



Y6 Geography — We are Seismologists (Volcanoes & Earthquakes)

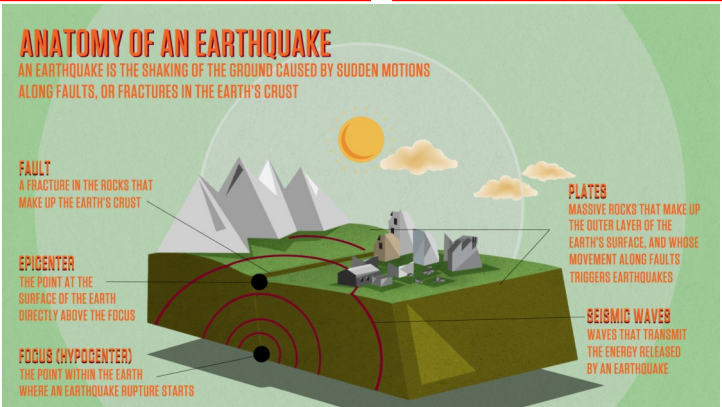
Key Knowledge

What I Should Already Know

- Continents and oceans (KS1)
- Mountains (year 6)
- Volcanoes (year 6)

What do Seismologists do?

Seismologists study shock waves created by earthquakes and volcanic activity. They also work in oil, gas and minerals exploration.



Earthquake Precautions

- 1) buildings are shorter
- 2) rubber foundations are used to absorb some of the force
- 3) plastic windows
- 4) schools practise earthquake drills

Key Vocabulary

Word	Definition
Focus/hypercenter	The point beneath the surface where energy is released during an earthquake.
Earthquake	A violent jolt that shakes the land created by the release of pressure built up by the friction of tectonic plate boundaries.
Epicentre	The point directly above the focus on the earth's surface, where the vibration are felt the strongest.
Richter Scale	Measurement of how much energy was released by the earthquake
Mercalli Scale	Measurement of how much damage the earthquake caused.
Seismograph	Specialist equipment used to measure the energy in seismic waves
Seismic Eaves	Waves of energy which vibrate through the ground during earthquakes
Magnitude	How big and powerful an earthquake is.
Foreshock	This is an earthquake that occurs before the mainshock.
Mainshock	This is the main earthquake
Aftershock	This is an earthquake that occurs after the mainshock.
Tremor	Smaller vibrations during an earthquakes
tsunami	Tsunami is a Japanese word that means "harbor wave." It is a large wave caused by movements in Earth's outer layer, or crust, which move ocean water.



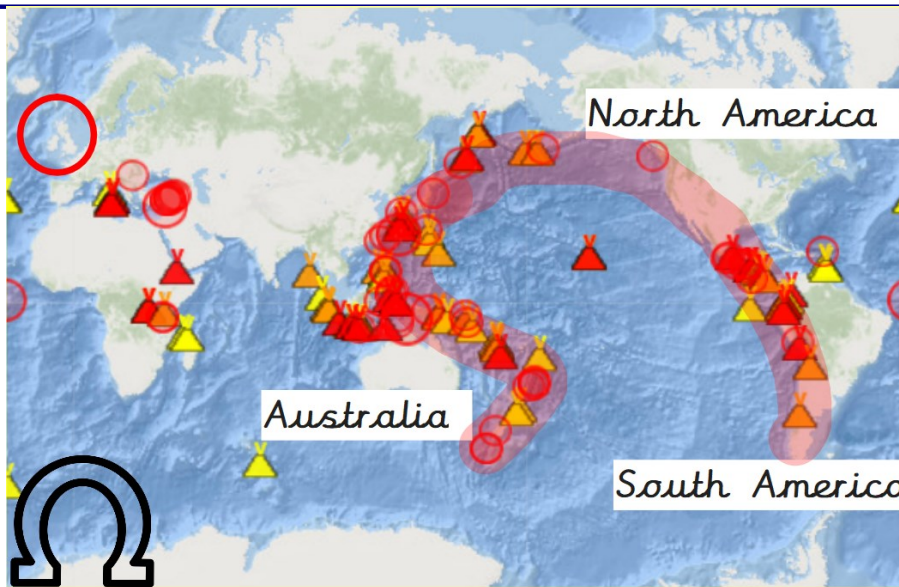
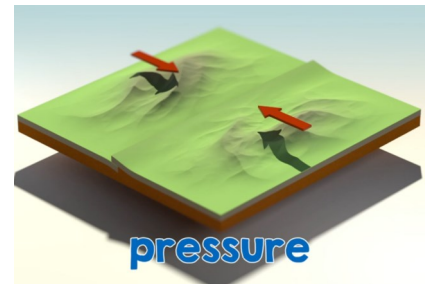
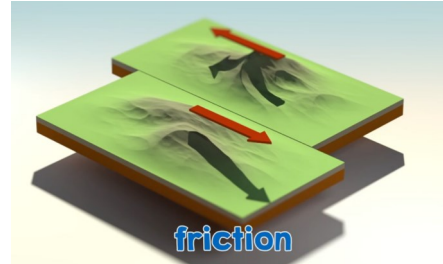
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Key Knowledge—

How Earthquakes are Formed

As tectonic plates rub against each other, friction causes energy to build up. Eventually it becomes so great that the energy is released. This strong shock-wave causes the ground to shake violently. This is called an earthquake. The point beneath the ground where the energy is released is called the focus or hypocentre. The place on the Earth's surface directly above this is called the epicentre and this is where the vibrations are strongest.



Ring of Fire

1. horseshoe-shape
2. 75% world's volcanoes
3. 90% of world's earthquakes
4. 25000 miles
5. Pacific Ocean

Earthquake Measurement

Why is it important to measure earthquakes?

- to allow seismologists and other scientists to develop their understanding of earthquakes and their causes.
- to allow us to make meaningful comparisons between earthquakes to make planning and risk assessment more meaningful and effective.
- to help evaluate the effectiveness of earthquake management.

Earthquake scale and impacts

- Some earthquakes are so small that they can only be detected by **specialist equipment**. Others can be so intense that they can **destroy towns and cities**.
- The **Richter magnitude scale** is used to measure the size of earthquakes. The higher the number, the more powerful the earthquake and the higher the chance that it will cause real damage.



A seismograph measures the strength of earthquakes.

- The largest earthquake recorded in the UK happened in 1931, in the North Sea, and measured 6.1 on the Richter scale.

