

## Reflect

Cal and Jake play on the rocks. The river tumbles over them. Jake sits on a ledge. Water rushes over his legs. It splashes on his back. Cal laughs from a lower rock. Water tickles his toes.



Water has rushed over these rocks for a long time. It has made them smooth. Cal and Jake have to be careful. The rocks are slippery. They are cold.

You probably have some rocks where you live, too. With an adult, go outside and find some rocks. Choose a few rocks to observe. What are their **properties**? How can you describe them?

**property:**  
how something looks, feels, sounds, tastes, or smells

**Rocks have different textures. Texture** is how the surface of something feels. Does a rock feel smooth or rough? Is it soft or hard? Bumpy or sharp?



This rock is hard, rough, and bumpy. Describe the textures of the rocks in the pictures below.  
HINT: Use words like SMOOTH, ROUGH, and SHARP to help you.



The texture of this rock is \_\_\_\_\_.



The texture of these rocks are \_\_\_\_\_.



The texture of this rock is \_\_\_\_\_.

## Reflect

**Rocks are different colors.** Look at the rocks around your school or home. What color are they?



Many rocks are brown, white, black, or gray.

People use red rocks to make garden paths around plants.

This piece of granite has speckles of different colors.

You can identify some rocks by their colors. The color **turquoise** is named for a blue-green stone. Look at the differently colored rocks below. Do their names have anything to do with their colors?



Blue Azurite



Clear Quartz



Turquoise



Speckled Granite



Brassy Pyrite



Red Sandstone

Some rocks have similar colors. Take a look at the picture of pyrite, above. Pyrite is sometimes called “fool’s gold.” Can you guess why?



Is this real gold or pyrite (It's real!)

## Reflect

**Rocks are different sizes.** You can estimate a rock's size. (When you *estimate*, you make an educated guess.) Simply compare the rock to your hands or feet.



This girl is sitting on a rock. It is bigger than her feet. Describe the rocks in the other pictures.

HINT: Use the words **BIGGER** or **SMALLER** in the blanks.



The rocks are \_\_\_\_\_  
than his fingers.



These rocks are \_\_\_\_\_  
than her hand.

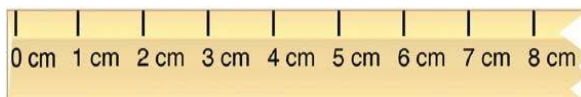


This rock is \_\_\_\_\_  
than their arms.

## Try Now

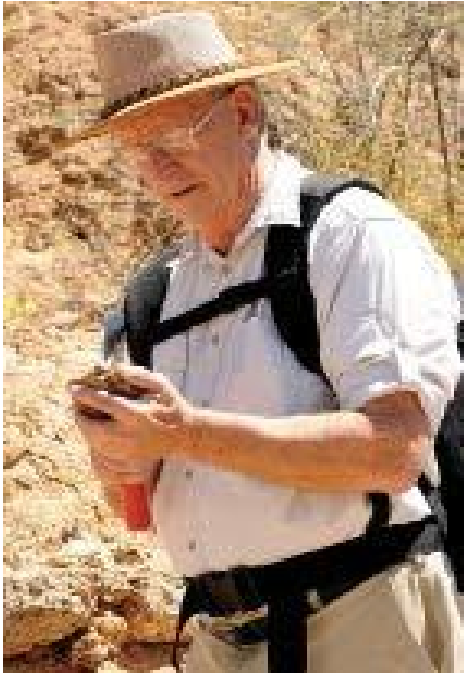
You can also measure the exact size of a rock. You will need a ruler to do this.

First, let's practice using these pictures of a ruler and a rock. The ruler is placed at one end of the rock. Look at the number at the other end of the rock, or count the tick marks. Here, each tick mark counts for 1 centimeter (cm). This rock is 5 cm wide.



Now, let's measure some actual rocks!

## What Do You Think?



### Career Corner: What does a geologist do?

Rocks have many uses. Many of our tools are made out of rocks. We grow plants in soil that contains rocks. Earth itself is made of rocks! It is important that we know as much as we can about rocks.

A **geologist** is a scientist who studies the physical parts of Earth. Some geologists study different types of rocks. If they find a rock, they might ask what it is made of. They might ask how the rock was made. Some geologists study animals or plants that become rocks after they die. These rocks are called *fossils*.

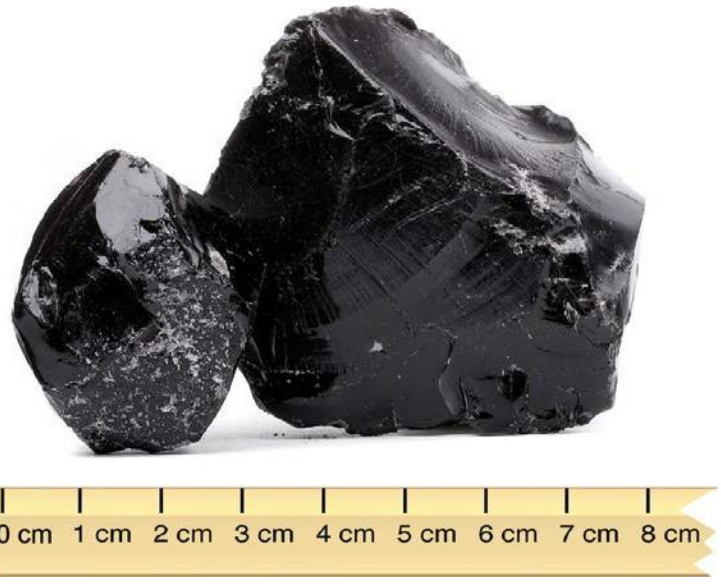
You have to go to college to become a geologist. Even if you decide not to focus on rocks, you will probably learn a lot about them. Rocks can be pretty interesting once we start looking more closely!



## Try Now

### What Do You Know?

Take a few moments to study these rocks. Then, answer the questions about them.



Circle the best answer for each question.

|                                      |                                                                                |
|--------------------------------------|--------------------------------------------------------------------------------|
| <p>What texture are these rocks?</p> | <p>Smooth all over    Rough all over</p> <p>Partly smooth and partly rough</p> |
| <p>What color are these rocks?</p>   | <p>Black all over    White all over</p> <p>Mostly black with white spots</p>   |
| <p>How wide is the smaller rock?</p> | <p>1 cm</p> <p>3 cm</p> <p>5 cm</p> <p>8 cm</p>                                |

## Connecting With Your Child

**Take a Rocky Scavenger Hunt**

Children enjoy scavenger hunts, so take this opportunity to design your own treasure hunt with a “rocky” theme. One great way to do this and get some great exercise with your child is to take a hike together. Find a local hiking trail or hiking area where you will come across rocks. During the hike, ask your child to find rocks that have different textures, colors, and sizes.

For example, ask your child to find a smooth white rock. Then try to find a pebble as small as a fingertip, followed by a boulder larger than your foot. (Be careful about using terms such as **pebble** and **boulder**—at this level, some children may be confused by these categories. It’s simpler to refer only to larger and smaller rocks.)

Here are some questions to discuss with your child:

1. Why are some rocks smooth and others rough?
2. Can you change the color of a rock? Why?
3. Why are some rocks tiny, whereas other rocks are as large as mountains?
4. What causes larger rocks to break into smaller pieces?