? ➤ How do people act in harmful ways to soil?

c) rock, clay, silt, sand, and humus are components of soils; and
 d) soil is a natural resource and should be conserved.

Standard 3.8
The student will investigate and understand basic patterns and cycles occurring in nature.

Key concepts include:

- a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides); and
- b) animal and plant life cycle

- ✓ Rock, clay, silt, sand, and humus are components of soil.
- ✓ Topsoil is the upper soil surface and a natural product of subsoil and bedrock. Topsoil is best for plant growth.
- ✓ Subsoil and bedrock are layers of soil under the topsoil that are formed over a long period of time by the action of water.
 Subsoil and bedrock are not as good for growing plants as is topsoil.
- ✓ Humus is decayed matter in soil. It adds nutrients to the soil. It is located in the topsoil.
- ✓ Clay contains tiny particles of soil that hold water well and provides nutrients.
- ✓ Sand is made up of small grains of worn-down rock, has few nutrients, and does not hold water well.
- ✓ Silt is made up of very small broken pieces of rock. Its particles are larger than clay and smaller than sand.
- ✓ Since soil takes a long time to form, it should be conserved, not wasted.
- ✓ The pattern of day and night is caused by the rotation of the Earth. One complete rotation occurs every 24 hours. The part of the Earth toward the sun has daylight while the part of the Earth away from the sun has night.
- ✓ The pattern of seasonal changes takes place because the Earth's axis is tilted toward or away from the sun during its revolution around the sun. The Earth takes 365 days, or one year, to make one revolution.
- ✓ The cycle of phases of the moon

- Collect, chart, and analyze data on soil conservation on the school grounds.
- Evaluate the importance of soil to people.
- Describe how soil can be conserved
- Make and communicate predictions about the outcomes of investigations.
- Explain how some events in nature occur in a pattern or cycle, such as the seasons, day and night, phases of the moon, tides, and life cycles.
- Recognize that the relationships that exist between and among the Earth, sun, and moon result in day and night, seasonal changes, phases of the moon, and the tides.
- Model and describe how the Earth's rotation causes day and night.
- Model and describe how the sun's rays strike the Earth to cause seasons.
- Observe, chart, and illustrate phases of the moon, and describe the changing pattern of the moon as it revolves around the Earth.
- Analyze data from simple tide tables to determine a pattern of high and low tides.
- Explain the pattern of growth and change that organisms, such as the butterfly and frog, undergo during their life cycle.

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<p>Standard 3.9 The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include a) the energy from the sun drives the water cycle; b) processes involved in the water cycle (evaporation, condensation, precipitation); c) water is essential for living things; and d) water supply and water conservation.</p>	<p>occurs as the moon makes one revolution around the Earth. The shapes we see follow a pattern.</p> <ul style="list-style-type: none"> ✓ The tides follow a pattern of two high and two low tides every 24 hours. This pattern is caused for the most part by the gravitational attraction between the Earth and the moon. ✓ Plants and animals undergo life cycles. For example, frogs begin as eggs in water. The eggs grow into tadpoles, the tadpoles eventually become frogs, and the adult frogs lay eggs to start the life cycle over again. In the plant life cycle, a seed grows into a new plant that forms seeds. Then the new seeds repeat the life cycle. ✓ The water cycle is the movement of water from the ground to the air and back to the ground by evaporation, condensation, and precipitation. The energy that drives this cycle comes from the sun. ✓ During the water cycle, liquid water is heated and changed to a gas (evaporation). The gas is cooled and changed back to a liquid (condensation). A liquid or a solid falls to the ground as precipitation. ✓ Our water supply on Earth is limited. Pollution reduces the amount of usable water; therefore, the supply should be conserved carefully. ✓ To understand how the moon phases and tides would affect the travel of explorers due to the positioning of the moon and high and low tides 	<ul style="list-style-type: none"> • Identify the sun as the origin of energy that drives the water cycle. • Describe the processes of evaporation, condensation, and precipitation as they relate to the water cycle. • Construct and interpret a model of the water cycle. • Identify major water sources for a community, including rivers, reservoirs, and wells. Describe the major water sources for the local community. • Explain methods of water conservation in the home and school. • Analyze possible sources of water pollution in their neighborhoods, at school, and in the local community. This includes runoff from over-fertilized lawns and fields, oil from parking lots, eroding soil, and animal waste. • Appraise the importance of water to people and to other living things. • Realize living things get water from the environment in different ways. 	
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SOCIAL STUDIES

