

Natural Disasters and Safety

Grade 5 • SCIENCE • Students practice connecting earthquakes, volcanoes, and hurricanes with their basic causes, hazards, and appropriate safety actions. • Standards: 4-ESS3-2

Read each question about earthquakes, volcanoes, and hurricanes. Choose or write the best answer based on what causes these events and how to stay safe during them.

1. What is the main cause of an earthquake? (A) Heavy rain (B) Movement of rock layers under the ground (C) Strong winds (D) Hot lava
2. Which natural disaster is caused by hot melted rock rising from deep inside Earth? (A) Hurricane (B) Tornado (C) Volcano (D) Flood
3. What is the safest place to go during an earthquake? (A) Under a sturdy table (B) Next to a tall bookshelf (C) In front of a large window (D) On top of a ladder
4. A hurricane forms over warm ocean water and brings strong winds and heavy rain. What should you do if a hurricane warning is announced for your area? (A) Go swimming at the beach (B) Follow your family's emergency plan and move to a safe location (C) Climb a tall tree (D) Open all the windows
5. Which hazard is common to both volcanoes and earthquakes but NOT hurricanes? (A) Flooding from heavy rain (B) Shaking or cracking of the ground (C) Lightning strikes (D) Ocean waves
6. Maria lives near a volcano that scientists are watching closely. If the volcano begins to erupt, what is the most important safety action? (A) Take pictures of the lava (B) Evacuate the area as directed by emergency officials (C) Collect samples of volcanic rock (D) Stay home and watch from the window
7. Why do hurricanes lose strength after they move from the ocean onto land? (A) They are blocked by mountains (B) The land is too cold (C) They no longer have warm ocean water as an energy source (D) Trees slow down the wind

8. Compare the causes of these disasters: Earthquakes are caused by shifting rock layers, volcanoes are caused by rising molten rock, and hurricanes are caused by what condition?

9. A family is preparing an emergency kit. Which three items would be most useful for all three types of disasters: earthquakes, volcanoes, and hurricanes? (A) Surfboard, tent, and camera (B) Water, flashlight, and first aid supplies (C) Swimsuit, umbrella, and radio (D) Laptop, phone charger, and headphones

10. Explain why scientists monitor earthquakes, volcanoes, and hurricanes differently. Describe one tool or method used to track each type of disaster.

Answer Key — Natural Disasters and Safety

For the teacher / parent. Do not distribute with the worksheet.

1. B (*Earthquakes happen when rock layers beneath Earth's surface shift and move suddenly.*)
2. C (*Volcanoes form when molten rock called magma rises from deep within Earth.*)
3. A (*A sturdy table protects you from falling objects during an earthquake.*)
4. B (*Following an emergency plan and going to a safe location protects you from hurricane dangers.*)
5. B (*Both volcanoes and earthquakes can cause the ground to shake and crack, but hurricanes do not.*)
6. B (*Evacuating when officials tell you to is the safest action during a volcanic eruption.*)
7. C (*Hurricanes need warm ocean water for energy, so they weaken when they reach land.*)
8. Warm ocean water and moisture in the atmosphere (*Hurricanes form when warm, moist air rises over warm ocean water, creating a spinning storm system.*)
9. B (*Water, flashlight, and first aid supplies are essential for surviving any disaster when help may be delayed.*)
10. Scientists use seismometers to detect earthquake vibrations, temperature and gas sensors to monitor volcanoes, and satellites to track hurricane movement over the ocean. (*Each disaster requires different monitoring tools: seismometers measure ground shaking, sensors detect volcanic activity changes, and satellites observe storm patterns from space.*)