

## Earthquakes

Once every 30 seconds somewhere in the world the Earth shakes slightly. These earth tremors are strong enough to be felt, but cause no damage. However, every few months a major earthquake occurs. The land shakes so violently that roads break up, forming huge cracks, and buildings and bridges collapse, causing many deaths. Earthquakes are caused by the movements of huge plates of rock in the Earth's crust. They occur in places that lie on the boundaries where these plates meet, such as the San Andreas fault which runs 435 km (270 miles) through central California.

### Earthquakes

There are two different scales for measuring earthquakes: the Richter scale and the Modified Mercalli scale.

### Richter scale

The Richter scale measures the strength of an earthquake at its source and takes account of the distance from the earthquake. The scale below gives an indication of the probable effects of earthquakes of particular magnitudes.

RICHTER SCALE	
Magnitude	Probable effects
1	Detectable only by instruments.
2-3	Can just be felt by people.
4-5	May cause slight damage.
6	Fairly destructive.
7	A major earthquake.
8-9	A very destructive earthquake.

### Modified Mercalli scale

The Modified Mercalli scale measures how much an earthquake shakes the ground at a particular place. This is called the felt intensity and the scale gives a list of descriptions of earthquake effects.

MODIFIED MERCALLI SCALE	
Intensity	Probable effects
1	Not felt by people.
2	May be felt by some people on upper floors.
3	Detected indoors. Hanging objects may swing.
4	Hanging objects swing. Doors and windows rattle.
5	Felt outdoors by most people. Small objects moved or upset.
6	Felt by everyone. Furniture moves. Trees and bushes shake.
7	Difficult for people to stand. Buildings damaged, loose bricks fall.
8	Major damage to buildings. Branches of trees break.
9	General panic. Large cracks in ground. Some buildings collapse.
10	Large landslides occur. Many buildings are destroyed.
11	Major ground disturbances. Railway lines buckle.
12	Damage is nearly total. Large objects thrown into the air.



Write out the sentences that are true.

- California is a high-risk area for earthquakes.
- Every 30 seconds there is a major earthquake somewhere in the world.
- Earthquakes are caused by huge plates of rock moving in the Earth's crust.
- A major earthquake takes place every few months.
- The Richter scale measures the noise made by earthquakes.
- Scientists always know when an earthquake is going to happen.
- A major earthquake registers 7 on the Richter scale.
- During major earthquakes, buildings are destroyed.
- The Richter scale is hardly ever used now.
- The Modified Mercalli scale measures how much the ground shakes.