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| **Quarterly Theme:** How does technology change our lives?**Third Grade Essential Question:** How does technology expand our horizons? |
| **Standards of Learning:** |
| **ENVIRONMENT** | **Standard 1:****Ecological, Social, and Economic Systems**Students develop knowledge of the interconnectionsand interdependency of ecological, social, andeconomic systems. They demonstrate understanding ofhow the health of these systems determines thesustainability of natural and human communities atlocal, regional, national, and global levels. | **Related Integrated Activities:**PLT Activity 95: “Did You Notice” (adapted to Grade 3)* TSW investigate changes in their local environment over the course of time.
* TSW summarize those changes in the form of a time line.

PLT Activity 40 :“Then and Now” (adapted to Grade 3)* TSW describe the environmental changes that have occurred in their community

 VA DOE Science Enhanced Scope and Sequence – Grade 3* “ Simple and Compound Machines”

Design an animal given specific details to its environment, survival needs, special adaptations, prey and/or predators |
| **Standard 2:****The Natural and Built Environment**Students engage in inquiry and systems thinking anduse information gained through learning experiencesin, about, and for the environment to understand thestructure, components, and processes of natural andhuman-built environments. |
| **Standard 3:****Sustainability and Civic Responsibility**Students develop and apply the knowledge,perspective, vision, skills, and habits of mind necessaryto make personal and collective decisions and takeactions that promote sustainability. |

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| **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 which1. predictions and observations are made;
2. objects with similar characteristics are classified into at least two sets and two subsets;
3. questions are developed to formulate hypotheses;
4. volume is measured to the nearest milliliter and liter;
5. length is measured to the nearest centimeter;
6. mass is measured to the nearest gram;
7. data are gathered, charted, and graphed (line plot, picture graph, and bar graph);
8. temperature is measured to the nearest degree Celsius;
9. time is measured to the nearest minute;
10. inferences are made and conclusions are drawn; and
11. natural events are sequenced chronologically.

3.2 The student will investigate and understand simple  machines and their uses. Key concepts include1. 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 include1. methods of gathering and storing food, finding shelter, defending themselves, and rearing young; and
2. 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 include1. producer, consumer, decomposer;
2. 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 include1. water-related environments (pond, marshland, swamp, stream, river, and ocean environments);dry-land environments (desert, grassland, rain forest, and forest environments); and
2. population and community.
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| **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 bya) 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 explainthe 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
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| **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, andsummarizing what is saidb) 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)](http://www.amazon.com/Simple-Machines-Starting-Science-Deborah/dp/1550743996/ref%3Dsr_1_1?s=books&ie=UTF8&qid=1342411710&sr=1-1&keywords=Simple+Machines) by Deborah Hodge and Ray Boudreau“[Machines We Use” (It's Science!)](http://www.amazon.com/Machines-We-Use-Its-Science/dp/0516263927/ref%3Dsr_1_9?s=books&ie=UTF8&qid=1342411710&sr=1-9&keywords=Simple+Machines) by [Sally Hewitt](http://www.amazon.com/Sally-Hewitt/e/B001H6WATA/ref%3Dsr_ntt_srch_lnk_9?qid=1342411710&sr=1-9) (Sep 1998) [Technology of Ancient Rome (Primary Sources of Ancient Civilizations)](http://www.amazon.com/Technology-Ancient-Primary-Sources-Civilizations/dp/082398947X/ref%3Dsr_1_18?s=books&ie=UTF8&qid=1342414281&sr=1-18&keywords=Technology) by [Daniel C. Gedacht](http://www.amazon.com/Daniel-C.-Gedacht/e/B001KHXQWQ/ref%3Dsr_ntt_srch_lnk_18?qid=1342414281&sr=1-18) (Aug 2004) [Ancient Agriculture: From Foraging to Farming (Ancient Technology)](http://www.amazon.com/Ancient-Agriculture-Foraging-Farming-Technology/dp/0822529955/ref%3Dsr_1_24?s=books&ie=UTF8&qid=1342414403&sr=1-24&keywords=Technology) by [Michael Woods](http://www.amazon.com/Michael-Woods/e/B001JSBQDC/ref%3Dsr_ntt_srch_lnk_24?qid=1342414403&sr=1-24) and Mary B. Woods (Sep 1999) [The Technology of Ancient Rome (The Technology of the Ancient World)](http://www.amazon.com/Technology-Ancient-Rome-World/dp/140420556X/ref%3Dsr_1_65?s=books&ie=UTF8&qid=1342414567&sr=1-65&keywords=Technology) by [Charles W. Maynard](http://www.amazon.com/Charles-W.-Maynard/e/B001JS1V28/ref%3Dsr_ntt_srch_lnk_65?qid=1342414567&sr=1-65) (Jan 30, 2006) * [Ancient Machines: From Wedges to Waterwheels (Ancient Technology)](http://www.amazon.com/Ancient-Machines-Wedges-Waterwheels-Technology/dp/0822529947/ref%3Dsr_1_69?s=books&ie=UTF8&qid=1342414667&sr=1-69&keywords=Technology) by [Michael Woods](http://www.amazon.com/Michael-Woods/e/B001JSBQDC/ref%3Dsr_ntt_srch_lnk_69?qid=1342414667&sr=1-69) and Mary B. Woods (Sep 1999)
* [Ancient Science: 40 Time-Traveling, World-Exploring, History-Making Activities for Kids](http://www.amazon.com/dp/0471215953?tag=historyforkids&link_code=as2&creativeASIN=0471215953&creative=374929&camp=211189), 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 contentareas.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 andwriting.  | **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
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| **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 willa) investigate the identity and the commutative properties for addition and multiplication; andb) 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 willa) 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; andc) 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
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| **Standards of Learning:** |
|  **MUSIC** |  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.  3.11 The student will explore the music of world cultures through song, dance, and movement. 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. 3.12 The student will identify the four orchestral families (woodwind, string, brass, and percussion), using sight and sound. | **Related Integrated Objectives:**The student will:* Investigate musical contributions of ancient civilization
* Study the impact technology has had on music
* Listen to non-traditional forms of music

