



Our Active planet

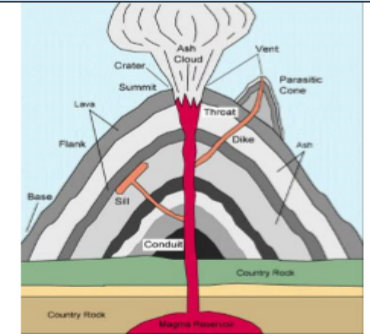


Key Vocabulary

Magma		Magma is the molten or semi-molten natural material from which all igneous rocks are formed.
Eruption		An eruption is an explosion of steam and lava from a volcano.
Plate tectonics		Plate tectonics is a scientific theory describing the large-scale motion of seven large plates and the movements
Epicentre		The point where an earthquake or an underground explosion originates.
Seismic waves		Seismic waves are waves of energy that travel through the Earth's layers, and are a result of earthquakes, volcanic eruptions, magma movement, large landslides
Vibration		Vibration means quickly moving back and forth (or up and down) about a point of equilibrium.
Tsunami		A tsunami or tidal wave is a series of waves. Earthquakes, volcanic eruptions.

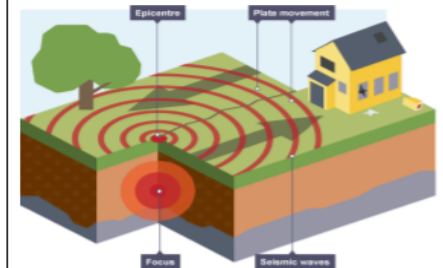
How are volcanoes formed?

1. Magma rises through cracks or weaknesses in the Earth's crust.
2. Pressure builds up inside the Earth.
3. When this pressure is released, e.g. as a result of plate movement, magma explodes to the surface causing a volcanic eruption.
4. The lava from the eruption cools to form new crust.
5. Over time, after several eruptions, the rock builds up and a volcano forms.



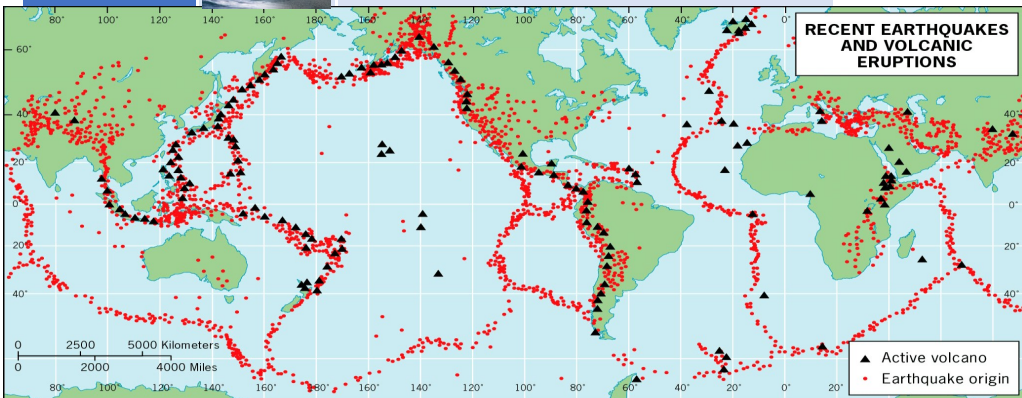
What causes an earthquake?

An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics). Earthquakes can happen along any type of plate boundary. Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other and sometimes get stuck. When this happens pressure builds up. When this pressure is eventually released, an earthquake tends to occur.



Did you know...?

- The word **volcano** originally comes from the name of the Roman god of fire, Vulcan.
- The object with the most **volcanic** activity in our solar system is Io, one of Jupiter's moons. Covered in volcanoes, its surface is constantly changing due to the large amount of volcanic activity.
- **Volcanic** eruptions can send ash high into the air, over 30km (17 miles) above the Earth's surface.
- Pumice is a unique **volcanic** rock (igneous) that can float in water.
- Scientists use the different speeds of seismic waves to locate the epicentre (the point on the surface directly above where the **earthquake** originated) of earthquakes.
- The most powerful **earthquake** ever recorded on Earth was in Valdivia, Chile. Occurring in 1960, it had a magnitude of 9.5.



Useful Websites and Books

Poems from a Green and Blue Planet.
Our Planet.

- <http://www.sciencekids.co.nz/sciencefacts/earth/volcano.html>
<http://www.primaryhomeworkhelp.co.uk/mountains/volcanoes.html>