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WHAT'S IN A ROCK?

Grade Level
K-3

What color was your rock that you found outside?

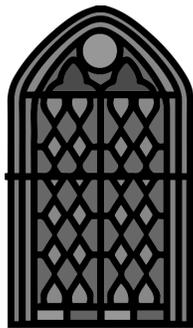
My rock color was: _____

Your rock probably looks very different from the rock in the photomicrograph. This is because scientists look at rocks with a special light called polarized light.

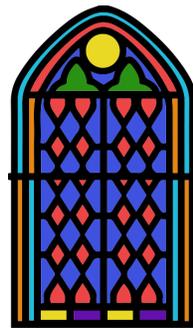
Most rocks look very dull under normal light. When you shine polarized light through a very thin slice of rock, bright colors appear like a stained glass window.

Rocks are made of different mineral crystals. Minerals can be identified by their color and the crystal shapes they form. The amounts and types of different minerals tell scientists what type of rock they are looking at.

normal light



polarized light



Different minerals form in different conditions. Some form at very high temperatures or high pressure. Some form very quickly and others very slowly. Photomicrographs allow us to tell what a rock is made of and how it was made.

A scientist wants to determine what types of rocks she is looking at and she needs your help! Color in the four photomicrographs using the keys. Look at the colors and patterns you see. Match the descriptions below to your observations to name each rock.

Diorite: made of two minerals that form crystals in stripes of color

Fun fact! This formation is called "twinning."

Agate: has bands of dark and color, made of one mineral called chalcedony that comes in many colors

Fun fact! Agates form in rings that look like the rings of a tree.

Basalt: made of several types of minerals that form large, long crystals

Fun fact! Basalt is formed when lava quickly cools.

