

Earthquakes





**A man helps cleanup
after an earthquake.**

What is an earthquake?

The walls of buildings start to shake. Pictures on the walls move back and forth. In some parts of the world, there are times when people can feel the ground move. This movement is called an earthquake.

We live on the Earth's crust. Earth's crust is broken into about seven large pieces and some smaller ones. These pieces are called plates. The plates move, Earth shakes. Many times, these movements are too small for people to feel.

When the movements are big, people can feel them. The ground moves and buildings may fall down. That movement is an earthquake.

Key Notes:

What are Earth's plates?



A scientist places a special computer into the ground to help predict if an earthquake will happen.

Predicting and Measuring Earthquakes

TV reports tell people when bad storms are coming. However, there's no report that tells when earthquakes are on the way. Scientists can predict places where earthquakes could happen. They can't predict when an earthquake might take place. Scientists keep looking for ways to predict earthquakes.

After earthquakes happen, scientists measure their size. The ground's vibrations are measured on the nine points of the Richter scale. When the vibrations measure 3.5 or higher on the Richter scale, people usually know that an earthquake has happened. Earthquakes that measure 4.5 or higher on the Richter scale can harm buildings and roads.

Key Notes:

What is the Richter scale?



These people demonstrate
"duck, cover, and hold"
under a table during an
earthquake drill.

Duck, Cover, and Hold

The three rules of earthquakes safety are DUCK, COVER, and HOLD.

DUCK means get under a table or sit next to a wall without windows. This position helps keep glass from a broken window from hitting you. If you're outside, get off sidewalks and stay away from buildings, trees, and power lines.

Next, COVER yourself with a rug or coat. Or put your head in your lap, with your arms around your head.

HOLD means stay where you are, even when you think the earthquake's over. The earthquake may seem to have stopped, but it can start up again.

Key Notes:

How do the three rules of Earthquake safety keep people safe?



A tsunami just hit this area near the ocean.

Underwater Earthquakes

When earthquakes happen underwater, vibrations that move through the water cause waves to form. The waves get bigger and faster as they move out from the earthquake's center. The waves can travel faster than 400 miles per hour. That's about the same speed as an airplane. They can grow to 100 feet, about as high as a six-story building.

In Japan, where many people live close to the water, the waves made by underwater earthquakes were given the name tsunami, which means harbor wave. These waves were given this name because tsunamis can harm the people and things around harbors.

Key Notes:

What causes waves to form in a tsunami?

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