

# Unit #4 Geology

Content Area: **Science**  
Course(s):  
Time Period:  
Length: **25 days**  
Status: **Published**

## State Mandated Topics Addressed in this Unit

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N/A	N/A

## Geology

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## Learning Objectives

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- Objective 1 - 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.
- Objective 2 - 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.
- Objective 3 - 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.
- Objective 4 - Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.

## Essential Skills

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- Essential Skill 1 - Name the seven properties of minerals, define them and use the properties to identify rocks
- Essential Skill 2 - Use Mohs scale to identify rocks
- Essential Skill 3 - Identify types of rocks and how they are formed
- Essential Skill 4 - Identify soil samples by layer and composition
- Essential Skill 5 - Determine the differences amongst types of volcanoes and how they are formed
- Essential Skill 6 - Determine how earthquakes are formed and the result of earthquakes
- Essential Skill 7 - Identify movement of tectonic plates and effect on the Earth's surface

## Standards

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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-ESS2-3	Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.
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**

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- Build the three types of volcanoes and a model of tectonic plate
- Draw out soil layers
- Draw out the rock cycle
- Foldables – organization of material (scientific method & features of living things)
- Group discussion
- Identify composition of a soil sample
- Inquiry based activity- Identify rocks using mineral characteristics.
- Model the rock cycle
- PowerPoint presentation of material
- Review game
- Think, pair, share (read assigned section of text individually, discuss with a partner, present material in pairs to class – use PowerPoint as a reference)
- Use a soil profile triangle

## **Assessment Procedure**

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- Classroom Total Participation Technique
- Classwork
- DBQ
- Essay
- Exit Ticket/Entrance Ticket/Do Now
- Journal / Student Reflection
- Kahoot
- Other named in lesson
- Peer Review
- Performance
- Problem Correction
- Project
- Quiz
- Rubric

- Teacher Collected Data
- Test
- Worksheet

## **Recommended Technology Activities**

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- Appropriate Content Specific Online Resource
- Appropriate Content Specific Online Resource
- 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 Slides
- Google Slides
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- Quiziz
- Screencastify

## **Accommodations & Modifications & Differentiation**

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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**

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

- Tutorial Groups

## **Instruction/Materials**

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- 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**

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- 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**

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## Resources

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