



Welcome!

Grade 4, Unit 8

Geology: This Rock You're Standing On

Dear Family Member,

In this unit, students will learn about Earth's layers and geological features.

What's the story?

Students will learn that the earth is composed of **layers** that, through heat and pressure, cause movements that result in **geological features** above and below the earth's surface. They will also explore the relationships between those different **geological processes** and how they affect the **landscape** and related **environments** of the earth.

What will my student learn?

Students will learn about the theory of **plate tectonics** and how it explains the presence of **volcanoes, mountains, underwater trenches, ridges**, and other geological features. They will also study geological processes like **rock formation, weathering**, and **erosion** to understand how the earth changes over time and why it looks the way it does.

Students will review the stages of the writing process and engage in several **short writing projects**. They will have many opportunities to write, some of which include **drafting an informational pamphlet** about tsunamis, writing an **informational flyer** about a specific volcano, and creating a **descriptive paragraph** about a type of rock or item in the rock cycle.

Conversation starters

Ask your student questions about the unit to promote discussion and continued learning:

1. What similarities did geologists observe as they examined fossils on different continents?
Follow up: What similarities did geologists observe as they examined rock formations on different continents?
2. What are seismic waves?
Follow up: What did scientists learn from studying them? Where can seismic waves travel?
3. What are tectonic plates?
Follow up: What are some different ways tectonic plates can move?
4. What is the difference between an earthquake and an aftershock?
Follow up: What does a seismograph do?
5. What happens below the earth's surface to form a volcano?
Follow up: What happens above the earth's surface to form a volcano?