

GRADE FIVE

EARTH SCIENCE: CHANGES IN LANDFORMS AND OCEANS

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.

5.E.3A. 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.

Performance Indicators: Students who demonstrate this understanding can:

5.E.3A.1 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.

5.E.3A.2 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).

5.E.3B. Conceptual Understanding: 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.

Performance Indicators: Students who demonstrate this understanding can:

5.E.3B.1 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.

5.E.3B.2 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).

5.E.3B.3 Construct scientific arguments to support claims that human activities (such as conservation efforts or pollution) affect the land and oceans of Earth.

5.E.3B.4 Define problems caused by natural processes or human activities and test possible solutions to reduce the impact on landforms and the ocean shore zone.