s pat other pressure building pressure sudden slip release of energy

Read the short story and answer each question.

How Earthquakes Happen

Earthquakes can shake the ground without warning, causing buildings to crack and roads to break. But what causes an earthquake?

The Earth's surface is made of huge pieces called tectonic plates. These plates move very slowly, sliding past, bumping into, or pulling away from each other. Most of the time, they move without causing problems. But sometimes, the edges get stuck.

When plates stick, pressure builds up. Eventually, the pressure becomes too great, and the plates suddenly slip. This quick release of energy causes the ground to shake—that's an earthquake.

The point deep underground where the plates move is called the focus. The spot on the surface directly above it is the epicenter. That's where the shaking is strongest.

After the earthquake, there may be aftershocks—smaller quakes that follow. Scientists use tools called seismographs to study where earthquakes begin and how strong they are. They use this information to make buildings safer and to help warn people in the future.

Each step in the process—from the slow movement of plates to the final shake—shows how Earth's surface is always changing.





Name:

How Earthquakes Happen

1. What causes the ground to 2. What is the epicenter of an shake during an earthquake? earthquake? The plates slip and release Α. Α. The place on the surface right above where the quake energy started The sun heats the ground Β. The middle of a volcano Β. C. Volcanoes explode nearby С. The strongest mountain The wind blows the dirt D. nearby The ocean where the waves D. form

3. Fill in the blank:

The place underground where an earthquake begins is called the

4. What are two key steps that happen before an earthquake shakes the ground?

5. How do those steps show the cause-and-effect relationship of an earthquake?



Guide Reading Level: P Lexile Level: 645L-795L Grade Level: 3rd Grade, End of the Year Genre: Informational / Earth Science

Introducing the Text

"Today we'll read about earthquakes and learn what happens under the ground to cause such powerful shaking. As we read, we'll look for the sequence of events that lead to an earthquake and how one step causes the next."

Vocabulary: tectonic plates, pressure, slip, epicenter, aftershock

Before Reading Discussion Questions

- 1. What do you already know about earthquakes?
- 2. Why do you think the ground can move or break apart?
- 3. What might scientists do to learn about these events?

During Reading Discussion Questions

- 1. What happens when tectonic plates get stuck?
- 2. How does the energy release lead to an earthquake?
- 3. What are seismographs used for?

After Reading Discussion Questions

- 1. How does the movement of tectonic plates cause earthquakes?
- 2. What is the relationship between the focus and the epicenter?
- 3. Why is it important for scientists to understand each step in the earthquake process?

Activity Idea

Let students create a flipbook showing the build-up and release of an earthquake. Each page should include a labeled drawing of a step in the sequence (plates moving, pressure building, slipping, shaking, aftershocks) and one sentence explaining what happens and why.

