

Unit 4: Dynamic Earth

Content Area: **Template**
Course(s):
Time Period:
Length:
Status: **Published**

State Mandated Topics Addressed in this Unit

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N/A	N/A

Unit Name

Essential Questions

- How do earthquakes form?
- How do volcanoes form?
- What causes mountains to form?
- What do volcanic island chains tell us about plate tectonics?
- What happens at plate boundaries?

Objectives

- Compare and contrast earthquake magnitude and intensity and the scales to measure each
- Describe how a seismometer works
- Describe how Earth's crust responds to the addition and removal of mass
- Describe how Earth's tectonic plates result in many geologic features
- Describe how plate tectonics influences the formation of volcanism
- Discuss what continental drift is and why it was not accepted at first as a theory
- Distinguish among the three types of movements of faults
- Explain how magma type influences volcanic activity
- Explain the process of convection
- Identify the major part of a volcano
- Research a hotspot island chain to explain trends in plate tectonics
- Summarize the evidence that the seafloor is spreading

Standards

SCI.HS-ESS1-5	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.
SCI.HS-ESS1-6	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.
SCI.HS-ESS2-1	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.

Instructional Tasks/Activities

- Absolute age vs Relative age assignment
- Board Game Presentation
- Common assessment chapter test
- Common assessment quiz
- Constructed response
- Do nows and/or exit slips
- Early Earth Notes/Questions/Activity
- Earthquake data and plates
- Exit Cards (answer to daily objective questions)
- Fossil Notes and Questions
- Fossil Research Assignment
- Fossil Research Project
- Geologic features identification
- Graphic organizers or models
- Guided practice
- Homework
- Hotspot Research and Data Analysis
- Individual, small, and large group work
- Intro to Geology (Big Picture)
- Laboratory investigations within small groups
- Midterm
- Midterm review day 1 scientific measurements
- Midterm review day 2 meteorology, atmosphere, climate
- Midterm review day 3 minerology, rocks, and geology
- Plate Boundary Research/assignment
- Plate Tectonics Research Project
- Relative age and Hotspots
- Section Review Questions
- Superposition and Original Horizontality Practice
- Vocabulary flash cards or map (word, picture, sentence, example)

- Volcanic Island Board Game Creation

Assessment Procedure

- Flashcards and/or drill and practice
- Inquiry based activities with reflective discussion
- Laboratory groups
- Lecture with note taking or guided notes
- Online models and simulators
- Power point presentations
- Whole and small group discussions

Recommended Technology Activities

- Appropriate Content Specific Online Resource
- Chromebook
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Gimkit
- GoGuardian
- Google Classroom
- Google Docs
- Google Forms
- Google Slides
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- Quiziz
- Screencastify

Accommodations & Modifications & Differentiation

Accommodations and Modifications should be used to meet individual needs. Their IEP and 504 plans should be used in addition to the following suggestions.

Gifted and Talented

- Compare & Contrast
- Conferencing
- Debates
- Jigsaw
- Peer Partner Learning
- Problem Solving
- Structured Controversy
- Think, Pair, Share
- Tutorial Groups

Instruction/Materials

- alter format of materials (type/highlight, etc.)
- color code materials
- eliminate answers
- extended time
- extended time
- large print
- modified quiz
- modified test
- Modify Assignments as Needed
- Modify/Repeat/Model directions
- necessary assignments only
- Other (specify in plans)
- other- named in lesson
- provide assistance and cues for transitions
- provide daily assignment list
- read class materials orally
- reduce work load
- shorten assignments
- study guide/outline
- utilize multi-sensory modes to reinforce instruction

Environment

- alter physical room environment
- assign peer tutors/work buddies/note takers
- assign preferential seating
- individualized instruction/small group

- modify student schedule (Describe)
- other- please specify in plans
- provide desktop list/formula

Honors Modifications

Resources

- Resource 1
- Resource 2
- Resource 3
- Resource 4
- Resource 5