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**Georgia Habitats**

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| **Estimated Time: 3 – 5 Class Segments** | |
| **GSE Standard(s) and Element(s):**  **S3L1. Obtain, evaluate, & communicate information about the similarities & differences between plants, animals, & habitats found within geographic regions (Blue Ridge Mtns., Piedmont, Coastal Plains, Valley & Ridge, and Appalachian Plateau) of Georgia.**  a. Ask questions to differentiate between plants, animals, & habitats found within Georgia’s geographic regions.  b. Identify external features & adaptations (camouflage, hibernation, protection, migration, mimicry) of animals to construct an explanation of how these features/adaptations allow survival in their habitat.  **Supporting Standards:**  **ELAGSE3RI1: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.**  **ELAGSE3RI3: Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.**  **ELAGSE3RI7: Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).** | |
| **Science and Engineering Practices:**  **Constructing Explanations and Designing Solutions**  Use evidence (e.g., observations, patterns) to support an explanation. | **Disciplinary Core Ideas:**  **Inheritance of Traits**  Other characteristics result from individuals’ interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment.  **Variation of Traits**  The environment also affects the traits that an organism develops. |
| **Crosscutting Concepts:**  **Cause and Effect**  Cause and effect relationships are routinely identified and used to explain change. |
| **Authentic Scenario (Phenomena):**  Have students watch the video, Mysterious Creature Washes Up on South Georgia Beach: <https://www.youtube.com/watch?v=KWM58YwnmYU>  What do you think the animal was? What physical features are clues?  *Source:* [*https://www.georgiascienceteacher.org/phenomena/*](https://www.georgiascienceteacher.org/phenomena/) | **Vocabulary:**   * habitat * geographic regions (Blue Ridge Mtns., Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) * feature * adaptation * trait * survive |
| **Guiding Questions:**  What are the 5 main geographic regions of Georgia?  What types of habitats are found within these geographic regions?  How do the characteristics of a habitat determine the organisms that live there?  How does an organism’s features allow it to live and thrive in a certain habitat? |
| **Materials:**   * Devices with Internet access to research information on habitats * “And the Tide Comes In…Exploring a Coastal Salt Marsh” by Merryl Alber * Georgia Habitat Information Organizer * Poster board or butcher paper * Markers/pens | **Safety Considerations:**   * N/A |
| **Technology Integration:**   * Devices with Internet access |

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| **5E Stage** | **Student Activities**  How will students engage actively in the three dimensions throughout the lesson?    **Teacher Activities**  How will the teacher facilitate and monitor student learning? |
| **Engage** | Begin by showing the students the video, Mysterious Creature Washes Up on South Georgia Beach: <https://www.youtube.com/watch?v=KWM58YwnmYU>  Ask, “What do you think the animal was? What physical features are clues?”  Next, show the students a picture of a Georgia alligator. Explain to them that, like the big gator, all living things have bodies that are adapted for the unique habitats in which they live.    If you want to know what an animal does to survive, just check out its body parts very closely (remind students to stay a safe distance from wild animals). Have students observe the gator closely and list as many of its characteristics as possible. Then, have your students predict and discuss how they think the characteristics (features) of the alligator help it to survive and thrive within its natural habitat. |
| **Explore** | Introduce one habitat to students by reading “And the Tide Comes In…Exploring a Coastal Salt Marsh” by Merryl Alber. Model to students how to fill out the Georgia Habitat Information Organizer that can be used to guide their research and work. Have students use the information presented in illustrations and words in the book to demonstrate understanding and have students help in filling out the organizer as the book is read.  Tell students that they are going to form groups to research the other different habitats that are found within the state of Georgia. These habitats include the mountains (Blue Ridge, Appalachian Plateau, Valley and Ridge), Piedmont, and Coastal Plains (ocean, coast, marsh, and swamp).  Each group will produce a poster report on their habitat that should include the following information:   * Type of habitat * Climate in the habitat * Common animals in the habitat (at least 2) with illustrations * Common plants in the habitat (at least 2) with illustrations * Describe how one of these animals or plants is adapted to the special conditions of their habitat.   If desired, you can use the Georgia Habitat Information Organizer to guide your research and work.  **Differentiation:**  Assist with research as necessary. |
| **Explain** | As needed, emphasize that habitats are the place (environment) in which an organism lives. Habitats provide the things that an organism needs to live, grow and reproduce. While some organisms, like a squirrel, are adapted to survive in a wide range of habitats, others are more keenly adapted to the special conditions of their habitat. For example, while alligators thrive in the warm swamps of South Georgia, you won’t see them in the North Georgia Mountains where the water and weather are too cold for their survival.  When a genetic change occurs that helps a plant or animal to survive, this change is called an adaptation. An adaptation may involve an external feature of an animal such as camouflage, or thick fur, a behavior such as hibernation for arctic animals, or other traits such as the venom of a snake that helps to protect it from predators. Animals that have favorable characteristics (adaptations) are more likely to survive and have babies than those that lack these traits. |
| **Elaborate** | Examine an area in the community and identify the habitat of that area – mountains, Piedmont, or Coastal Plains. Identify the kind of plants and animals that live there. Make a model of the habitat. Which elements of the habitat are natural, and which are introduced by man? For example, new trees not originally found in that area, or an artificial lake, or animals introduced into the area. |
| **Evaluate** | As a class, have students share their habitat posters and explain how their animals and plants are uniquely adapted to their habitats. Evaluate student presentations of their habitats based on clarity, creativity, and quality. |