**Related Integrated Activities:**The student will:* Investigate and perform traditional dances from various cultures
* Use various instruments to create music
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| **Standards of Learning:** |
| **HEALTH & PE** | 3.2 The student will use decision-making skills to promote health and personal wellness. Keyconcepts/skills includea) 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. Keyconcepts/skills includea) 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. Keyconcepts/skills includea) 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
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| **INSTRUCTIONAL ELEMENTS** |
| **Key Vocabulary** | **Instructional Strategies** | **Instructional Materials** | **Technology** |
| Sciencecompound machine constructdirection force fulcrum functioninclined plane lever pulley screwsimple machine tools wedge wheel and axle workSocial Sciencecapital resources consumershuman resources producersnatural resources decisionopportunity cost spendeconomics economic specializationeconomic interdependenceReadinglanguage narrative oral paraphrase respond vowel patterns closed sorts open sorts homophones root words affixes synonyms antonyms | * 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
 | * “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](http://www.amazon.com/Simple-Machines-Cindy-Davis/dp/155799689X/ref%3Dsr_1_3?s=books&ie=UTF8&qid=1342411710&sr=1-3&keywords=Simple+Machines)” by Cindy Davis, Jo Ellen Moore and Evan-Moor Educational Publishers (Nov 1, 1998)

[Machines We Use (It's Science!)](http://www.amazon.com/Machines-We-Use-Its-Science/dp/0516263927/ref%3Dsr_1_9?s=books&ie=UTF8&qid=1342411710&sr=1-9&keywords=Simple+Machines) by [Sally Hewitt](http://www.amazon.com/Sally-Hewitt/e/B001H6WATA/ref%3Dsr_ntt_srch_lnk_9?qid=1342411710&sr=1-9) (Sep 1998)  | [www.solpass.org](http://www.solpass.org)[www.readinga-z.com](http://www.readinga-z.com)[www.brainpop.com](http://www.brainpop.com)United StreamingSmart Exchange |
| context clues prefix suffix fiction narrative nonfictionpoetry biography autobiography main idea setting historical facts compare contrastdetails caption cause-effect dictionary glossary resourcetechnology encyclopedia thesaurus referencetable of contents index Internetresearch |  |  | **Field Trips:*** 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:**1. The students will research the various habitats and animals that live in each.
2. The students will create and design a new animal based on their developed knowledge.
3. The students will use technology to design and enhance an animal and its habitat.
4. Students will include physical adaptations that will enable the animal to survive in the chosen habitat.
5. Students will research learned behavior and instinct to develop their animal in a realistic manner.
6. Creations will be presented to classmates and displayed for the school to view.
7. Students will include a typed report to accompany their model or design.
8. 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. |

