Third Grade Curriculum Pacing Guide

Cross-cutting Concepts: Patterns, Cause and Effect, Structure and Function, Stability and Change

Topics: Rocks and Soils of Georgia

Estimated Time Instructional Segment: 14 weeks

Anchoring Phenomenon	Standard	Instructional Segment	Disciplinary Core Ideas	Science and Engineering Practices	Instructional Notes
Show students the What's in a Rock PowerPoint and discuss how the items came to be in the rocks, and what effect the items might have on the rock in the future.	• **S3E1** a, b, c • **S3E2** a, b • **S3L1**c	Rocks, Soils and Fossils of Georgia	**ESS1.C The History of Planet Earth** ● Earth has changed over time. Understanding how landforms develop, are weathered (broken down into smaller pieces), and erode (get transported elsewhere) can help infer the history of the current landscape. The presence and location of certain fossil types indicate the order in which rock layers were formed. **ESS2.A Earth Materials and Systems** ● Rainfall helps shape the land and affects the types of living things found in a region. Water, ice, … break rocks, soils, and sediments into smaller particles and move them around. **ESS2.C The Roles of Water in Earth's Surface Processes** ● The downhill movement of water as it flows to the ocean shapes the appearance of land. **ESS2.E: Biogeology** ● Living things affect the physical characteristics of their regions (e.g. plants' roots hold soil in place, beaver shelters and human built dams alter the flow of water, plants' respiration affects the air) Many types of rocks and minerals are formed from the	• Asking questions and defining problems • Developing and using models • Planning and carrying out investigations • Constructing explanations and designing solutions • Engaging in argument from evidence • Obtain, evaluate and communicate	**Background**: Wind and water help to break down rocks and form new landscapes. Rocks break down into smaller pieces, mix with organic material, and form soil. Fossils are found only in sedimentary rock. Fossils would burn up while undergoing the process of igneous rock formation, and they cannot survive the heat and pressure of metamorphic rock formation. **Safety**: After handling rocks and soils, students should be sure to wash their hands. Students in third grade should not use sharp or breakable items to test rock hardness. Items, especially metallic items, set in the sun may become especially hot. Use caution when handling items that have been in the sunlight.

			remains of organisms or are altered by their activities. **LS4.A Evidence of Common Ancestry and Diversity** ● Fossils provide evidence about the types of organisms (both visible and microscopic) that lived long ago and also about the nature of their environments. Fossils can be compared with one another and to living organisms according to their similarities and differences **LS4.C Adaptation** ● Changes in an organism's habitat are sometimes beneficial to it and sometimes harmful. For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all.		By the end of this unit, students are using the following language in their speaking and writing during EXPLAIN or ELABORATE: ● Weathered ● Erosion ● Fossil ● Rock layers ● Luster ● Texture ● Sediments ● Organisms ● Similarity ● Difference ● Beneficial ● Harmful ● Visible ● Microscopic ● Habitat ● Extinct

This instructional segment will connect to Life on Earth and Energy. Students will use what they know about rocks and soils to learn about the plants and animals in different regions and how they keep warm in the sun.