

Third Grade Canal Sciences Program Outline

Standards:

GA: S3CS7. Students will be familiar with the character of scientific knowledge and how it is achieved.

Students will recognize that: a. Similar scientific investigations seldom produce exactly the same results, which may differ due to unexpected differences in whatever is being investigated, unrecognized differences in the methods or circumstances of the investigation, or observational uncertainties.

S3CS8. Students will understand important features of the process of scientific inquiry.

Students will apply the following to inquiry learning practices:

a. Scientific investigations may take many different forms, including observing what things are like or what is happening somewhere, collecting specimens for analysis, and doing experiments.

b. Clear and active communication is an essential part of doing science. It enables scientists to inform others about their work, expose their ideas to criticism by other scientists, and stay informed about scientific discoveries around the world.

c. Scientists use technology to increase their power to observe things and to measure and compare things accurately.

S3L1. Students will investigate the habitats of different organisms and the dependence of organisms on their habitat. c. Identify features of animals that allow them to live and thrive in different regions of Georgia. d. Explain what will happen to an organism if the habitat is changed. **S3L2.** Students will recognize the effects of pollution and humans on the environment. a.

Explain the effects of pollution (such as littering) to the habitats of plants and animals. b. Identify ways to protect the environment.

• Conservation of resources • Recycling of materials. **S3E2.** Students will investigate fossils as evidence of organisms that lived long ago. a. Investigate fossils by observing authentic fossils or models of fossils or view information resources about fossils as evidence of organisms that lived long ago. b. Describe how a fossil is formed.

SC: 3-2.2 Explain how physical and behavioral adaptations allow organisms to survive (including hibernation, defense, locomotion, movement, food obtainment, and camouflage for animals and seed dispersal, color, and response to light for plants). 3-2.3 Recall the characteristics of an organism's habitat that allow the organism to survive there. 3-2.4 Explain how changes in the habitats of plants and animals affect their survival.

3-2.5 Summarize the organization of simple food chains (including the roles of producers, consumers, and decomposers).

Essential Question(s):

1. What happens if an animal's habitat is disturbed?

2. What effects do humans and pollution have on the environment and how does this affect animal and plant survival?

3. How do adaptations help organisms survive, and what role does the food chain play in everything?

Objectives:

Students will be able to explain the habitats of animals and plants.

SWBAT develop an understanding of the effects of pollution and the importance of recycling and conservation.

SWBAT determine the necessary adaptations plants and animals employ to survive.

Plan for Field Trip:

1. Students will alternate between activities being conducted within the Interpretive Center, Cotton Room (new classroom), and/or courtyard. There will be a boat option at extra cost that can be included in the field trip.

2. Students will participate in the Canal Quest, an activity that will facilitate higher order thinking skills and cooperative learning. Students will find answers to science questions using clues in groups throughout the Center and courtyard to learn about plants, animals, their habitats, environmental awareness, what plants and animals do to survive that is unique, and much more.

3. In the Cotton Room, students will participate in the Discovery Learning stations (2 out of 5 activities chosen by the teacher prior to the day of the trip) where they will participate in a food chain and flow of energy diagram, an animal track identification game in groups, and an Animal Meet & Greet where they meet a native frog and learn about its habitat, characteristics, etc. They will learn the adaptations and physical features of animals needed to survive in their environment. They will also develop conclusions through kinesthetic learning.

4. Students will participate in a Heritage Area Discovery Walk detailing the harmful effects of pollution, the necessitation of conservation and recycling, as well as important physical and behavioral adaptations of plants and animals in response to humans, other animals, and changes in their habitats.

5. Students may participate in the Eco-Active boat ride option. Each activity will concentrate on the environment and the

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importance of taking care of it. They will be able to make real world connections by relating events to the Augusta Canal.
6. Students will answer questions throughout the learning experience to facilitate understanding and reinforce knowledge.

Timeline: 9:45 am-1:30 pm

Canal Quest: 30 minutes

Discovery Learning Stations (Cotton Room): 30 minutes

Boat Ride (optional): 45 minutes

Discovery Walk: 30 minutes

Additional time included for travel time, lunch, restroom, etc.

Materials:

-Copies of Canal Quest, food chain diagram, Animal Tracking game

-Rulers, crayons, markers, and other science equipment (as needed)

-Binoculars and magnifiers for Heritage Area Discovery Walk

-Sidewalk chalk

- Hand sanitizer for Wildlife Meet & Greet

Assessment:

Students will show what they learned by taking 5-10 minutes at the end of the field trip to use sidewalk chalk to draw an important idea or concept they learned about during the trip and sign their name. Ongoing assessment will take place throughout the course of the field trip with questions and activities, as well as worksheet results.