Earth and Space Science (Plate Tectonics)

Grade 8 Science Grade 8 Science
Start Date: October 14, 2013
End Date : November 01, 2013

Unit Overview	Content Elaborations	Unit Resources
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.	The historical data related to the present plate te "puzzle-like-fit" noticed as early as Magellan an paleontological data, paleoclimate data, paleom convection theory (Holmes) and sea floor spread introduced, including seismic data, GPS/GIS da movement), robotic studies of the sea floor and Physical world maps, cross sections, models (vi plate boundaries, movement at the boundary an relationship between heat from Earth's core, co should be explored. World distribution of tecton investigated (e.g., Ring of Fire, San Andreas Fa Hawaiian Islands, New Madrid Fault System). Volcanic activity, earthquakes, tsunamis, geyse arcs, hot spots and rift valleys should all be incl boundaries. Plate boundary identification (conv the resulting features or events. The focus must and direction of plate movement and the result plate names.	Gizmo Lab: **Plate Tectonics** Gizmo Lab: **Buiding Pangaea** Lab: **Faults** Textbook: Chapter 7 United Streaming Study Island Enrichment
Unit Vocabulary	**Enduring Understandings (Big Ideas)**	**Connections**
Plate tectonics Convergent boundary Divergent boundary	**Earth's crust consists of major and minor tectonic plates that move relative to each**	

Transform boundary Earthquakes Volcanoes Subduction zones Trenches Ridges Sea-floor spreading Hess Lithosphere Crust Mantle Plate Continental Drift Pangaea Supercontinent Landmass Ice Age Glacier Fossil Sea-Floor Spreading Compression Tension Folding Fault	**other.** Historical data and observations such as fossil distribution, paleomagnetism, continental drift and sea-floor spreading contributed to the theory of plate tectonics. The rigid tectonic plates move with the molten rock and magma beneath them in the upper mantle. Convection currents in the crust and upper mantle cause the movement of the plates. The energy that forms convection currents comes from deep within the Earth. 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.	

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.

Earth and Space Science (Plate Tectonics)

Grade 8 Science Grade 8 Science
Start Date: October 14, 2013
End Date : November 01, 2013

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.

Student Assessment	Unit Refection
Chapter Test Study Island Assessment Gizmo Assessment	

Plate Boundaries

Content	Skills	Assessment
A. Plate Boundaries	A. Plate Boundaries 1. Desribe the three types of tectonic plate boundaries 2. Describe the three forces thought to move tectonic plates 3. Explain how scientists know about the structure of Earth's interior 4. Explain how scientists measure the rate at which tectonic plates move 5. Describe Wegener's hypothesis of continental drift 6. Explain how sea-floor spreading provides a way for continents to move 7. Describe how new oceanic lithosphere forms at mid-ocean ridges 8. Explain how magnetic reversals provide evidence for sea-floor spreading 9. Identify pieces of evidence that continental drift occurs (ex/ shape of continents, fossil record) 10. 10. Describe two types of stress that deform rock 11. Describe three major types of folds 12. Explain the difference between the three major types of faults 13. Identify the most common types of mountains	