

# Earthquakes

## What Causes an Earthquake?

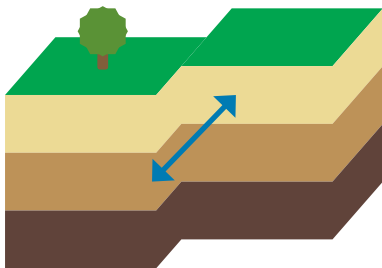
The earth has four main layers: the inner core, the outer core, mantle and crust.

The crust and the top of the mantle is like a puzzle made up of many pieces. These puzzle pieces move around, sliding past one another and sometimes bumping one another. These pieces are called tectonic plates. The edges of the plates are rough and can snag on other plates while the remainder of the plates continue to move. This movement causes faults or areas of stress where crushed rocks along the edges of the plates move in relation to one another. This causes a break in the surface and the energy released moves in waves through the earth.



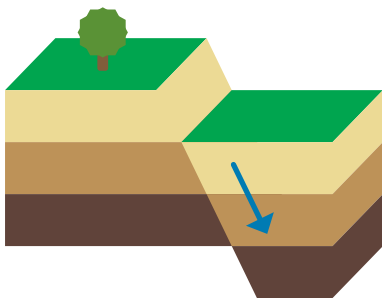
## Types of Faults

There are three main types of movement along fault lines.



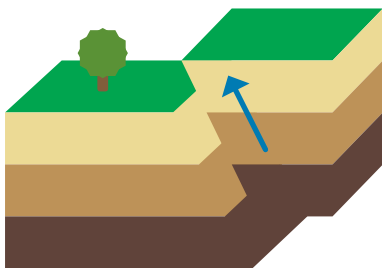
### Strike-slip

This is where there is lateral or side-to-side movement.



### Dip-slip (normal)

Vertical movement which involves the overhanging or overlying rock moving downwards in relation to a lower block.



### Dip-slip (reverse or thrust)

Vertical movement which involves the overhanging or overlying rock moving upwards in relation to a lower block.

## Interesting Facts

- There are around seven large and several small tectonic plates making up the surface of the earth.
- The study of earthquakes is called seismology.
- Seismometers measure the vibrations of the earth during an earthquake.
- The magnitude and intensity of shaking is reported using the Richter scale. This scale rates the earthquake between 1 and 10 with 1 being hardly noticeable and 10 being widespread devastation.
- The depth of an earthquake and the type of fault also has an impact on the amount of damage that is done.
- Some earthquakes can occur under the ocean, resulting in a tsunami.
- The epicentre of an earthquake is the location directly above where the earthquake originated.