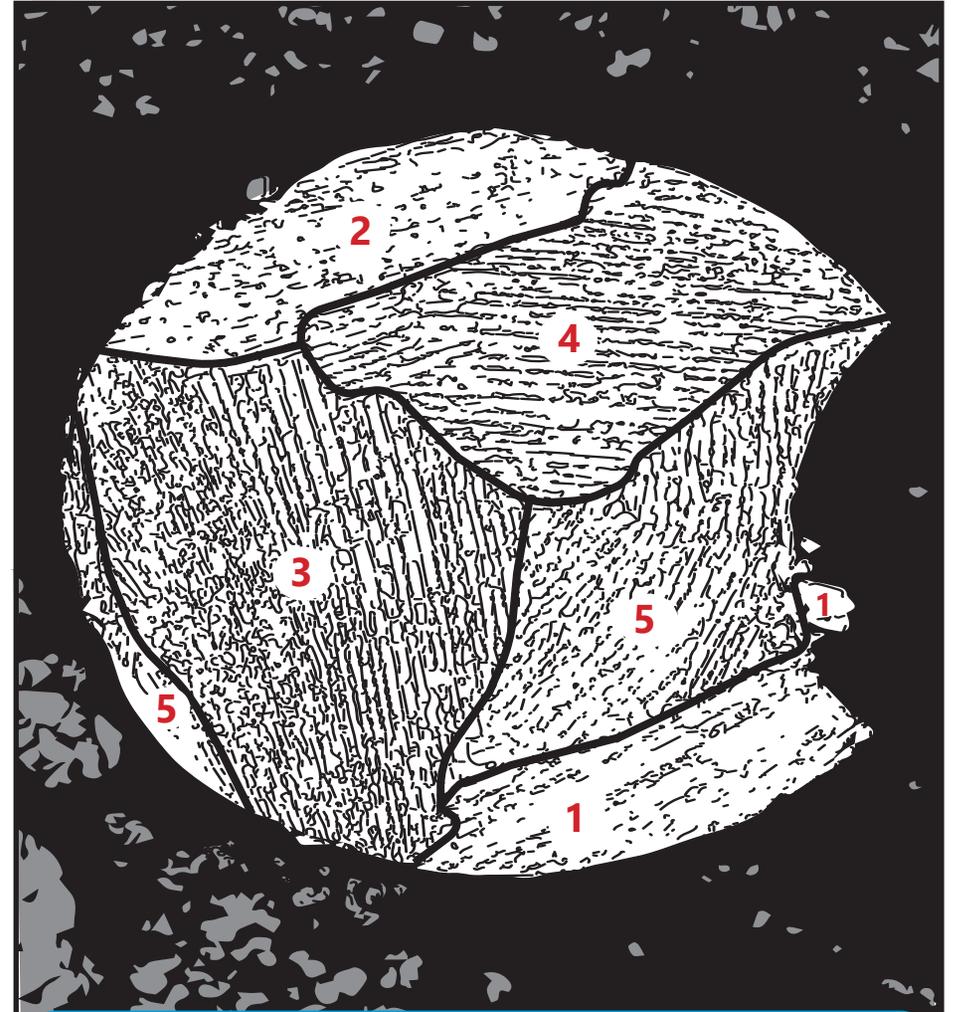
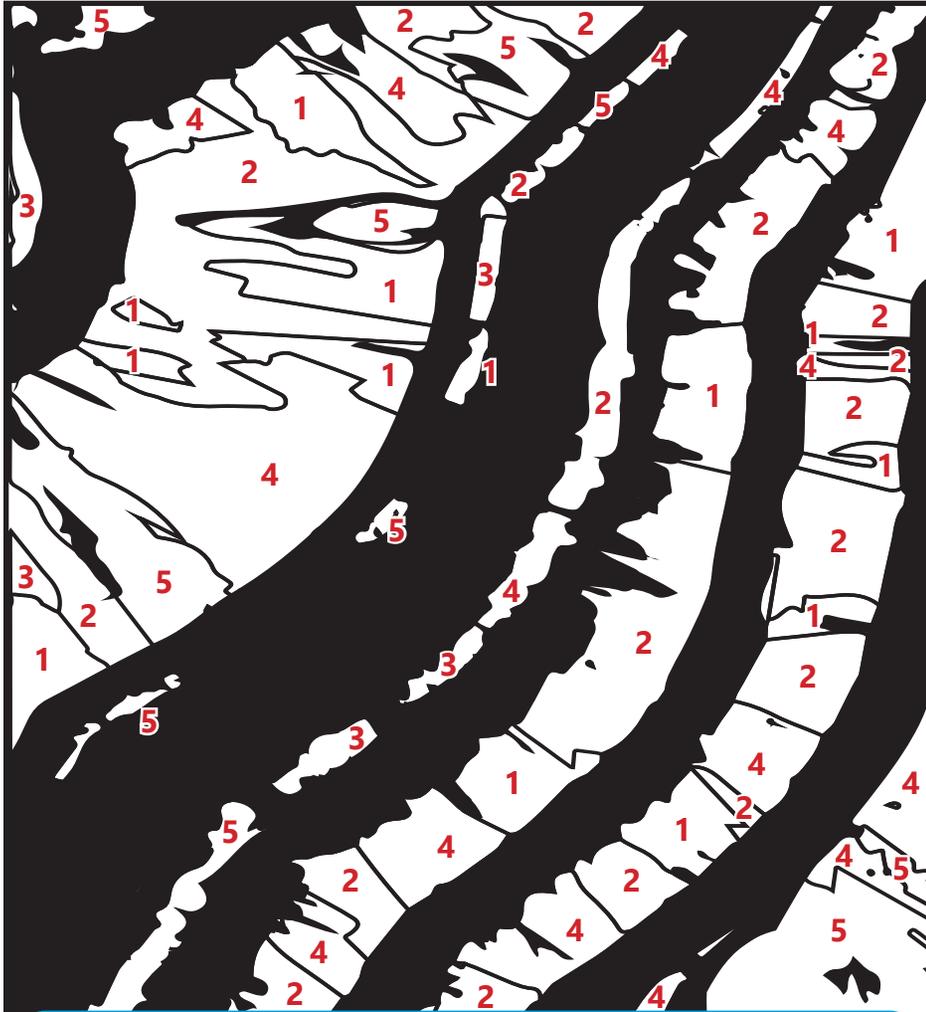
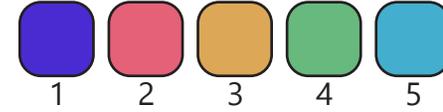
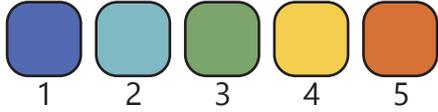
Chondrite: has spheres that are made of thin crystals from several minerals

