

Lesson Plan

Subject: Earth Science

Grade Level: Gifted 6th

1-11-16 to 1-15-16

Content Standard:

S6E5. Students will investigate the scientific view of how the earth's surface is formed.

Recognize that lithospheric plates constantly move and cause major geological events on the earth's surface. Explain the effects of physical processes (plate tectonics, erosion, deposition, volcanic eruption, gravity) on geological features including oceans (composition, currents, and tides).

Vocabulary: Lithosphere, Asthenosphere, crust, mantle, core, plate tectonics, continent, seismic, volcano, earthquake, transform boundary, convergent boundary, divergent boundary, seismologist, seismograph, Alfred Wegner, continental drift, Richter Scale, subduction

Parallel

Alternative

Station

Team

Independent

	Beginning May include: Opening, warm up, review, anticipatory set, etc	Middle May include: Instruction, checking for understanding, independent or group practice	End May include: Closing, assessments, extension of lesson, etc.
Monday Turn in HW of Engineering Method	What evidence do scientist have that continents were joined together?	What is Unpacking the Standard? Task 1: Student will deconstruct the standards based on verb and noun usage. Task 2: After deconstructing the standard, Student will choose 4 vocabulary words that identify with the essential question	Class discussion of essential question
Tuesday Turn in Gizmo- Plate Tectonics	EQ:How are the earth's layers alike and different?	students will use their 21 st knowledge of technology using OneNote class notebook Task 1:	
Wednesday	EQ:How are the earth's layers alike and different?	What is Unpacking the Standard? Task 1: Student will deconstruct the standards based on verb and noun usage. Task 2: After deconstructing the standard, Student will choose 4 vocabulary words that identify with the essential question	
Thursday		Quiz on structure of the earth	Class reflection
Friday		STEM-	

Marzano's Essential 9 (Highlight Strategies Used)

- Identifying Similarities and Difference
- Summarizing and Note-taking
- Reinforcing Effort and Providing Recognition
- Homework and Practice
- Nonlinguistic Representations
- Cooperative Learning
- Setting Objectives and Providing Feedback
- Generating and Testing Hypotheses
- Cues, Questions, and Advance Organizers

Multiple Intelligence (Highlight Accessed Intelligences)

- Verbal-Linguistic
- Logical-Mathematical
- Visual-Spatial
- Bodily-Kinesthetic
- Musical
- Interpersonal
- Intrapersonal
- Naturalistic

Name: _____ Date: _____ Pd: _____

Unpacking the Standards

(Unit 4–The Dynamic Earth)

Standard S6E5: *(Circle the noun(s) and underline the verb(s).)*

S6E5. Students will investigate the scientific view of how the earth's surface is formed.

Essential Questions

1. How are earth's layers alike and different?
2. How does the movement of the lithospheric plates cause major events on earth's surface?
3. What evidence do scientist have that continents were one joined together?

Enduring Understandings

Students will understand that:

- the earth is layered with a partly molten, metallic core; a mantle that though solid, is hot enough to flow; and a colder, rigid lithosphere.
- lithospheric plates on the scales of continents and oceans constantly move.
- major geological events, such as earthquakes, volcanic eruptions, and mountain building, result from these plate motions.
- some changes in the earth's surface are abrupt (such as earthquakes and volcanic eruptions) while other changes happen very slowly (such as uplift and wearing down of mountains)

Do (Verbs-from the Standards)	Know (Nouns-From the Standards)
a. compare and contrast	a. Earth's crust, mantle, and core- Temperature, pressure, and density and composition
d.	d.
e.	e.
f.	f.
g.	g.

My Essential Question:

S6E5. Students will investigate the scientific view of how the earth's surface is formed.

- a. Compare and contrast the Earth's crust, mantle, and core including temperature, density, and composition.**
- b. Investigate the contribution of minerals to rock composition.
- c. Classify rocks by their process of formation.
- d. Describe processes that change rocks and the surface of the earth.**
- e. Recognize that lithospheric plates constantly move and cause major geological events on the earth's surface.**
- f. Explain the effects of physical processes (plate tectonics, erosion, deposition, volcanic eruption, gravity) on geological features including oceans (composition, currents, and tides).**
- g. Describe how fossils show evidence of the changing surface and climate of the Earth.**
- h. Describe soil as consisting of weathered rocks and decomposed organic material.
- i. Explain the effects of human activity on the erosion of the earth's surface.
- j. Describe methods for conserving natural resources such as water, soil, and air.

Key Vocabulary

Layers of Earth	Plate Tectonics		Earthquakes and Volcanoes
Crust	Convergent boundary	Valleys	Seismic waves
Mantle	Divergent boundary	Outcrop	Mountain
Outer core	Transform Boundary	Rift valley	Volcano
Inner core	Continental Drift	Seismograph	Earthquake
Seismic waves	Plate Tectonics	Normal fault	Earthquake focus
Lithosphere	Pangaea	Reverse fault	Earthquake epicenter
Asthenosphere	Fault	Strike-slip fault	magnitude
Convection currents	Fossil		Ring of Fire
Density	Mountain		Composite Volcano
Mohorovic's discontinuity (Moho)	Continents		Cinder Cone Volcano
Gutenberg's	Volcano		Shield Volcano

discontinuity			
Geothermal Energy	Earthquake		
	Subduction		