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| **ENVIRONMENT** |
| **Driving Objectives:** | **Essential Understanding:** | **Essential Skills:** | **Essential Questions:** |
| **Standard 1:****Ecological, Social, and Economic Systems**Students develop knowledge of the interconnectionsand interdependency of ecological, social, andeconomic systems. They demonstrate understanding of how the health of these systems determines thesustainability of natural and human communities atlocal, regional, national, and global levels.**Standard 2:****The Natural and Built Environment**Students engage in inquiry and systems thinking anduse information gained through learning experiencesin, about, and for the environment to understand thestructure, components, and processes of natural andhuman-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. | * 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.
 | * 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.
 | * What role can students play in sustaining the environment?
* Evaluate changes in the environment
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| **SCIENCE** |
| **Driving Objectives:** | **Essential Understanding:** | **Essential Skills:** | **Essential Questions:** |
| Standard 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;
* j.) inferences are made and conclusions are drawn;

**Standard 3.4****The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs.** * a.) methods of gathering and storing food, finding shelter, defending themselves, and rearing young;
* b.) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.

**3.6 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources.**Key concepts include1. water-related environments (pond, marshland, swamp, stream, river, and ocean environments);
2. dry-land environments (desert, grassland, rain forest, and forest environments); and
3. population and community.
 | * 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).
* Some animals go on a long-distance journey from one place to another as seasons change (migration).
* Various animals blend into their environments to protect themselves from enemies (camouflage).
* 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.)
* Water-related environments include those with fresh water or salt water. Examples include ponds, marshes, swamps, streams, rivers, and oceans.
* Dry-land environments include deserts, grasslands, rain forests, and forests.
* There are distinct differences among pond, marshland, swamp, stream, river, ocean, desert, grassland, rainforest, and forest environments.
* A *population*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 herd of cattle in the grassland.
* A *community* 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.
 | * 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.
* 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.
* 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.
 | * 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?
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| **SOCIAL STUDIES** |
| **Driving Objectives:** | **Essential Understanding:** | **Essential Skills:** | **Essential Questions:** |
| **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.**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.**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). | * 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.

**Terms to know:*** *Economic choice*: The choice of or

decision among alternatives orpossibilities* *Opportunity cost*: The next best choice that is given up when a decision is made.
* *Specialization* occurs when

people focus on the production ofselected goods and services. | * Gather, classify, and interpret information.
* Make decisions.
* Explain cause-and-effect relationships.
 | * 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:** |
| 3.17The student willa) 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; andc) read and interpret the data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data. | * 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.
* In vestigate, understand, and apply basic concepts of probability.
* Understand that probability is the chance of an event happening.
 | * 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 *impossible*, *unlikely*, *as likely as*, *equally likely*, *likely*, and *certain*.
 | * 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?
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| **Reading** |
| **Driving Objectives:** | **Essential Understanding:** | **Essential Skills:** | **Essential Questions:** |
| **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.

**3.7 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.
 | * 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.
 | * 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:
* 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
* 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.
 | * 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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| **Writing** |
| **Driving Objectives:** | **Essential Understanding:** | **Essential Skills:** | **Essential Questions:** |
| **3.9The 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.**1. Use a variety of planning

strategies.1. Organize information according to the type of writing.
2. Identify the intended audience.
3. Revise writing for specific vocabulary and information.
4. Use available technology.

**3.11 The student will edit****writing for correct****grammar, capitalization,****punctuation, and spelling.**1. 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 abbreviationsg) 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.** | * 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.
 | **To be successful with this standard, students are expected to*** 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 *first*, *next*, and *last*
* 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 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
* use the word *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., *men, children*
* punctuate correctly
* commas in a simple series

apostrophes in contractions with pronouns, e.g., *I’d, we’ve*. | * 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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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](http://www.solpass.org)

[www.unitedstreaming.com](http://www.unitedstreaming.com)