Fun fact! Chondrites are meteorites that come from space.



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Color in each rock slice using the keys. Look at the colors and patterns in each rock slice. Use the descriptions of the four different rocks to name each rock slice.



Rock name:

Rock name:



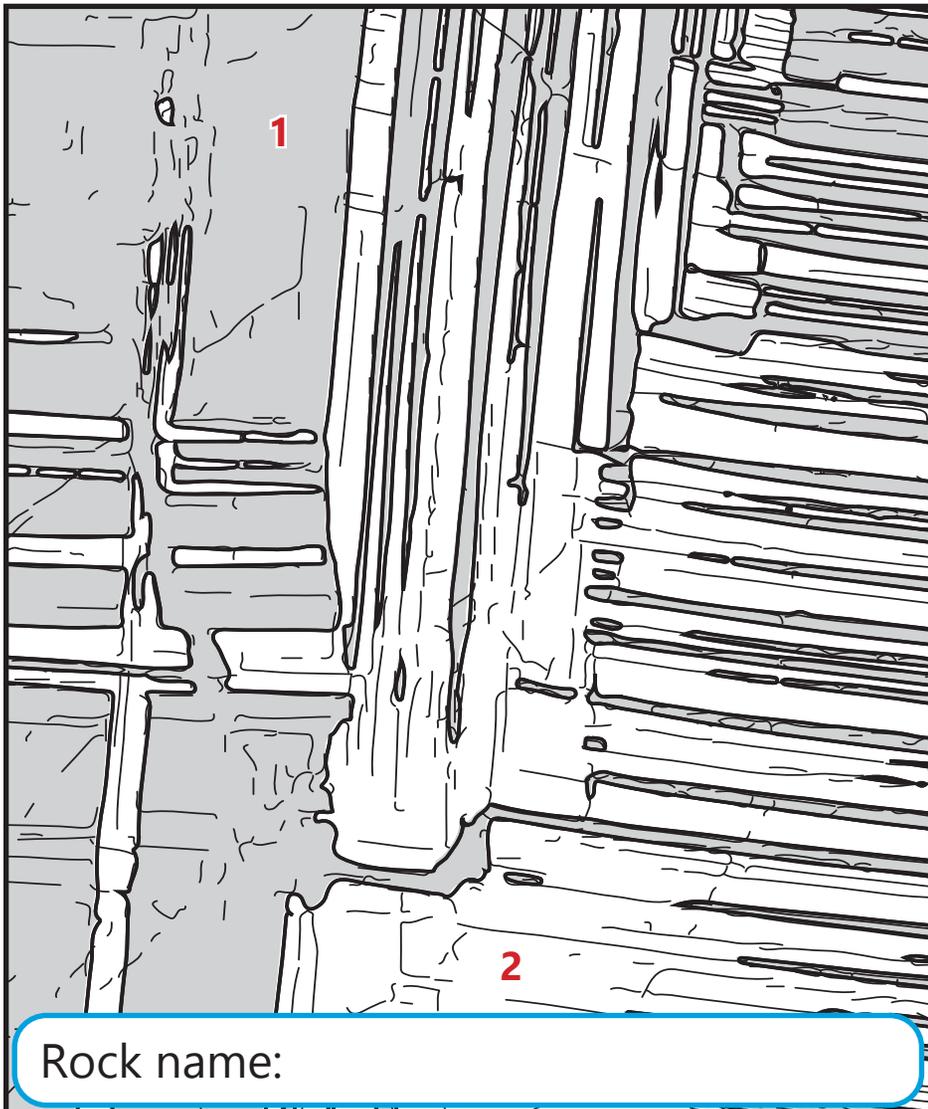
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(grey) (white)



