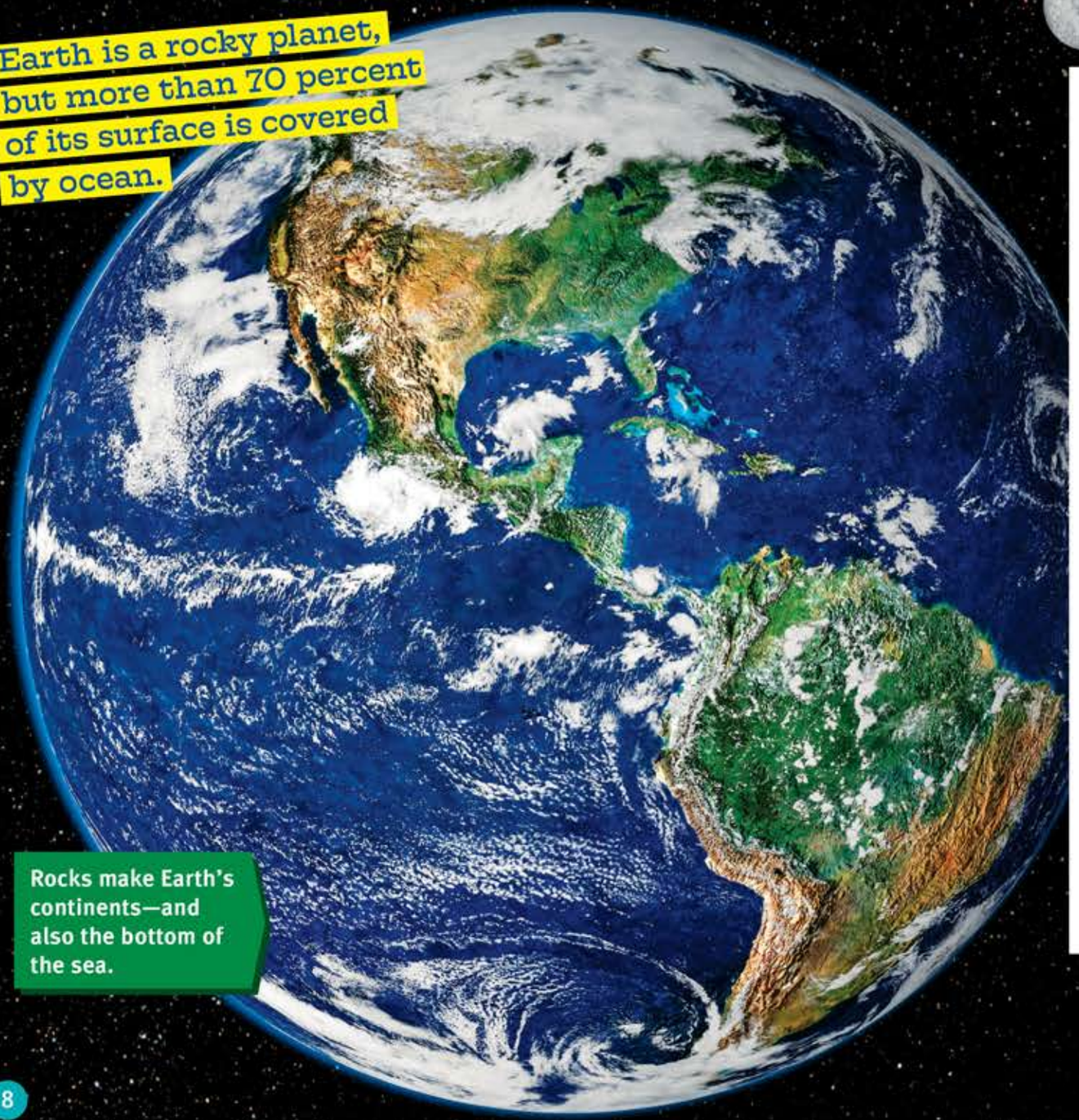

Earth is a rocky planet, but more than 70 percent of its surface is covered by ocean.

Rocks make Earth's continents—and also the bottom of the sea.

CHAPTER 1

Our Rocky Planet

Look outside your window. Do you see pebbles scattered on the ground? Hilltops in the distance? Maybe a stone building across the street? You're looking at rocks. From tiny stones to towering mountains, rocks are all around us. In fact, without them, our planet wouldn't exist. Earth is almost entirely made up of rocks. But where did all these rocks come from?

The BIG Truth

Are There Rocks Flying Around in Space?

Yes! Space not only has rocky planets and moons. It is also filled with other rocks such as zooming comets, asteroids, and meteoroids. Many of these rocky structures orbit our sun. If these space rocks come close to Earth during their trip around our star, they are called Near-Earth Objects. Let's take a closer look!

Comets: Dusty Snowballs
Comets are balls of rock, ice, gases, and dust. Each comet has a heart of ice called a nucleus. When a comet gets close to the sun, some of the ice evaporates, or turns from liquid into gas. Gas and dust create a tail that can stretch for millions of miles.

More than 3,600 known comets are in our solar system.

Asteroids: Planet Busters
Asteroids come in many shapes and sizes. Some are made of small rocks loosely grouped together. Others are huge chunks of rock that are as big as cities. There are asteroids so large that they have moons circling around them. If a big asteroid were to hit our planet, it would create major damage!

Meteoroids: Rocky Fireballs
Meteoroids are small chunks of rock that usually come from asteroids or comets. Meteoroids that burn up completely when they pass through Earth's atmosphere are called meteors. They create a streak of light we usually call a shooting star. Some meteoroids land on Earth. These are called meteorites.

Quiz

Name That Rock!

Ready to test your rock smarts? The photos on this spread show famous rock formations around the world. Read the hint, then guess what type of rock makes up each formation from the choices below. The answers are on page 39.

Basalt **Gneiss** **Granite** **Limestone** **Marble** **Sandstone**

1 Hint: This 46-foot (14-meter) natural rock arch is made of sand grains that were pressed together and turned into stone over time. (See page 19.)

2 Hint: These rocks formed when lava spewed out of volcanoes between 60 and 55 million years ago. (See page 17.)

3 Hint: This 3,000-foot (914-m) rock wall is made of coarse rock that formed when magma cooled deep underground. (See page 16.)

4 Hint: These caves are made of a type of rock that was transformed deep underground from limestone. (See page 21.)

5 Hint: This mountain range is made of rock that was a coral reef about 250 million years ago. (See page 19.)

6 Hint: This 3.8-billion-year-old gray and white rock formation is made of a type of rock that was transformed deep underground from either granite or sedimentary rock. (See page 21.)

ANSWERS: 1. Sandstone; 2. Basalt; 3. Granite; 4. Marble; 5. Limestone; 6. Gneiss