

Name: _____ Class: _____

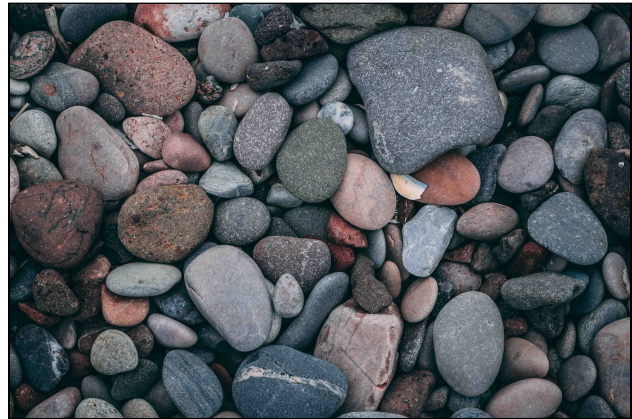
Rock Secrets

By Betsy James

Do you take the time to study the rocks in your backyard? No? Well, you should! In this text from Highlights, Betsy James discusses what you can learn from the rocks in your very own backyard. As you read, take notes on what rocks can tell us about the past.

[1] A rock is never just a rock. A rock is a mystery.

Pick up a rock. Any rock. Does it look as if it has a secret? Because it does. A big one. As big as a volcano. Or an ocean. Or a ferocious¹ dinosaur. Every rock has a secret story to tell about what the earth was like long ago. Could where you're sitting this very second once have been a pool of lava? Or the bottom of an ocean? Or a tropical forest? Maybe. How can you tell? You pick up a rock.



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Is your rock sandy or gritty? It's probably sandstone. To make sandstone, millions of years of wind and rain wore down mountains until nothing was left but grains of sand. That sand made deserts and beaches; in time it stuck together and became rock. Sandstone sometimes shows ripples left by long-ago winds or waves.

Did you pick up a piece of shiny black obsidian? It came out of a volcano! When a volcano erupts, some lava may cool so fast that it hardens into this smooth, glassy rock.

[5] Does your rock have sparkly crystals? Then it once spent time far underground, where heat from deeply buried lava, called magma, can help crystals grow. If you look at the very hard rock called granite, you'll see the different colors of many mineral crystals.

Rocks can tell stories of lives before our own. Long-ago oceans were full of animals, little and big; when they died, their shells and skeletons sank to the seafloor and formed limestone. In limestone you might see fossil sponges or corals, or even the shell of an animal that is now extinct.² Then you'll know that your neighborhood was once covered by a great sea!

Or you might find a piece of petrified³ wood, made from a tree that died in an ancient forest. When mud covered the fallen tree, minerals that were dissolved⁴ in the water slowly seeped into the rotting wood and made an exact copy of it in hard rock.

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1. **Ferocious** (*adjective*): dangerous
 2. died out
 3. changed into a stony substance
 4. to become a part of a liquid

If you're really lucky, you might pick up a piece of dinosaur bone. How can a scientist tell if the rock she picks up is a dinosaur fossil? She might touch her tongue to it. If it's bone, tiny holes where blood vessels once ran will usually make her tongue stick a little.

Or you might find a gastrolith, a round, smooth, shiny stone that once spent time in a dinosaur's stomach, helping it grind up its dinner of plants.

- [10] Does every rock have a secret story? Yes, every single rock — even a tiny pebble from your playground. It won't tell you its story in words. You have to figure it out by looking, feeling, asking, and wondering. But first — pick up a rock!

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Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which sentence describes the main idea of the text?
 - A. Rocks can tell you about past environments and organisms.
 - B. You can learn the most about a rock by tasting it.
 - C. Fossils and petrified wood are the rarest types of rocks.
 - D. Studying rocks is the only way we can understand the past.

2. PART B: Which detail from the text best supports the answer to Part A?
 - A. "To make sandstone, millions of years of wind and rain wore down mountains until nothing was left but grains of sand." (Paragraph 3)
 - B. "Rocks can tell stories of lives before our own. Long-ago oceans were full of animals, little and big; when they died, their shells and skeletons sank to the seafloor and formed limestone." (Paragraph 6)
 - C. "When mud covered the fallen tree, minerals that were dissolved in the water slowly seeped into the rotting wood and made an exact copy of it in hard rock." (Paragraph 7)
 - D. "She might touch her tongue to it. If it's bone, tiny holes where blood vessels once ran will usually make her tongue stick a little." (Paragraph 8)

3. How is the text organized?
 - A. The author describes different types of rocks and what they can tell you.
 - B. The author describes the least valuable rocks, and then goes to the most valuable.
 - C. The author discusses how rocks formed in the past are different from rocks today.
 - D. The author discusses the different time periods that different rocks were created in.

4. What is the first thing you should do when studying a rock?
 - A. crack the rock open
 - B. show the rock to someone
 - C. study the area you found the rock
 - D. look at the rock

5. How are the rocks you can find today related to past?

Discussion Questions

Directions: *Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.*

1. How often do you pass by a rock without taking the time to study it? How could taking the time to study an interesting rock help you better understand and appreciate the world around you? Has this article inspired you to look more closely at the rocks around you? Why or why not?
2. In the text, the author discusses how studying rocks can help us learn about the past. Why do you think it's important to know what the world looked like in the past, and the different animals that were here before us?