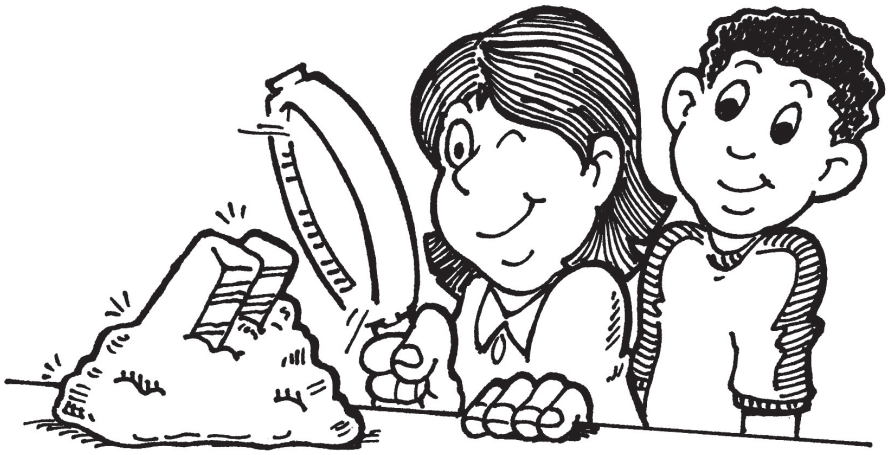
Geology Rocks: Y-Chart

Skills Objectives

Identify different types of rocks.
Compare the characteristics of igneous, sedimentary, and metamorphic rocks.

A **Y-Chart** is used to compare and contrast three different things. The sections of the chart allow students to organize information into distinct categories. In this lesson, students will use a Y-chart to describe the characteristics of the three types of rocks.



Materials

Geology Rocks reproducible

igneous rock samples (granite, basalt, periodite, pumice, obsidian)

sedimentary rock samples (sandstone, limestone, shale, conglomerate, breccia)

metamorphic rock samples (schist, gneiss, slate, quartzite, marble)

magnifying glasses

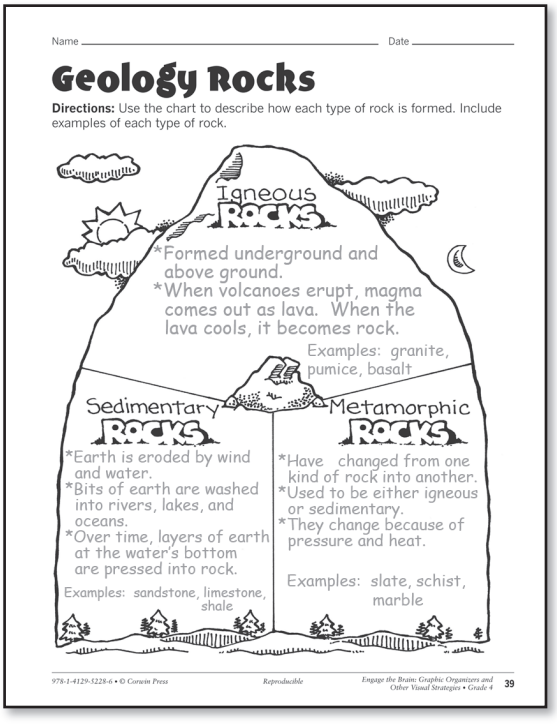
reference materials

1. Capture students' interest by setting up a discovery table with rock samples. Include samples of igneous rocks, sedimentary rocks, and metamorphic rocks. Stock the table with magnifying glasses, and encourage students to study the rocks independently or with partners.
2. Ask students what they know about how rocks are formed. List all of their ideas on the board, whether they are correct or not.
3. Explain to students that there are three types of rocks—igneous, sedimentary, and metamorphic. Give students a copy of the **Geology Rocks reproducible (page 39)**. Explain that they will use the chart to record how each type of rock is formed and to list examples of each one.
4. Invite volunteers to investigate the formation of igneous rocks. They may look in science textbooks, encyclopedias, on the Internet, or in other available resources. Have volunteers report their findings to the class and model how to record the information on the Y-chart.

5. Check to be sure that everyone understands how to complete the Y-chart before directing students to work independently to learn about the formation of sedimentary and metamorphic rocks. Students may copy the information provided about igneous rocks.
6. When everyone has finished their charts, go back to the information that you listed on the board in Step 2. Challenge students to evaluate each of the ideas and determine which ones are correct. Cross out the incorrect ideas.

Extended Learning

- Have students investigate what different types of rocks are used for. For example, pumice is used in soaps and abrasive cleansers.
- Have students group your rock samples into the three categories. Invite them to use a rock guide to check the accuracy of their work.
- Encourage students to make posters for each type of rock.
- Invite students to bring in found rocks from home or various places such as a park or the beach. Ask the class to explore the rocks and categorize them by type of rock, color, shape, and more.



Name _____ Date _____

Geology Rocks

Directions: Use the chart to describe how each type of rock is formed. Include examples of each type of rock.

Igneous Rocks

*Formed underground and above ground.
*When volcanoes erupt, magma comes out as lava. When the lava cools, it becomes rock.

Examples: granite, pumice, basalt

Sedimentary Rocks

*Earth is eroded by wind and water.
*Bits of earth are washed into rivers, lakes, and oceans.
*Over time, layers of earth at the water's bottom are pressed into rock.

Examples: sandstone, limestone, shale

Metamorphic Rocks

*Have changed from one kind of rock into another.
*Used to be either igneous or sedimentary.
*They change because of pressure and heat.

Examples: slate, schist, marble

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Geology Rocks

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