1

2



Rock name:



1

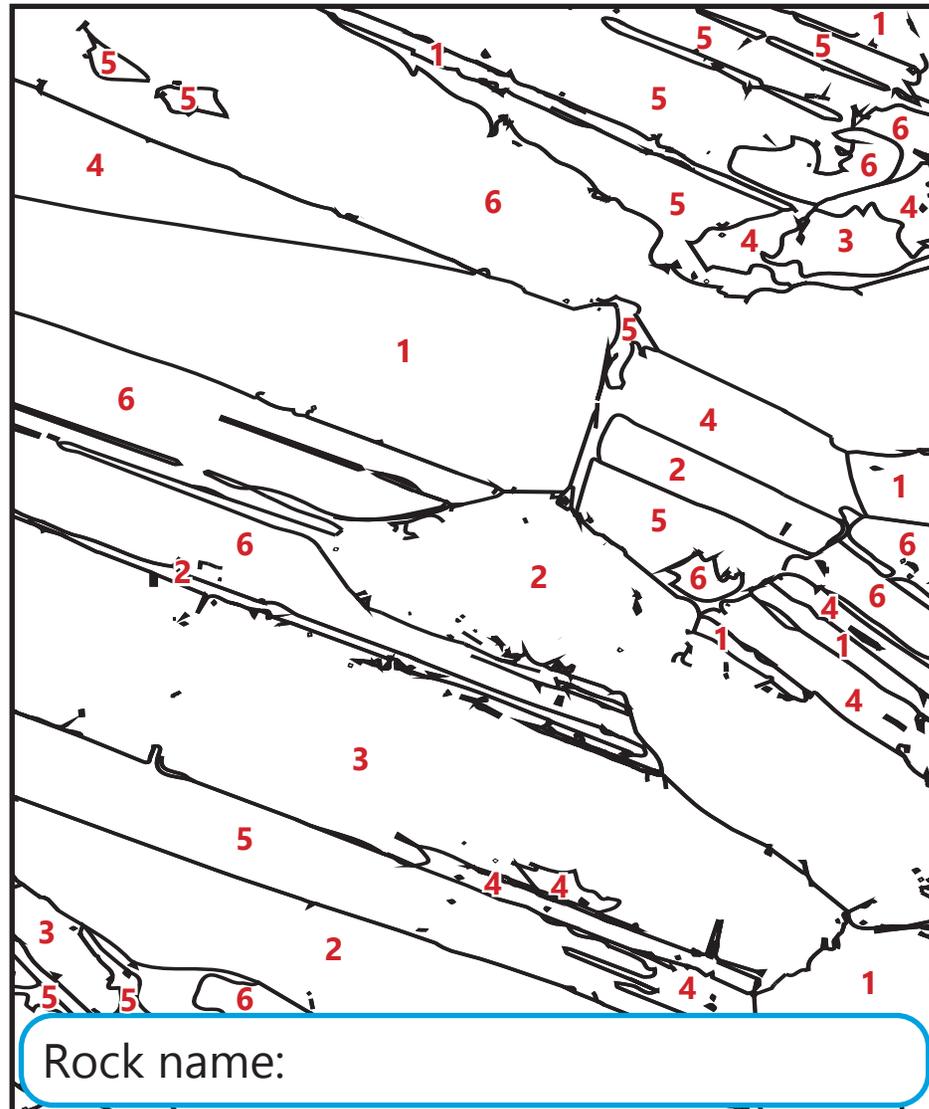
2

3

4

5

6



Rock name: