SCIENCE PARENT GUIDE – UNIT 1

IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME

EARTH LANDFORMS OF GEORGIA

DESCRIPTION

In this unit, students will become familiar with landforms around the world! They will learn about the constructive and destructive processes that are continuously shaping our ever changing Earth. They will explore places like where glaciers are found, the Ring of Fire, the San Andreas Fault, and the ocean floor. In this unit of study, the students will explain what constructive and destructive forces are at work, how those forces impact the environment, and how humans have used technology and/or interventions in attempts to control the effects of these constructive and destructive processes that shape our earth.

KEY WORDS TO KNOW

- Constructive: the process of building up
- Destructive: the process of breaking down
- Topography: the arrangement of physical features of an area
- Plate: Continent-sized slab of Earth's crust and upper mantle
- Crust: The solid outside layer of the Earth
- Mantle: The middle layer of the Earth
- Core: The center of the Earth; The dense center of Earth; a ball made mostly of two metals, iron and nickel
- Lithosphere: The cool, solid portion of Earth that includes all of the crust and part of the upper mantle
- Continental Drift: A theory of how Earth's continents move over its surface
- Magma: Melted rock inside Earth
- Plate Boundary: Place where two pieces of Earth's crust meet
- Convergent Boundary: place where two pieces of Earth's crust push together
- Divergent Boundary: place where two pieces of Earth's crust pull apart
- Transform Boundary: place where two pieces of Earth crust slide past each other
- Earthquake: The shaking of Earth's surface caused by movement of the crust and mantle
- Volcano: An opening in Earth's surface from which lava flows
- Lava: A melted rock that reaches Earth's surface

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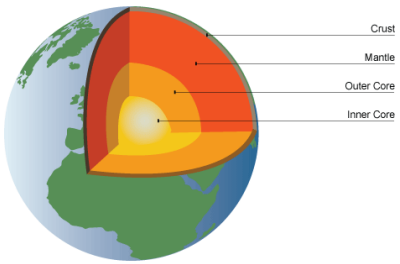
Important Concepts Addressed in this Unit	Sample Problems	How You Can Help Your Child
S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes. a. **Construct an argument** supported by scientific evidence to identify surface features (examples could include deltas, sand dunes, mountains, volcanoes) as being caused by constructive and/or destructive processes (examples could include deposition, weathering, erosion, and impact of organisms). b. **Develop simple interactive models** to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes. c. **Ask questions to obtain information** on how technology is used to limit and/or predict the impact of constructive and destructive processes. (Clarification statement: Examples could include seismological studies, flood forecasting (GIS maps), engineering/construction methods and materials, and infrared/satellite imagery.) Beach reclamation (Georgia coastal islands)	1. Compare and contrast constructive and deconstructive processes. 2. What surface features are created from constructive processes? 3. Construct an argument supported by evidence to explain how volcanos are created from constructive and destructive processes. 4. How does the mantle affect the crust layer of Earth? 	**Online Resources** • Science Curriculum: STEMscopes or HMH via MyBackpack • Milestones Assessment Guide https://lorpub.gadoe.org/xmlui/bitstream/handle/123456789/49665/Gr_05_Assessment_Guide_10.25.17.pdf?sequence=1 • Structure of Earth http://www.bbc.co.uk/science/earth/surface_and_interior/inside_the_earth • Plate Tectonics • http://www.kidsgeo.com/geology-for-kids/0043-plate-tectonics.php • Landforms • http://studyjams.scholastic.com/studyjams/jams/science/rocks-minerals-landforms/landforms.htm

		• Earthquake Simulation: http://www.tlc.com/games-quizzes/earthquake-simulator.htm • Volcano Simulation: http://kids.discovery.com/games/build-play/volcano-explorer

Changes to Science Standards: Students are expected to perform the practices while learning the content and understanding the crosscutting concepts.

Science and Engineering Practices

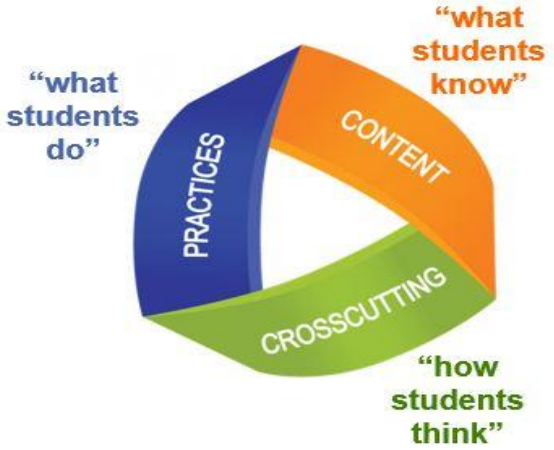
Students can use their understanding to investigate the natural world through the practices of science inquiry, or solve meaningful problems through the practices of engineering design.

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.



Quoted text from Peter A'Hearn