



# Getting to Know Georgia's Regions

## *A Walk Through Time in Georgia Scavenger Hunt:* High School Environmental Science Georgia Performance Standards

### **Piedmont Region**

Examine the Piedmont region, then circle the biotic factors you find in this location.

- **SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.**
  - c. Characterize the components that define a biome. Abiotic factors—to include precipitation, temperature and soils. Biotic factors—plant and animal adaptations that create success in that biome.

### **Ridge and Valley Region**

Take a look around the Ridge and Valley mountain region. Can you spot three abiotic factors in this environment? What are they?

- **SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.**
  - c. Characterize the components that define a biome. Abiotic factors—to include precipitation, temperature and soils. Biotic factors—plant and animal adaptations that create success in that biome.

Briefly explain how the abiotic factors that you found help to determine the biotic factors in this environment.

- **SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.**
  - a. Describe how the abiotic components (water, air, and energy) affect the biosphere.
- **SEV3. Students will describe stability and change in ecosystems.**
  - d. Explain how biotic and abiotic factors influence populations.

### **Coastal Plain Region**

The water that the dinosaurs are shown drinking in *The Ruling Dinosaur* gallery is the same water that is on Earth now. Since Earth is a closed system, as a whole, water has neither been added nor lost over time. This is an example of the law of conservation of matter.

- **SEV1. Students will investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.**
  - d. Relate the cycling of matter and the flow of energy to the Laws of Conservation of matter and energy. Identify the role and importance of decomposers in the recycling process.

Locate the gopher tortoise in the Coastal Plain. His burrow, which can be more than 40 feet long, provides shelter to numerous other animal species. These animals benefit from the shelter, but the gopher tortoise is neither harmed nor helped. This relationship is called: commensalism.

- **SEV3. Students will describe stability and change in ecosystems.**
  - e. Describe interactions between individuals (i.e. mutualism, commensalism, parasitism, predation, and competition).



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### **Okefenokee Swamp Region**

Find two examples of adaptations (plant or animal) that would make it easier to live in the Okefenokee Swamp. Explain how the adaptation helps the organism.

- **SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.**
  - c. Characterize the components that define a biome. Abiotic factors—to include precipitation, temperature and soils. Biotic factors—plant and animal adaptations that create success in that biome.

Using plants and animals that you find in the swamp, create a food chain for this habitat. What is the main reason that energy passed up the food chain decreases with each level?

- **SEV1. Students will investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.**
  - b. Relate energy changes to food chains, food webs, and to trophic levels in a generalized ecosystem, recognizing that entropy is a primary factor in the loss of usable food energy during movement up the trophic levels.

Give two examples of decomposers. Where would they fit in the food chain?

- **SEV1. Students will investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.**
  - d. Relate the cycling of matter and the flow of energy to the Laws of Conservation of matter and energy. Identify the role and importance of decomposers in the recycling process.

### **Coast and Barrier Islands Region**

The loggerhead sea turtle has several adaptations to aid life in a marine environment. After each adaptation, explain how it helps the turtle.

- **SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.**
  - c. Characterize the components that define a biome. Abiotic factors—to include precipitation, temperature and soils. Biotic factors—plant and animal adaptations that create success in that biome.

### **Gray's Reef**

Using the following organisms or systems from Gray's Reef, match them up with their proper designations.

- **SEV2. Students will demonstrate an understanding that the Earth is one interconnected system.**
  - b. Recognize and give examples of the hierarchy of the biological entities of the biosphere (organisms, populations, communities, ecosystems, and biosphere).