

## Key Vocabulary

**Volcano** - An opening in the Earth's crust that allows magma, hot ash and gases to escape.

**Earthquake** - When two large pieces of the Earth's crust suddenly slip causing shock waves to shake the surface of the Earth.

**Active** - A volcano is active when it has erupted within 10,000 years.

**Dormant** - A volcano is dormant when it has not erupted within 10,000 years, but can still erupt again.

**Extinct** - A volcano is extinct when it has not erupted within 10,000 years and will likely not erupt again.

**Eruption** - When magma is released from a volcano.

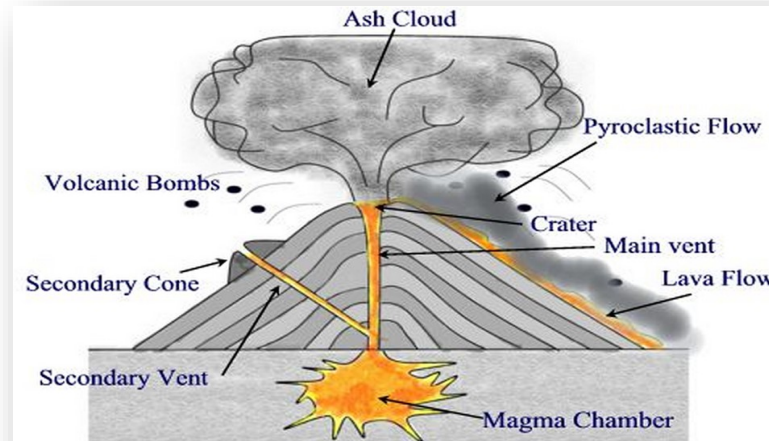
**Lava**— Molten rock which has been exposed to air.

**Magma** - Molten rock beneath the earth.

**Tectonic Plates** - A slab of solid rock which sits upon a layer of **Magma**.

**Fault Line** - A line on a rock surface which traces the edge of a **Tectonic Plate**.

# Shake and Quake



**Main Features of a Volcano**

## How is a volcano formed?

A volcano is formed when the **tectonic plates** underneath the **crust** of the earth move towards each other, pushing molten **magma** out of the crater. The molten rock is stored in a magma chamber deep beneath the surface.

## Where are volcanos found?

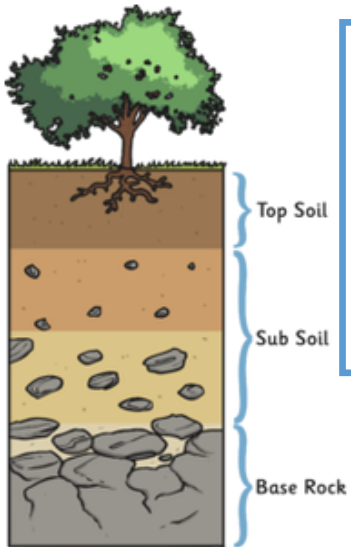
Volcanos are found across **fault lines**, as the plates push together, volcanos are formed. The famous **ring of fire** is a circle of volcanos around Hawaii, across a **hot spot** of plates which ooze magma.

## What happens when a volcano erupts?

A volcano **erupts** when the plates push together or pull apart. Causing molten **magma** to flow out. When the plates move violently, it results in a powerful explosion of ash, volcanic (**igneous**) rock, **pyroclastic flows** of hot ash and launching pieces of rock known as **volcanic bombs**.

The **magma** from the cones becomes hot flowing lava as it reaches the air. And the flows from the volcano cascade down the slopes.





### Volcanos can be good!

The grassland on a volcano is incredibly fertile, allowing plants and farming to grow much easier. A layer of minerals from the volcano seeps into the top soil layers, acting as a natural fertiliser for the land.

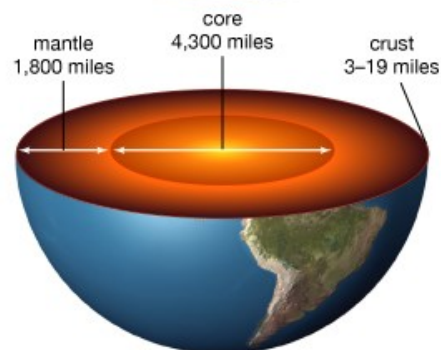
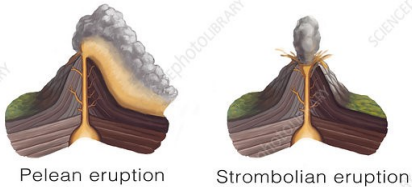
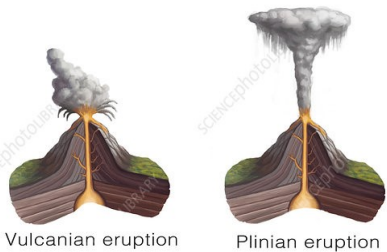
### What on earth?

The Earth is made up of 3 main sections.

The **core** is a solid metal ball holding the centre of the earth together.

The **mantle** is a liquid layer of molten rock.

The **Crust** is a solid layer at the top which is split into sections like a jigsaw called **tectonic plates**.

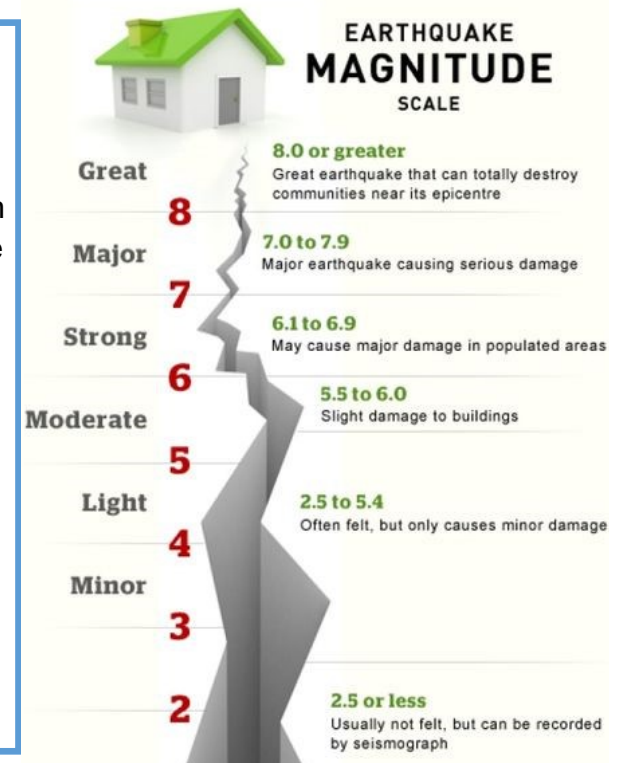


### Earthquakes and Faults

Before a volcano erupts, there is often a series of **tremors** known as **earthquakes**. These earthquakes are caused when the **tectonic plates** beneath the crust build friction by grinding against or away from each other. The result of the friction causes a large shaking around the **epicentre** of the plates, which we call an earthquake. These are measured on the **Richter scale**.

### CASE STUDY: Iceland (2010)

In 2010, a major volcano **erupted**, releasing an ash plume 9 kilometres into the sky. The cloud covered 250 million meters of airspace and shut down airports across the globe. All 500 farmers who lived on the slopes of the volcano were safely evacuated. However, farming was impacted by a layer of ash on the soil.



### Think to yourself

Why are we learning this?  
What do you know already?  
What would you like to know?