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.1 The student will explain how the contributions of ancient Greece and Rome have influenced the present world in terms of architecture, government (direct and representative democracy), and sports.</p> <p>3.3) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de León (near St. Augustine, Florida), Jacques Cartier (near Québec, Canada), and Christopher Newport (Jamestown, Virginia);</p> <p>3.5 The student will develop map skills by d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de León (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia); e) locating specific place</p>	<ul style="list-style-type: none"> ✓ The ancient Greeks and Romans were two groups of people who made significant contributions to society in terms of architecture, government, and sports. ✓ The ancient Greeks and Romans have influenced the lives of people today ✓ The first explorers had different motivations, had different sponsors, and met different successes ✓ Due to European explorations, American Indians experienced changes to their cultures and environment. ✓ There are seven continents and five oceans located in the world. ✓ The equator and the prime meridian divide the globe into four hemispheres. ✓ The four hemispheres are Northern, Southern, Eastern, and Western. ✓ A simple letter-number grid system on maps is used to locate places 	<ul style="list-style-type: none"> • The physical shapes of the continents (North America, South America, Europe, Asia, Africa, Australia, Antarctica) and the positions of the five oceans (Arctic, Atlantic, Indian, Pacific, and Southern) may be located on a world map. • Locate places on a grid system. • Identify and locate continents, oceans, and major features on maps and globes. • Draw maps of familiar areas. • Locate places on a grid system. • Identify and locate continents, oceans, and major features on maps and globes. 	<ul style="list-style-type: none"> ➤ What styles in architecture used today came from ancient Greece and Rome? ➤ What principles of government from ancient Greece and Rome are parts of our government? ➤ What sporting events today came from ancient Greece? ➤ What is the location of each ocean and which ocean did each explorer cross during their journey? ➤ How would the position of the oceans affect the travel plans of early explorers? ➤ How did explorers determine the best time of year for travel? ➤ Who were some of the important European explorers from Spain, England, and France? ➤ What were the different motivations of these early European explorers? ➤ What were the successes of these early European explorers? ➤ What were the effects of European explorations on American Indians?

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<p>3.10 The student will recognize the importance of government in the community, Virginia, and the United States of America by a) explaining the purpose of rules and laws; b) explaining that the basic purposes of government are to make laws, carry out laws, and decide if laws have been broken; c) explaining that government protects the rights and property of individuals, using a simple letter-number grid system.</p> <p>3.12 The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.</p>	<ul style="list-style-type: none"> ✓ Governments protect the rights and property of individuals. ✓ Governments exist at the local (community), state (Virginia), and national (United States) levels. ✓ The American people come from diverse ethnic and national origins and are united as Americans by basic American principles. ✓ Being an American is defined by the shared basic principles of the republican form of government. 	<ul style="list-style-type: none"> • Compare and contrast differing sets of ideas, values, personalities, behaviors, and institutions. • Explain cause and effect relationships • Differentiate between points of view by self and others. • Participate in groups and democratic society. • Make generalizations about data 	<ul style="list-style-type: none"> ➤ Where are the seven continents and the five oceans located on a world map? ➤ What imaginary lines are used to define hemispheres? ➤ What are the names of the four hemispheres? ➤ On which continents are England, Spain, France, and the United States located? ➤ Where are the countries of England, Spain, and France located on a world map? ➤ Where are the regions (general areas) of San Salvador in the Bahamas; St. Augustine, Florida; Québec, Canada; and Jamestown, Virginia, located on a map? ➤ How is a simple letter-number grid system used to locate places on maps? ➤ What is government? ➤ What are the basic purposes of government? ➤ Why is government necessary? ➤ What unites the people of the United States? ➤ What are some benefits of diversity in the United States?
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Math

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.9 The student will estimate and use U.S. Customary and metric units to measure</p> <p>a) length to the nearest 1/2 -inch, inch, foot, yard, centimeter, and meter;</p> <p>b) liquid volume in cups, pints, quarts, gallons, and liters;</p> <p>c) weight/mass in ounces, pounds, grams, and kilograms; and</p> <p>d) area and perimeter.</p> <p>3.12 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.</p>	<ul style="list-style-type: none"> ✓ Understand the relationship that exists among periods of time, using calendars and clocks. ✓ Understand how data can be collected and organized. ✓ Understand that data can be displayed in different types of graphs depending on the data. ✓ Understand how to construct a line plot, picture graph, or bar graph. ✓ Understand that data sets can be interpreted and analyzed to draw conclusions. ✓ Understand how to estimate measures of length, liquid volume, weight/mass, area and perimeter. ✓ Understand how to determine the actual measure of length, liquid volume, weight/mass, area and perimeter. ✓ Understand that perimeter is a measure of the distance around a polygon. ✓ Understand that area is a measure of square units needed to cover a surface. 	<ul style="list-style-type: none"> • Construct a line plot with no more than 30 data points. • Read, interpret and analyze information from line plots by writing at least one statement. • Label each axis on a bar graph and give the bar graph a title. • Limit increments on the numerical axis to whole numbers representing multiples of 1, 2, 5, or 10. • Read the information presented on a simple bar or picture graph (e.g., the title, the categories, the description of the two axes). • Analyze and interpret information from picture and bar graphs, with up to 30 data points and up to 8 categories, by writing at least one 	<ul style="list-style-type: none"> ➤ What is the perimeter of the third grade garden? ➤ How many days are in one year? ➤ How many minutes are in an hour? ➤ How long does it take the earth to revolve around the sun? ➤ How far apart should seeds be planted for maximum growth? ➤ How do days relate to months, years? ➤ What are the parts of a graphs? ➤ How can tables, charts and graphs be used to convey data?

