

## Earth and Space Science (Volcanoes)

Grade 8 Science    Grade 8 Science

Start Date: November 18, 2013

End Date : November 29, 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 (with plate boundaries, movement at the boundary and relationship between heat from Earth's core, convection) should be explored. World distribution of tectonic activity should be investigated (e.g., Ring of Fire, San Andreas Fault, Hawaiian Islands, New Madrid Fault System).</p> <p>Volcanic activity, earthquakes, tsunamis, geysers, hot spots, arcs, hot spots and rift valleys should all be included. Plate boundary identification (convergent, divergent, transform) and the resulting features or events. The focus must be on the type and direction of plate movement and the resulting features. Plate names.</p>	<p>Unit Resources</p> <p>Textbook: Chapter 9</p>
<p>Unit Vocabulary</p> <p>Volcano Magma Chamber Vent Crater Caldera Lava Plateau Rift Zone Hot Spot</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>

### Standards

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## **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	Unit Reflection
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## **Volcanic Activity**

<b>Content</b>	<b>Skills</b>	<b>Assessment</b>
A. Volcanoes	A. Volcanoes <ol style="list-style-type: none"><li>1. Distinguish between nonexplosive and explosive volcanic eruptions</li><li>2. Identify the features of a volcano</li><li>3. Explain how the composition of magma affects the type of volcanic eruption that will occur</li><li>4. Describe the four types of lava and four types of pyroclastic material</li><li>5. Explain how volcanic eruptions can affect climate</li><li>6. Compare the three types of volcanoes</li><li>7. Compare craters, calderas, and lava plateaus</li><li>8. Describe the formation and movement of magma</li><li>9. Explain the relationship between volcanoes and plate tectonics</li><li>10. Summarize the methods scientists use to predict volcanic eruptions</li></ol>	