

**Landforms and Oceans 5**  
**2017 Science P.L.U.S. Institute**  
Roper Mountain Science Center  
Greenville, South Carolina

**Academic Course Description:**

Hands-on, inquiry-based activities emphasizing science process skills will provide the vehicles for studying the Earth and ocean science concepts that correlate to the fifth grade South Carolina Science Academic Standards. Course topics will provide additional content to help develop a secure knowledge base for elementary science teachers. Participants will observe and measure characteristic properties of the earth and ocean features and movement, and investigate their interaction and change. Participants receive a significant quantity of materials for performing the activities in their own classrooms.

**Outline of Course Content:**

**Main standard: 5.E.3:** The student will demonstrate an understanding of how natural processes and human activities affect the features of Earth's landforms and oceans

**Standard 5.S.1:** The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content.

	Topics	Activities or Assignments	Correlation to SC Science Academic Standards
Monday	<p>Inquiry lesson</p> <p>Note booking</p> <p>Destructive/Constructive forces</p> <p>Weathering –</p> <p>Erosion</p>	<p>Discuss and set up ISNs</p> <p>Destructive/Constructive</p> <p>Weathering activity</p>	<p><b>5.S.1:</b> The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content.</p> <p><b>5.E.3B.1</b> Analyze and interpret data to describe and predict how natural processes (such as weathering, erosion, deposition, earthquakes, tsunamis, hurricanes, or storms) affect Earth’s surface.</p>
Tuesday	<p>Deposition-erosion, deposition, floods, landslides – pollution</p> <p>Earthquakes</p> <p>Ring of Fire-</p> <p>Volcanoes</p> <p>Tsunami/landslide ideas?</p>	<p>Erosion- activity</p> <p>Deposition activity</p> <p>Stream table activities</p> <p>Earthquake activity</p> <p>Ring of Fire- activity</p> <p>Volcanoes- Mt St Helens-</p>	<p><b>5.S.1A.</b> Conceptual Understanding: The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers.</p> <p><b>5.S.1B.</b> Conceptual Understanding: Technology is any modification to the natural world created to fulfill the wants and needs of humans. The engineering design process involves a series of iterative steps used to solve a problem and often leads to the development of a new or improved technology</p> <p><b>5.E.3B.1</b> Analyze and interpret data to describe and predict how natural processes (such as weathering, erosion, deposition, earthquakes, tsunamis, hurricanes, or storms) affect Earth’s surface.</p> <p><b>5.E.3:</b> The student will demonstrate an understanding of how natural processes and human activities affect the features of Earth’s landforms and oceans</p>
Wednesday	<p>Watersheds</p> <p>Ocean Floor features</p>	<p>Watershed simulation</p> <p>Ocean Floor models</p>	<p><b>5.E.3A.1</b> Construct explanations of how different landforms and surface features result from the location and movement of water on Earth’s surface through watersheds (drainage basins) and rivers.</p> <p><b>5.E.3A.</b> Conceptual Understanding: Some of the land on Earth is located above water and some is located below the oceans. The downhill movement of water as it flows to the ocean shapes the appearance of the land. There are patterns in the location and structure of landforms found on the continents and those found on the ocean floor.</p> <p><b>5.E.3A.2</b> Develop and use models to describe and compare the characteristics and locations of the landforms on continents with those on the ocean floor (including the continental shelf and slope, the mid-ocean ridge, the rift zone, the trench, and the abyssal plain).</p>

Thursday	<p>Ocean Movement</p> <p>Human impact</p>	<p>Waves activity</p> <p>Current activity</p> <p>Oil Spill activity</p> <p>Water well activity</p>	<p><b>5.E.3B.2</b> Develop and use models to explain the effect of the movement of ocean water (including waves, currents, and tides) on the ocean shore zone (including beaches, barrier islands, estuaries, and inlets).</p> <p><b>5.E.3B. Conceptual Understanding:</b> Earth's oceans and landforms can be affected by natural processes in various ways. Humans cannot eliminate natural hazards caused by these processes but can take steps to reduce their impacts. Human activities can affect the land and oceans in positive and negative ways.</p> <p><b>5.E.3B.4</b> Define problems caused by natural processes or human activities and test possible solutions to reduce the impact on landforms and the ocean shore zone#</p>
Friday	<p>Human impact</p>	<p>Pollution activity</p>	<p><b>5.E.3B.3</b> Construct scientific arguments to support claims that human activities (such as conservation efforts or pollution) affect the land and oceans of Earth.</p> <p><b>5.E.3B.4</b> Define problems caused by natural processes or human activities and test possible solutions to reduce the impact on landforms and the ocean shore zone#</p>

Daily Activities:

- We will be note booking each day.