<p>3.17 The student will a) collect and organize data, using observations, measurements, surveys, or experiments; b) construct a line plot, a picture graph, or a bar graph to represent the data; and c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.</p>			
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Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.1 The student will use effective communication skills in group activities. a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said. b) Ask and respond to questions from teachers and other group members. c) Explain what has been learned.</p> <p>3.2 The student will present brief oral reports. a) Speak clearly. b) Use appropriate volume and pitch. c) Speak at an understandable rate. d) Organize ideas sequentially or around major points of information. e) Use grammatically correct language and specific vocabulary to communicate ideas.</p> <p>3.3 The student will apply word-analysis skills when reading. a) Use knowledge of regular and irregular vowel patterns. b) Decode regular multisyllabic words.</p> <p>3.4 The student will expand vocabulary when reading. a) Use knowledge of homophones. b) Use knowledge of roots, affixes, synonyms, and</p>	<ul style="list-style-type: none"> ✓ participate effectively in group activities by taking turns in conversations and moving group discussions forward ✓ cluster or sequence information on a topic when presenting an oral report ✓ speak clearly at an understandable rate and volume. ✓ understand ways to select the best resource for gathering information on a given topic. 	<ul style="list-style-type: none"> • Engage in taking turns in conversations by • Make certain all group members have an opportunity to contribute • Listen attentively by making eye contact while facing the speaker • Elicit information or opinions from others • Support opinions with appropriate ideas, examples, and details • Indicate disagreement in a constructive manner • Take initiative in moving a group discussion forward by • Contribute information that is on topic • Answer questions • Ask clarifying questions of the speaker • Summarize the conclusions reached in the discussion • Explain what has been learned. • Deliver oral presentations in an engaging manner that maintains audience interest by <ul style="list-style-type: none"> ◦ presenting information with expression and confidence ◦ varying tone, pitch, and volume to convey meaning ◦ using grammatically correct language ◦ speaking at an understandable rate ◦ using specific vocabulary appropriate for the audience and the topic 	<ul style="list-style-type: none"> ➤ In what ways can you effectively capture the attention of audience? ➤ How can you make your presentation a learning experience for other students? ➤ How can using different resources help you find and gather information on different topics? ➤ How can ideas be organized around major points of information? ➤ What verbal skills promote effective oral communication? ➤ How can informative print be used to research a given topic? ➤ How does technology impact research?

<p>antonyms. c) Apply meaning clues, language structure, and phonetic strategies. d) Use context to clarify meaning of unfamiliar words. e) Discuss meanings of words and develop vocabulary by listening and reading a variety of texts. f) Use vocabulary from other content areas.</p> <p>3.5 The student will read and demonstrate comprehension of fictional text and poetry.</p> <p>a) Set a purpose for reading. b) Make connections between previous experiences and reading selections. c) Make, confirm, or revise predictions. d) Compare and contrast settings, characters, and events. e) Identify the author’s purpose. f) Ask and answer questions about what is read. g) Draw conclusions about text. h) Identify the problem and solution. i) Identify the main idea. j) Identify supporting details. k) Use reading strategies to monitor comprehension throughout the reading process. l) Differentiate between fiction and nonfiction. m) Read with fluency and accuracy.</p> <p>3.6 The student will continue to read and demonstrate comprehension of nonfiction</p>		<ul style="list-style-type: none"> • Stay on topic during presentations • Organize ideas sequentially or around major points of information • Answer questions from the audience • Evaluate their own presentations, using class-designed criteria • Make decisions about which resource is best for locating a given type of information • Locate selected information in glossaries, dictionaries, thesauruses, encyclopedias, atlases, and other print and online reference materials • Retrieve information from electronic sources • Use the Internet to find information on a given topic • Use a printer to create hard copies of information retrieved from electronic sources. 	
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<p>texts.</p> <ul style="list-style-type: none"> a) Identify the author’s purpose. b) Use prior and background knowledge as context for new learning. c) Preview and use text features. j) Use reading strategies to monitor comprehension throughout the reading process. k) Identify new information gained from reading. l) Read with fluency and accuracy. <p>3.7 The student will demonstrate comprehension of information from a variety of print resources.</p> <ul style="list-style-type: none"> a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials. b) Use available technology. 			
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Writing

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.9 The student will write descriptive paragraphs.</p> <p>a) Develop a plan for writing.</p> <p>b) Focus on a central idea.</p> <p>c) Group related ideas.</p> <p>d) Include descriptive details that elaborate the central idea.</p> <p>e) Revise writing for clarity.</p> <p>3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.</p> <p>a) Use a variety of planning strategies.</p> <p>b) Organize information according to the type of writing.</p> <p>c) Identify the intended audience.</p> <p>d) Revise writing for specific vocabulary and information.</p> <p>e) Use available technology.</p> <p>3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.</p>	<ul style="list-style-type: none"> ✓ Understand how to plan and compose a descriptive paragraph. ✓ Understand how to plan and compose stories, friendly letters, simple explanations, and short reports ✓ Understand that grammatically correct language and mechanics contribute to the meaning of writing. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • generate ideas and develop a plan for writing • focus on a central topic and group related ideas • select specific details of sight, sound, touch, taste, and smell in order to paint a verbal picture of a person, place, thing, or event • use examples from their reading as models to imitate in their writing • create verbal pictures, using precise nouns, verbs, and adjectives, that elaborate ideas within a sentence • describe events, ideas, and personal stories with accurate details and sequence • read their own writing orally to check for sentence rhythm (sentence variety) • select information that the audience will find interesting or entertaining • revise to eliminate details that do not develop the central idea • incorporate transitional (signal) words that clarify sequence, such as <i>first</i>, <i>next</i>, and <i>last</i> • apply knowledge of the writing 	<ul style="list-style-type: none"> ➤ In what ways can you organize your facts to make your information interesting and understandable for your audience? ➤ What are the steps in the writing process? ➤ How can writing support communication with students in other communities?

