

**3**

SCIENCE PARENT GUIDE – UNIT 1 & 2

|  |  |
| --- | --- |
| ***IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME*** | |
| **GEORGIA’S HABITATS** | |
| **DESCRIPTION** | |
| Students will obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau of Georgia. Weather and climate play a large role in the differences between the regions. Students will explore the how heat energy impact plants, animals, and habitats. Third grade Georgia Standards of Excellence for Science will engage students in obtaining, evaluating, and communicating information about heat energy. Students will generate questions about how heat is produced and used. They will identify the sun as the primary source of heat and light for the Earth. Students will plan and carry out investigations to gather data using thermometers to produce tables and charts that illustrate the effects of the sun on different objects. Finally, they will use everyday tools to design and construct a device that will increase and decrease the warming effects of the sun on various materials. | |
| **KEY WORDS TO KNOW** | |
| **Mountain:** A high raised part of Earth’s surface  **Swamp/ Marsh:** low land covered at times by water; soft, wet land  **Coastal Plain:** An area of low, flat land new an ocean  **Piedmont:** An area, with many hills, between the coastal plain and the mountains.  **Atlantic Ocean:** - the ocean located east of North and South America.  **Habitat-** -Habitat provides food supply, shelter, and a place to raise young- A habitat is an animal or plant’s living environment.  **Georgia-** one of the southern states within the United States – the one in which we live.  **Organism-** any living thing.  Types of habitats in Regions of Georgia (mountains, marsh/swamp, coast, Piedmont, Atlantic Ocean) based upon physical features.  **Mountains-** the highest of earth’s land forms; Blue Ridge – mountains, ridges, basins.  **Adaptation**- A body part or a behavior that helps an organism survive  **Camouflage-** An animal/ insect’s ability to change its color or shape to blend in with its surroundings.  **Hibernation-** to spend the winter in a deep sleep  **Migration-** to travel from one place to another and back again  **Mimicry-** Imitating appearance or behavior | **Heat**- the movement of thermal energy from hotter to cooler objects.  **Energy**: what is needed to do work or cause change  **Friction**: a force that releases heat when objects rub together  **Sunlight**: energy from the Sun  **Burning**: when there is a flame and a great amount of heat  **Thermometer**: a tool used to measure heat  **Sun**: the star at the center of the solar system that provides light and heat to Earth  **Tools**: objects that make a job easier  Thermal Energy- A form of energy that moves particles of matter  **Temperature** -the measure of how hot or cold something is  **Fahrenheit**- a standard temperature scale that defines the freezing point of water as 32° degrees and the boiling point of water a 212°  **Celsius**-the metric scale for measuring temperature that defines the freezing point of water as 0° degrees and the boiling point of water as 100° degrees  **AT HOME VOCABULRY STRATEGIES**  1. Read aloud with your child.  2. Use vocabulary words in daily conversations.  3. Build a word wall or window.  4. Play simple vocabulary games.  5. Relate words to real life experiences.  http://1.bp.blogspot.com/-QOn2S_p5PU8/Vg5eWgC54BI/AAAAAAAAPuU/lQnA-gp1UkM/s640/vocabulary.png |

