

Name _____

Making Inferences

Infer from the Text

Earthquakes

Before an earthquake occurs, the Earth's crust is under stress. Earthquakes happen when there is a sudden release of energy in the Earth's crust that creates seismic waves. These waves make the ground shake. The place inside the Earth where the earthquake starts is called the focus, and the place directly above it on the surface is called the epicenter. Earthquakes can vary in size, and their strength is measured on the Richter scale. Small earthquakes, called tremors, might not be felt, but large ones can cause significant damage.

Earthquakes occur mostly along faults, which are cracks in the Earth's crust where tectonic plates meet. The movement of these plates can be caused by various factors such as volcanic activity, tectonic shifts, or the buildup of pressure along fault lines. When the pressure is too much, the crust breaks and releases the built-up energy in the form of an earthquake.

Not all earthquakes are the same. Some cause the ground to shake violently, while others produce gentle rolling movements. Earthquakes can also cause secondary disasters, such as tsunamis, landslides, and fires. Tsunamis are large sea waves generated by underwater earthquakes that can flood coastal areas. Land slides can bury communities, and fires may start from broken gas lines or electrical wires.

Earthquakes can happen anywhere in the world, but some places are more prone to them. Areas near the edges of tectonic plates, like the Pacific Ring of Fire, experience frequent earthquakes. This area includes countries like Japan, Indonesia, New Zealand, and parts of the west coast of North and South America. In the United States, California is well-known for its earthquakes because of the San Andreas Fault.

While earthquakes can occur at any time of the year, they often happen without warning. Scientists use seismographs to monitor the Earth's movements and try to predict when an earthquake might occur, but predicting the exact time and place is still very challenging.

To stay safe during an earthquake, it is important to know what to do. If you are indoors, drop to the ground, take cover under a sturdy piece of furniture, and hold on until the shaking stops. Stay away from windows, mirrors, and anything that could fall. If you are outside, move to an open area away from buildings, trees, and power lines. If you are driving, pull over to a safe location and stay in your vehicle. After the shaking stops, be prepared for aftershocks, which are smaller quakes that can follow the main event.

1. What can be inferred about the impact of earthquakes on infrastructure?

- a. Earthquakes are unlikely to affect buildings or roads.
- b. Earthquakes can cause significant damage to buildings, roads, and utilities.
- c. Earthquakes only affect coastal areas.

2. Why might it be challenging for scientists to predict earthquakes accurately?

- a. Because seismographs are often broken.
- b. Because the exact time and place of pressure release in the Earth's crust is unpredictable.
- c. Because tectonic plates are too small to measure.

3. Which secondary disaster is most likely to occur if an earthquake happens under the ocean?

- a. Landslide
- b. Fire
- c. Tsunami
- d. Tornado

4. What is the best immediate action to take if you are inside during an earthquake?

- a. Run outside as fast as possible.
- b. Stand in a doorway.
- c. Drop to the ground, take cover under sturdy furniture, and hold on.