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<p>a) Use complete and varied sentences.</p> <p>b) Use the word <i>I</i> in compound subjects.</p> <p>c) Use past and present verb tense.</p> <p>d) Use singular possessives.</p> <p>e) Use commas in a simple series.</p> <p>f) Use simple abbreviations</p> <p>g) Use apostrophes in contractions with pronouns.</p> <p>h) Use correct spelling for high-frequency sight words, including irregular plurals.</p>		<p>domains of composing, written expression, and usage/mechanics.</p> <ul style="list-style-type: none"> • generate ideas and plan writing by <ul style="list-style-type: none"> ◦ using ideas from class brainstorming activities ◦ making lists of information ◦ talking to classmates about what to write ◦ reading texts by peer and professional authors ◦ using a cluster diagram, story map, or other graphic organizer ◦ selecting an appropriate writing form for nonfiction writing (such as explanation, directions, simple report), expressive writing (such as narrative, reflection, and letter), and creative writing (such as fiction and poetry) • identify the intended audience • follow the organization of particular forms of writing for <ul style="list-style-type: none"> ◦ stories – beginning, middle, and end ◦ letters – date, greeting, body, and closing ◦ explanations – opening; information presented in a way to show the relationship of ideas, such as chronological order; and closing ◦ short reports – opening, grouping of like information into clear paragraphs, 	
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		<p>ordering of paragraphs so that there is a logical flow of information, and closing</p> <ul style="list-style-type: none">• clarify writing when revising by including specific vocabulary and information use available technology to write.• use complete sentences• use the word <i>I</i> in compound subjects• use past and present verb tenses• use singular possessives• use simple abbreviations• use correct spelling for frequently used words, including irregular plurals, e.g., <i>men, children</i>• punctuate correctly<ul style="list-style-type: none">◦ commas in a simple series◦ apostrophes in contractions with pronouns, e.g., <i>I'd, we've.</i>	
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Patrick Henry School of Science and Arts Third Grade Third Quarter Curriculum Plan
References

VA DOE Science Enhanced Scope & Sequence

VA DOE History/ Social Science Enhanced Scope & Sequence

VA DOE Math Enhanced Scope & Sequence

Richmond City Public Schools Learning Portal

www.solpass.org

www.unitedstreaming.com

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

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 72 “ Air We Breathe”

- TSW identify various types of indoor air pollutants and their sources.
- TSW understand how various pollutants can be harmful to people’s health.
- TSW take action to improve indoor air quality.

PLT 73 “ Waste Watchers”

- TSW identify ways to save energy in their daily lives.
- TSW explain how saving energy can reduce air pollution.

PLT 87 “Earth Manners”

- TSW express appropriate ways to treat living things and to act in forests, parks, and other natural areas.
- TSW express their own rules for proper manners when outside.

VA DOE Enhanced Scope &Sequence

- “Riparian Buffers”
- “A River Runs Through It”
- “Who Killed SAV”

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

SCIENCE

3.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which

- a) observations are made and are repeated to ensure accuracy;
- b) predictions are formulated using a variety of sources of information;
- c) objects with similar characteristics or properties are classified into at least two sets and two subsets;
- d) natural events are sequenced chronologically;
- e) length, volume, mass, and temperature are estimated and measured in metric and standard English units using proper tools and techniques;
- f) time is measured to the nearest minute using proper tools and techniques;
- g) questions are developed to formulate hypotheses;
- h) data are gathered, charted, graphed, and analyzed;
- i) unexpected or unusual quantitative data are recognized;
- j) inferences are made and conclusions are drawn;
- k) data are communicated

3.10 The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include

- a) the interdependency of plants and animals;
- b) the effects of human activity on the quality of air, water, and habitat;
- c) the effects of fire, flood, disease, and erosion on organisms; and
- d) conservation and resource renewal.

3.11 The student will investigate and understand different sources of energy. Key concepts include

- a) energy from the sun;
- b) sources of renewable energy; and
- c) sources of nonrenewable energy.

Related Environmental Objectives:

The student will:

- Identify the human impact on the environment.
- Describe and give examples of a healthy community.
- Identify natural events that impact a healthy community.
- Identify ways to conserve energy

Quarterly Theme: How do we contribute to a healthy community?
Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

SOCIAL STUDIES

- 3.5 The student will develop map skills by**
 a) positioning and labeling the seven continents and five oceans to create a world map;
 b) using the equator and prime meridian to identify the Northern, Southern, Eastern, and Western Hemispheres;
 c) locating the countries of Spain, England, and France;
 d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de León (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia);
 e) locating specific places, using a simple letter-number grid system.
- 3.6 The student will read and construct maps, tables, graphs, and/or charts.**
- 3.11 The student will explain the importance of the basic principles that form the foundation of a republican form of government by**
 a) describing the individual rights to life, liberty, and the pursuit of happiness; and equality under the law;
 b) identifying the contributions of George Washington; Thomas Jefferson; Abraham Lincoln; Rosa Parks; Thurgood Marshall; Martin Luther King, Jr.; and Cesar Chavez;
 c) recognizing that Veterans Day and Memorial Day honor people who have served to protect the country’s freedoms,
 d) describing how people can serve the community, state, and nation.

Related Integrated Objectives:

- The student will:
- Recognize the impact ancient civilizations had on their environment
 - Identify natural resource used by the ancient civilizations that were available because of their environment
 - Explain how the historical people of SOL 3.11 support sustaining healthy environments

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standard of Learning:

READING

3.1 The student will use effective communication skills in group activities.

- a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said.
- b) Ask and respond to questions from teachers and other group members.
- c) Explain what has been learned.