SCIENCE PARENT GUIDE – UNIT 1 & 2 

SCIENCE PARENT GUIDE – UNIT 1

**3**

|  |  |  |  |
| --- | --- | --- | --- |
| **Children’s Literature (Available at your local public library or Amazon.)** | | | |
| *Atlantic Ocean* by Doraine Bennett  *Coast* by Doraine Bennett  Examining Forest Habitats by Zelda King  *Coastal Plain* by Doraine Bennett  *Marsh and Swamp* by Doraine Bennett  *Mountains* by Doraine Bennett  *Piedmont* by Doraine Bennett  Examining Pond Habitats by Zelda King  Mountains by Fran Howard | | *Deep in the Swamp* by Donna M. Bateman  *This Is Our Earth* by Laura Lee Benson  *Georgia Hello U.S.A*. by Rita C. LaDoux  *Earth Day – Hooray!* by Stuart J. Murphy  *The Lorax* by Dr. Seuss  *Where does all the garbage go*? Revised Edition (Let’s Read-and-Find-Out Science 2) by Paul Showers | |
| **GEORGIA’S HABITATS** | | | |
| **Important Concepts**  **Addressed in this Unit** | **Sample Questions** | | **How You Can Help Your Child** |
| S3L1. Obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.   1. Ask questions to differentiate between plants, animals, and habitats found within Georgia’s geographic regions. 2. Construct an explanation of how external features and adaptations (camouflage, use of hibernation, protection, migration, mimicry) of animals allow them to survive in their habitat. 3. Use evidence to construct an explanation of why some organisms can thrive in one habitat and not another.   S3P1. Obtain, evaluate, and communicate information about the ways heat energy is transferred and measured.   1. Ask questions to identify sources of heat energy. (*Clarification Statement:* Examples could include, sunlight, friction, and burning). 2. Plan and carry out an investigation to gather data using thermometers to produce tables and charts that illustrate the effect of sunlight on various objects. (*Clarification Statement:* The use of both Fahrenheit and Celsius temperature scales is expected) 3. Use tools and every day materials to design and construct a device/ structure that will increase/decrease the warming effects of sunlight on various materials. (*Clarification Statement:* Conduction, convection, and radiation are taught inupper grades and should not be taught at this grade level). | 1. Which habitat can you find the following animals:     Image result for alligator /var/folders/mz/hmn2wxfn7vv376jvbctmfvn40000gn/T/com.microsoft.Word/Content.MSO/9D6F751.tmp  /var/folders/mz/hmn2wxfn7vv376jvbctmfvn40000gn/T/com.microsoft.Word/Content.MSO/209BC687.tmp/var/folders/mz/hmn2wxfn7vv376jvbctmfvn40000gn/T/com.microsoft.Word/Content.MSO/10CFF92D.tmp   1. Okefenokee Swamp 2. Blue Ridge Mountains 3. Atlantic Coast 4. Piedmont Region 5. Compare and Contrast the Georgia Coast and the Piedmont. Write how they are alike and different.   Georgia Coast Piedmont    https://cdn.acceleratelearning.com/system/content_images/contents/70415/original/fox.jpg?1481731545   1. Sasha’s class has been studying animals of the arctic. Each student has to choose an arctic animal and create a presentation on that animal. Sasha has chosen the arctic fox as her animal. In her research, she discovers that the arctic fox likes to eat small animals. She also learns that the arctic fox has brown fur in the summer and white fur in the winter.   Explain how the fox’s fur color has adapted to help it survive. Use the CER (Claim-Evidence-Reasoning). Make a claim. Provide evidence of your reasoning.   1. The characteristics of the squirrel include fur, small, with sharp claws that they use for digging and climbing. Which is the best habitat for the squirrel? 2. Plains 3. Swamp 4. Ocean 5. Forrest  When you rub your hands together you produce heat. This is called…/var/folders/mz/hmn2wxfn7vv376jvbctmfvn40000gn/T/com.microsoft.Word/Content.MSO/A69B02EA.tmpHeat energyBurningTemperatureFrictionWhich choice below is *NOT* a natural source of heat energy?LightningSunlightVolcanoesA stoveBy looking at the thermometer, you can tell that the temperature is... Related imagea. Above freezingBlow freezingAt the freezing point of waterAbove the boiling point of water  1. Which color absorbs the most heat from sunlight? 2. Red 3. White 4. Black 5. yellow 6. Which object below would hold in the most heat (an insulator)? 7. A soda pop can 8. A thick blanket 9. A metal pan 10. Aluminium foil | | **Digital Resources**  Science Curriculum: STEMscopes or HMH via MyBackpack Brain Pop/Brain Pop Jr. via My Backpack [www.brainpop.com](http://www.brainpop.com)   * Artic habitat * Freshwater habitat * Ocean habitat * Hibernation * Camouflage   Review Game <https://www.superteachertools.us/jeopardyx/jeopardy-review-game.php?gamefile=252303#.V3P6pNIrLDc>  **Study Jams**  Plant Adaptations  <http://studyjams.scholastic.com/studyjams/jams/science/plants/plant-adaptations.htm>  Animal adaptations  <http://studyjams.scholastic.com/studyjams/jams/science/animals/animal-adaptations.htm>  Heat  <http://studyjams.scholastic.com/studyjams/jams/science/energy-light-sound/heat.htm> A variety of resources for the definition of heat, how to measure heat, how it is transferred, and thermometers.<https://billnye.com/billnye_resource/heat/><http://www.scilinks.org/Harcourt_Hsp/HspStudentRetrieve.aspx?Code=HSP306>Brain Pop/Brain Pop Jr.<https://jr.brainpop.com/science/energy/heat/><https://www.brainpop.com/science/energy/heat/>Interactive Games via Brain Pop<https://jr.brainpop.com/science/energy/heat/matching/> Earth Day- Hooray! By Stuart J. Murphy  <https://www.youtube.com/watch?v=lxs8Aebxxhk> |
| **Changes to Science Standards: Students are expected to perform the practices while learning the content and understanding the crosscutting concepts.** | | | |
| **Science and Engineering Practices**  Students can use their understanding to investigate the natural world through the practices of science inquiry, or solve meaningful problems through the practices of engineering design.  **Crosscutting Concepts**  Provide students with connections and intellectual tools that are related across the differing areas of disciplinary content and can enrich their application of practices and their understanding of core ideas  **Core Ideas**  Core ideas cover the four domains: physical sciences, earth and space sciences, life science, and engineering and technology. | |  | |