

Earth and Space Science (Earthquakes)

Grade 8 Science Grade 8 Science

Start Date: November 04, 2013

End Date : November 15, 2013

<p>Unit Overview</p> <p>This topic focuses on the physical features of Earth and how they formed. This includes the interior of Earth, the rock record, plate tectonics and landforms.</p>	<p>Content Elaborations</p> <p>Physical world maps, cross sections, models (viewed from above and from the side) of plate boundaries, movement at the boundary and the relationship between heat from Earth's core, convection currents, and plate movement should be explored. World distribution of tectonic plates and boundaries investigated (e.g., Ring of Fire, San Andreas Fault, Mid-Atlantic Ridge, Hawaiian Islands, New Madrid Fault System).</p> <p>Volcanic activity, earthquakes, tsunamis, geysers, hot springs, and hydrothermal vents, arcs, hot spots and rift valleys should all be included in the study of plate boundaries. Plate boundary identification (convergent, divergent, transform) and the resulting features or events. The focus must be on the location, type, and direction of plate movement and the result of plate interactions and plate names.</p>	<p>Unit Resources</p> <p>Gizmo Lab: Earthquake - Determining an Epicenter</p> <p>Gizmo Lab: Earthquake - Recording Station</p> <p>Study Island Enrichment</p> <p>Textbook: Chapter 8</p>
<p>Unit Vocabulary</p> <p>Seismology</p> <p>Deformation</p> <p>Seismic Waves</p> <p>P Waves</p> <p>S Waves</p> <p>Seismograph</p> <p>Seismogram</p> <p>Epicenter</p> <p>Focus</p> <p>Gap Hypothesis</p>	<p>Enduring Understandings (Big Ideas)</p> <p>There are three main types of plate boundaries: divergent, convergent and transform. Each type of boundary results in specific motion and causes events (such as earthquakes or volcanic activity) or features (such as mountains or trenches) that are indicative of the type of boundary</p>	<p>Connections</p>

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Seismic Gap		
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Standards

OH Academic Content Standards - Science (2011) - Grade 8

Strand ESS Earth and Space Science

Topic ESS.1 This topic focuses on the physical features of Earth and how they formed. This includes the interior of Earth, the rock record, plate tectonics and landforms.

Content Statement ESS.1.2 Earth's crust consists of major and minor tectonic plates that move relative to each other.

ESS.1.2.c There are three main types of plate boundaries: divergent, convergent and transform. Each type of boundary results in specific motion and causes events (such as earthquakes or volcanic activity) or features (such as mountains or trenches) that are indicative of the type of boundary.

Content Statement ESS.1.3 A combination of constructive and destructive geologic processes formed Earth's surface.

ESS.1.3.a Earth's surface is formed from a variety of different geologic processes, including but not limited to plate tectonics.

Student Assessment Chapter Test Gizmo Assessments Study Island Assessments Project: Quake Challenge (pg. 240) Project: Research/Webquest on 2012 Japan earthquake	Unit Reflection
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Earthquake Activity

Content	Skills	Assessment
A. Earthquakes	A. Earthquakes <ol style="list-style-type: none">1. Explain where earthquakes take place2. Explain what causes earthquakes3. Identify three different types of faults that occur at plate boundaries4. Describe how energy from earthquakes travels through the Earth5. Explain how earthquakes are detected6. Describe how to locate an earthquake's epicenter7. Explain how the strength of an earthquake is measured8. Explain how the intensity of an earthquake is measured9. Explain how earthquake-hazard level is determined10. Compare methods of earthquake forecasting11. Describe ways to safeguard buildings against earthquakes	

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	12. Outline earthquake safety procedures	
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