3.2 The student will present brief oral reports using visual media.

- a) Speak clearly.
- b) Use appropriate volume and pitch.
- c) Speak at an understandable rate.
- d) Organize ideas sequentially or around major points of information.
- e) Use contextually appropriate language and specific vocabulary to communicate ideas.

3.3 The student will apply word-analysis skills when reading.

- a) Use knowledge of regular and irregular vowel patterns.
- b) Decode regular multisyllabic words.

3.4 The student will expand vocabulary when reading.

- a) Use knowledge of homophones.
- b) Use knowledge of roots, affixes, synonyms, and antonyms.
- c) Apply meaning clues, language structure, and phonetic strategies.
- d) Use context to clarify meaning of unfamiliar words.
- e) Discuss meanings of words and develop vocabulary by listening and reading a variety of texts.
- f) Use vocabulary from other content areas.

Anchor Text Bibliography:

- Suggested Novel Study:
“Tales of the Fourth Grade Nothing” by Judy Blume
- Biographical Text
- The Lorax by Dr. Seuss
- www.readinga-z.com
- Resource Materials:
Thesaurus
Dictionary
Encyclopedia
Worldwide Web

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

READING continued

3.5 The student will read and demonstrate comprehension of fictional text and poetry.

- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author's purpose.
- f) Ask and answer questions about what is read.
- g) Draw conclusions about text.
- h) Identify the problem and solution.

3.6 The student will continue to read and demonstrate comprehension of nonfiction texts.

- a) Identify the author's purpose.
- b) Use prior and background knowledge as context for new learning.
- c) Preview and use text features.
- j) Use reading strategies to monitor comprehension throughout the reading process.
- k) Identify new information gained from reading.
- l) Read with fluency and accuracy.

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

WRITING

3.7 The student will demonstrate comprehension of information from a variety of print and electronic resources.

- a) Use encyclopedias and other reference books, including online reference materials.
- b) Use table of contents, indices, and charts.

3.9 The student will write for a variety of purposes.

- a) Identify the intended audience.
- b) Use a variety of prewriting strategies.
- c) Write a clear topic sentence focusing on the main idea.
- d) Write a paragraph on the same topic.
- e) Use strategies for organization of information and elaboration according to the type of writing.
- g) Revise writing for clarity of content using specific vocabulary and information.

3.10 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.

- a) Use complete sentences.
- b) Use transition words to vary sentence structure.
- e) Use singular possessives.
- h) Use apostrophes in contractions with pronouns and in possessives.
- j) Use correct spelling for frequently used sight words, including irregular plurals.

3.11 The student will write a short report.

- a) Construct questions about the topic.
- b) Identify appropriate resources.
- c) Collect and organize information about the topic into a short report.
- d) Understand the difference between plagiarism and using own words.

Related Inquiry Unit Texts:

- Biographical Text
- Internet Search Engines
- Newspapers
- Magazines

Related Integrated Activities:

The students will:

- Write a biography of a person in SS3.11
- Write an argument in the trial of SAV's killer (*VA DOE Enhanced Scope and Sequence*)

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

MATHEMATICS

3.1 The student will

c) compare two whole numbers between 0 and 9,999, using symbols ($>$, $<$, or $=$) and words (*greater than*, *less than*, or *equal to*).

3.17 The student will

- a) collect and organize data, using observations, measurements, surveys, or experiments;
- b) construct a line plot, a picture graph, or a bar graph to represent the data; and
- c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

Related Integrated Activities:

The students will:

- Use $<$, $>$, $=$ to compare miles on a map
- Collect data on the plant growth in the grade level garden
- Construct graphs and tables to represent data collected while tending the grade level garden
- Create a chart of facts about the historical figures in SS SOL 3.1
- Conduct a survey to determine how people contribute to a Healthy environment
- Determine distance from rain garden to Reedy Creek
- Determine distance from Reedy Creek to James River

Quarterly Theme: How do we contribute to a healthy community?

Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

ART

3.3 The student will develop art ideas from a variety of sources, including print, non-print, and technology.

3.10 The student will produce a work of art that communicates feelings.

3.11 The student will create a work of art in clay, using the coil-building process.

Related Integrated Objectives:

- Draw and label a map of the environment.
- Create a poster conveying ways to contribute to a healthy environment.
- Create a collage, diorama or book about a person studied in history.

Related Integrated Activities:

The students will:

- Use a variety of materials to create works of art
- Use a variety of sources to inspire art
- Use clay and or recycled materials to create 3-Dimensional works of art
- Draw the butterfly garden

Quarterly Environmental Theme: How do we contribute to a healthy community?
Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

MUSIC

- 3.1 The student will sing a repertoire of songs in tune with a clear tone quality.
 - 1. Sing melodies within the range of an octave.
 - 2. Perform in a two-part music ensemble.
 - 3. Accompany singing with rhythm and/or melody instruments.
 - 4. Use music terminology to interpret a music selection.

- 3.4 The student will respond to music with movement.
 - 1. Perform line and circle dances.
 - 2. Perform dances and games from various cultures.
 - 3. Dramatize songs, stories, and poems.
 - 4. Perform choreographed and non-choreographed movements.

- 3.7 The student will create music through a variety of experiences.
 - 1. Create accompaniments and ostinatos for songs and chants.
 - 2. Create movement to illustrate meter and form.
 - 3. Create lyrics to familiar melodies.
 - 4. Create new verses to songs.

