

Objective

By the end of this lesson, Heidi will understand the three main types of rocks—sedimentary, igneous, and metamorphic—along with the processes that form them and the minerals they contain. She will also be able to explain how these rocks are interconnected and their significance in the Earth's geology.

Materials and Prep

- Paper and colored pencils or markers
- Access to a computer or device for research (optional)
- Rock samples (if available) or images of different types of rocks
- Knowledge of basic geological terms (e.g., minerals, processes, formations)

Activities

- **Rock Identification Challenge:** Heidi will gather any rock samples she can find or research images of sedimentary, igneous, and metamorphic rocks. She will identify each type and note their characteristics, such as color and texture.
- **Rock Cycle Diagram:** Using colored pencils, Heidi will create a colorful diagram of the rock cycle, illustrating how each type of rock transforms into another. She can label the processes like erosion, melting, and cooling.
- **Mineral Exploration:** Heidi will research common minerals found in each type of rock. She will create a mini-poster showcasing these minerals, including pictures, names, and interesting facts about their uses.
- **Story of a Rock:** Heidi will write a short story from the perspective of a rock, explaining its journey through the rock cycle. This can include its formation, changes, and what it has experienced over time.

Talking Points

- "Rocks are divided into three main types: sedimentary, igneous, and metamorphic. Each type tells a different story about the Earth's history."
- "Sedimentary rocks are formed from particles and organic materials that settle over time. Think of them as nature's scrapbook!"
- "Igneous rocks form from cooled magma or lava. They are like the Earth's molten creations, solidifying into solid forms."
- "Metamorphic rocks are created when existing rocks change due to heat and pressure. Imagine them going through a makeover!"
- "Minerals are the building blocks of rocks. Each rock type contains specific minerals that give them unique properties."
- "The rock cycle is a continuous process. Rocks can change from one type to another over millions of years, showing how dynamic our planet is!"
- "Understanding rocks helps us learn about Earth's history and the processes that shape our world, from mountains to valleys."