

## Earth Science Earthquakes

One summer I was in Las Vegas with my family. Our hotel room was on one of the top floors of a high-rise building. There was a morning of that vacation I will never forget. We woke up around 6 A.M. The building was shaking and swaying back and forth like a pendulum. It was an **earthquake**.<sup>1</sup>

Las Vegas is in the western state of Nevada, which is right next to California. The **epicenter**<sup>2</sup> was actually in California, but we still felt it over 100 miles away.

Earthquakes occur when plates in the Earth's crust rub together. This **friction**<sup>3</sup> causes the surface to shift back and forth. It also makes huge cracks in the ground, sometimes miles long and several feet deep.

Luckily, that summer in Las Vegas, my family got out of the building safely. I was never so scared in all my life. Others in history have not been so **fortunate**.<sup>4</sup> On Jan. 17, 1995, an earthquake struck in Kobe, Japan. It caused over 6,000 deaths. In 1906, a huge earthquake hit San Francisco, killing over 3,000 people and destroying over 25,000 buildings.

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<sup>1</sup> **earthquake** – a sudden, violent shaking of the ground

<sup>2</sup> **epicenter** - the middle of the earthquake

<sup>3</sup> **friction** – rubbing one object or surface against another

<sup>4</sup> **fortunate** – lucky

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Where is Las Vegas?
  - a. California
  - b. In the east
  - c. Nevada
  - d. In the epicenter
  
2. A problem in this passage is being on a top floor of a high-rise building during an earthquake. What is the solution for this problem?
  - a. plates in the Earth's crust rub together
  - b. to try to get out of the building safely
  - c. buildings can be destroyed and people can die
  - d. to study earthquakes in foreign countries
  
3. From this passage it can be inferred that
  - a. earthquakes are predictable.
  - b. earthquakes are unpredictable.
  - c. it's safe to be in an earthquake.
  - d. people always die in earthquakes.
  
4. Read the following sentence: "Earthquakes **occur** when plates in the Earth's crust rub together."

The word **occur** most nearly means

  - a. stop
  - b. predict
  - c. finish
  - d. happen
  
5. This passage is mostly about
  - a. earthquakes and the author's experience with one.
  - b. how scientists can predict the next earthquake.
  - c. the difference between earthquakes in Japan and America.
  - d. safety steps you can take during an earthquake.

6. What causes an earthquake to happen?

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7. Based on the passage, explain why being high up in a building could be dangerous during an earthquake.

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8. The question below is an incomplete sentence. Choose the answer that best completes the sentence.

There isn't much warning when an earthquake might occur, \_\_\_\_\_ they are very scary and surprising.

- a. such as
- b. **so**
- c. yet
- d. but

9. Read the following sentence.

**Plates in the Earth's crust cause earthquakes because they rub together.**

Answer the questions below based on the information provided in the sentence you just read. One of the questions has already been answered for you.

1. What? Plates in the Earth's crust
2. What do plates in the Earth's crust do? \_\_\_\_\_
3. Why? \_\_\_\_\_

10. **Vocabulary Word:** friction: rubbing one object or surface against each other.

Use the vocabulary word in a sentence: \_\_\_\_\_

\_\_\_\_\_

**Teacher Guide and Answers**

**Passage Reading Level:** Lexile 710

**Featured Text Structure:** Descriptive - the writer explains, defines or illustrates a concept or topic

**Passage Summary:** Earthquakes occur when the underground plates of the earth move and rub together. This causes buildings and structures to move, sway, and shake on the surface of the earth. Earthquakes have caused a lot of damage and deaths in different parts of the world.

1. Where is Las Vegas?
  - a. California
  - b. In the east
  - c. Nevada**
  - d. In the epicenter
  
2. A problem in this passage is being on a top floor of a high-rise building during an earthquake. What is the solution for this problem?
  - a. plates in the Earth's crust rub together
  - b. to try to get out of the building safely**
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5. This passage is mostly about

- a. **earthquakes and the author's experience with one.**
- b. how scientists can predict the next earthquake.
- c. the difference between earthquakes in Japan and America.
- d. safety steps you can take during an earthquake.

6. What causes an earthquake to happen?

**Suggested answer:** Plates in Earth's crust rub together. This friction causes the surface to shift back and forth and can cause huge cracks in the ground.

7. Based on the passage, explain why being high up in a building could be dangerous during an earthquake.

**Suggested answer:** Earthquakes cause cracks in the ground and can destroy buildings. Because you do not know when an earthquake is going to happen, it might be difficult to quickly get out safely if you are high up in a tall building.

8. The question below is an incomplete sentence. Choose the answer that best completes the sentence.

There isn't much warning when an earthquake might occur, \_\_\_\_\_ they are very scary and surprising.

- a. such as
- b. **so**
- c. yet
- d. but

9. Read the following sentence.

**Plates in the Earth's crust cause earthquakes because they rub together.**

Answer the questions below based on the information provided in the sentence you just read. One of the questions has already been answered for you.

- 1. What? Plates in the Earth's crust
- 2. What do plates in the Earth's crust do? **cause earthquakes**
- 3. Why? **because they rub together**

10. **Vocabulary Word:** friction: friction is the force that makes it difficult for things to move freely when they are touching each other.

Use the vocabulary word in a sentence: answers may vary.