Related Environmental Objectives:

- The student will:
- Listen to and identify earth sounds
 - Create a butterfly dance to mimic the moves of butterflies
 - Learn and interpret American patriotic songs

Related Environmental Activities:

- The students will:
- Listen to sounds in nature and relate to music
 - Create songs as evidence of learning
 - Listen to music that celebrate the accomplishments of the historical figures in S.S. SOL 3.11
 - Listen to and sing patriot songs

Quarterly Environmental Theme: How do we contribute to a healthy community?
Third Grade Essential Question: How can a butterfly garden impact the James River Watershed?

Standards of Learning:

HEALTH & PE

3.5 The student will explain that customs and traditions may impact community health decisions. Key concepts/skills include:

- a) dietary customs and practices;
- b) recreational activities;
- c) celebrations and traditions.

3.2 The student will use decision-making skills to promote health and personal wellness. Key concepts/skills include:

- a) goal setting for personal health;
- b) the process of resolving conflicts peacefully;
- c) strategies for solving problems related to health.

3.3 The student will identify the effects of drugs, alcohol, tobacco, and other harmful substances on personal health. Key concepts/skills include:

- a) improper use of medicines;
- b) the use of refusal skills to counter negative influences;
- c) the effects of nicotine, alcohol, and other drugs on body systems;
- d) the use of common household items as inhalants;
- e) the effects of mind-altering drugs on behavior.

Related Integrated Objectives:

- Identify healthy eating habits
- Describe physical activities that promote healthy living
- Dance to imitate the movement of the butterfly

Related Integrated Activities:

The students will:

- Identify behaviors that have a negative impact on the community
- Launch an anti-drug initiative to promote healthy living
- Walk along the banks of the James River to evaluate in current state

INSTRUCTIONAL ELEMENTS

Key Vocabulary	Instructional Strategies	Instructional Materials	Technology
<p>conservation disease erosion fire flood interdependency natural events resource renewal survival</p> <p>advantages coal conserve disadvantages energy fossil fuel natural gas nonrenewable resources oil renewable resources solar energy</p>	<ul style="list-style-type: none"> • Small Groups • Guided Practice • Cooperative Groups • Peer Tutoring • Direct Instruction 	<ul style="list-style-type: none"> • Trade Books • World Map • Environment • Internet • “The Trial of SAV’s Killer” (VA DOE Enhance Scope and Sequence) 	<ul style="list-style-type: none"> • http://www.epa.gov/recyclecity/mainmap.htm • United Streaming • Brain Pop • www.solpass.org • www.readinga-z.com • http://www.projectwild.org/ • http://www.rockingham.k12.va.us/resources/elementary/ • http://geographyworldonline.com/mapgames.html <p style="text-align: center;"><u>Field trips</u></p> <p style="text-align: center;">James River Park Pocahontas State Park Tredegar Ironworks Three Lakes Park Virginia Living Museum Lewis Ginter Botanical Gardens</p>

INQUIRY PROJECT & CULMINATING ACTIVITY

Goal:

The third grade classes will work together to research how a butterfly garden impacts the James River watershed and how we contribute to a healthy community. Then plan and execute a Theatrical presentation displaying each stage in the cycle of a plant as well as how insects, specifically, the butterfly affects the plants and the watershed. And how all these contribute to a healthy community.

Elements:

- a) The students will research the stages of a plant life cycle.
- b) The students will research the effects of insects on plant life.
- c) The students will research the James River watershed by conducting water quality tests.
- d) The students will use the information gathered through research to create costumes and dialogue for the presentation.
- e) The students will work in small groups to write and learn their specific roles in the presentation.
- f) The presentation will be presented to the parents, student body and staff on a selected day near the end of the school year.

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</p> <p>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</p> <p>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>	<ul style="list-style-type: none"> ✓ TSW identify various types of indoor air pollutants and their sources. ✓ TSW understand how various pollutants can be harmful to people’s health. ✓ TSW take action to improve indoor air quality. ✓ TSW identify ways to save energy in their daily lives. ✓ TSW explain how saving energy can reduce air pollution. ✓ TSW express appropriate ways to treat living things and to act in forests, parks, and other natural areas. ✓ TSW express their own rules for proper manners when outside. 	<ul style="list-style-type: none"> • Use various forms of technology at home and school. • Identify technological contributions of the past and their impact on present day. • Investigate how technology is used in the community to sustain the environment. 	<ul style="list-style-type: none"> ➤ How can students contribute to a healthy community? ➤ What are some ways to conserve energy in daily life? ➤ How does pollution impact the quality of air, water and land? ➤ What are some human actions that impact the James River? ➤ What are some practices that might improve the quality of the James River watershed?

**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.

SCIENCE

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>Standard 3.1 The student will plan and conduct investigations in which</p> <p>a.) predictions and observations are made; b.) objects with similar characteristics are classified into at least two sets and two subsets; c.) questions are developed to formulate hypotheses; j.) inferences are made and conclusions are drawn;</p> <p>Standard 3.10 The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include</p> <p>a) the interdependency of plants and animals; b) the effects of human activity on the quality of air, water, and habitat;</p>	<ul style="list-style-type: none"> ✓ Complete observations are made using all of the senses. Simple instruments can help extend the senses. ✓ Predictions are statements of what is expected to happen in the future based on past experiences and observations. ✓ It is sometimes useful to organize objects according to similarities and differences. By organizing objects in sets and subsets, it may be easier to determine a specific type of characteristic. ✓ An inference is a conclusion based on evidence. ✓ Every living thing depends on every other living thing to survive. This is called <i>interdependency</i>. ✓ Human actions, such as polluting, can affect the survival of plants and animals. ✓ Natural events, such as fires, floods, diseases, and erosion, can also affect the survival of plant and animal species. ✓ Conservation is the careful use and preservation of our natural resources. 	<ul style="list-style-type: none"> • Make and communicate careful observations. • Classify objects into at least two major sets and subsets based on similar characteristics, such as predator/prey and herbivore, carnivore, and omnivore • Develop hypotheses from simple questions. These questions should be related to the concepts in the third grade standards. Hypotheses should be stated in terms such as: “If an object is cut into smaller pieces, then the physical properties of the object and its smaller pieces will remain the same.” • Make and communicate predictions about the outcomes of investigations. • Explain how living things in an area are dependent on each other. • Compare and contrast human influences on the quality of air, water, and habitats. • Analyze the effects of fire, flood, disease, and erosion on organisms and habitat. 	<ul style="list-style-type: none"> ➤ Why do plants depend on insects like butterflies to survive? ➤ Why are plants important for a healthy community?

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<p>3.11 The student will investigate and understand different sources of energy. Key concepts include</p> <ul style="list-style-type: none">a) energy from the sun;b) sources of renewable energy; andc) sources of nonrenewable energy.	<ul style="list-style-type: none">✓ Resource renewal is a conservation practice in which species are protected. An example would be protecting endangered plants by saving their seeds, growing the seeds indoors, and later putting the new plants back in their natural habitats.	<ul style="list-style-type: none">• Describe how conservation practices can affect the survival of a species.• Describe a conservation practice in the local community.	
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SOCIAL STUDIES

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.5 The student will develop map skills by a) positioning and labeling the seven continents and five oceans to create a world map; b) using the equator and prime meridian to identify the Northern, Southern, Eastern, and Western Hemispheres; c) locating the countries of Spain, England, and France; d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de León (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia); e) locating specific places, using a simple letter-number grid system.</p> <p>3.6 The student will read and construct maps, tables, graphs, and/or charts.</p> <p>3.11 describing how people can serve the community, state, and nation.</p>	<ul style="list-style-type: none"> ✓ There are seven continents and five oceans located in the world. ✓ The equator and the prime meridian divide the globe into four hemispheres. ✓ The four hemispheres are Northern, Southern, Eastern, and Western. ✓ A simple letter-number grid system on maps is used to locate places ✓ Students will understand how planting and participating in community gardens and other similar activities can contribute to a healthy community. ✓ Veterans Day is the recognition of and respect for Americans who served in the military. ✓ Memorial Day is the recognition of Americans who died in wars while they were serving their country. ✓ There are many ways that people can serve their community, state, and nation. 	<ul style="list-style-type: none"> • Compare, and contrast differing sets of ideas, values, personalities, behaviors, and institutions. • Identify and locate the seven continents and five oceans • Distinguish between the Prime Meridian and the Equator • Locate European countries on a world map 	<ul style="list-style-type: none"> ➤ Where are the seven continents and the five oceans located on a world map? ➤ What imaginary lines are used to define hemispheres? ➤ What are the names of the four hemispheres? ➤ On which continents are England, Spain, France, and the United States located? ➤ Where are the countries of England, Spain, and France located on a world map? ➤ Where are the regions (general areas) of San Salvador in the Bahamas; St. Augustine, Florida; Québec, Canada; and Jamestown, Virginia, located on a map? ➤ How is a simple letter-number grid system used to locate places on maps? ➤ What are some basic principles commonly held by American citizens? ➤ Why do we observe Veterans Day and Memorial Day? ➤ How can people serve their community, state, and nation? ➤ How did some American citizens work to defend America’s basic principles?

Math

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.17 The student will a) collect and organize data, using observations, measurements, surveys, or experiments; b) construct a line plot, a picture graph, or a bar graph to represent the data; and c) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.</p>	<ul style="list-style-type: none"> ✓ Understand how to estimate measures of liquid volume. ✓ Understand how to determine the actual measure of liquid volume 	<ul style="list-style-type: none"> • Estimate and use U.S. Customary and metric units to measure liquid volume. • Determine the actual measure of liquid volume using U.S. Customary. 	<ul style="list-style-type: none"> ➤ What instruments is used to measure liquid volume? ➤ What type of graph could be used to compare the results of water quality on different days?

Reading

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.1 The student will use effective communication skills in group activities. a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said. b) Ask and respond to questions from teachers and other group members. c) Explain what has been learned.</p> <p>3.2 The student will present brief oral reports. a) Speak clearly. b) Use appropriate volume and pitch. c) Speak at an understandable rate. d) Organize ideas sequentially or around major points of information. e) Use grammatically correct language and specific vocabulary to communicate ideas.</p> <p>3.7 The student will demonstrate comprehension of information from a variety of print resources. a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials.</p>	<ul style="list-style-type: none"> ✓ Participate effectively in group activities by taking turns in conversations and moving group discussions forward ✓ Cluster or sequence information on a topic when presenting an oral report ✓ Speak clearly at an understandable rate and volume. ✓ Understand ways to select the best resource for gathering information on a given topic. 	<ul style="list-style-type: none"> • Engage in conversations by: <ul style="list-style-type: none"> ◦ making certain all group members have an opportunity to contribute ◦ listening attentively by making eye contact while facing the speaker ◦ eliciting information or opinions from others ◦ supporting opinions with appropriate ideas, examples, and details ◦ indicating disagreement in a constructive manner ◦ take initiative in moving a group discussion forward by <ul style="list-style-type: none"> ◦ contributing information that is on topic ◦ answering questions ◦ asking clarifying questions of the speaker ◦ summarizing the conclusions reached in the discussion ◦ explaining what has been learned. • Deliver oral presentations in an engaging manner that maintains audience interest by <ul style="list-style-type: none"> ◦ presenting information with expression and confidence ◦ varying tone, pitch, and volume to convey meaning ◦ using grammatically correct 	<ul style="list-style-type: none"> ➤ In what ways can you effectively capture the attention of audience? ➤ How can you make your presentation a learning experience for other students? ➤ How can using different resources help you find and gather information on different topics?

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<p>b) Use available technology.</p>		<p>language</p> <ul style="list-style-type: none"> ◦ speaking at an understandable rate ◦ using specific vocabulary appropriate for the audience and the topic <ul style="list-style-type: none"> • stay on topic during presentations • organize ideas sequentially or around major points of information • answer questions from the audience • evaluate their own presentations, using class-designed criteria • make decisions about which resource is best for locating a given type of information • locate selected information in glossaries, dictionaries, thesauruses, encyclopedias, atlases, and other print and online reference materials • retrieve information from electronic sources • use the Internet to find information on a given topic • use a printer to create hard copies of information retrieved from electronic sources. 	
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Writing

Driving Objectives:	Essential Understanding:	Essential Skills:	Essential Questions:
<p>3.9 The student will write descriptive paragraphs.</p> <ul style="list-style-type: none"> a) Develop a plan for writing. b) Focus on a central idea. c) Group related ideas. d) Include descriptive details that elaborate the central idea. e) Revise writing for clarity. <p>3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.</p> <ul style="list-style-type: none"> a) Use a variety of planning strategies. b) Organize information according to the type of writing. c) Identify the intended audience. d) Revise writing for specific vocabulary and information. 	<ul style="list-style-type: none"> ✓ Understand how to plan and compose a descriptive paragraph. ✓ Understand how to plan and compose stories, friendly letters, simple explanations, and short reports ✓ Understand that grammatically correct language and mechanics contribute to the meaning of writing. 	<p>To be successful with this standard, students are expected to</p> <ul style="list-style-type: none"> • generate ideas and develop a plan for writing • focus on a central topic and group related ideas • select specific details of sight, sound, touch, taste, and smell in order to paint a verbal picture of a person, place, thing, or event • use examples from their reading as models to imitate in their writing • create verbal pictures, using precise nouns, verbs, and adjectives, that elaborate ideas within a sentence • describe events, ideas, and personal stories with accurate details and sequence • read their own writing orally to check for sentence rhythm (sentence variety) • select information that the audience will find interesting or entertaining • revise to eliminate details that do not develop the central idea • incorporate transitional (signal) words that clarify sequence, such as <i>first</i>, <i>next</i>, and <i>last</i> • apply knowledge of the writing domains of composing, written expression, and usage/mechanics. 	<ul style="list-style-type: none"> ➤ In what ways can you organize your facts to make your information interesting and understandable for your audience?

<p>e) Use available technology.</p> <p>3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.</p> <p>a) Use complete and varied sentences.</p> <p>b) Use the word <i>I</i> in compound subjects.</p> <p>c) Use past and present verb tense.</p> <p>d) Use singular possessives.</p> <p>e) Use commas in a simple series.</p> <p>f) Use simple abbreviations</p> <p>g) Use apostrophes in contractions with pronouns.</p> <p>h) Use correct spelling for high-frequency sight words, including irregular plurals.</p>		<ul style="list-style-type: none"> • generate ideas and plan writing by <ul style="list-style-type: none"> ◦ using ideas from class brainstorming activities ◦ making lists of information ◦ talking to classmates about what to write ◦ reading texts by peer and professional authors ◦ using a cluster diagram, story map, or other graphic organizer ◦ selecting an appropriate writing form for nonfiction writing (such as explanation, directions, simple report), expressive writing (such as narrative, reflection, and letter), and creative writing (such as fiction and poetry) • identify the intended audience • follow the organization of particular forms of writing for <ul style="list-style-type: none"> ◦ stories – beginning, middle, and end ◦ letters – date, greeting, body, and closing ◦ explanations – opening; information presented in a way to show the relationship of ideas, such as chronological order; and closing ◦ short reports – opening, grouping of like information into clear paragraphs, ordering of paragraphs so that there is a logical flow of information, and closing • clarify writing when revising by including specific vocabulary and information • use available technology to write. • use complete sentences 	
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		<ul style="list-style-type: none">• use the word <i>I</i> in compound subjects• use past and present verb tenses• use singular possessives• use simple abbreviations• use correct spelling for frequently used words, including irregular plurals, e.g., <i>men, children</i>• punctuate correctly<ul style="list-style-type: none">◦ commas in a simple series◦ apostrophes in contractions with pronouns, e.g., <i>I'd, we've.</i>	
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References

VA DOE Science Enhanced Scope & Sequence

VA DOE History/ Social Science Enhanced Scope & Sequence

VA DOE Math Enhanced Scope & Sequence

Richmond City Public Schools Learning Portal

www.solpass.org

www.unitedstreaming.com

Project Learning Tree