

Year 4 Autumn Term - Active Planet Knowledge Organiser

Key facts and features

How are volcanoes formed?

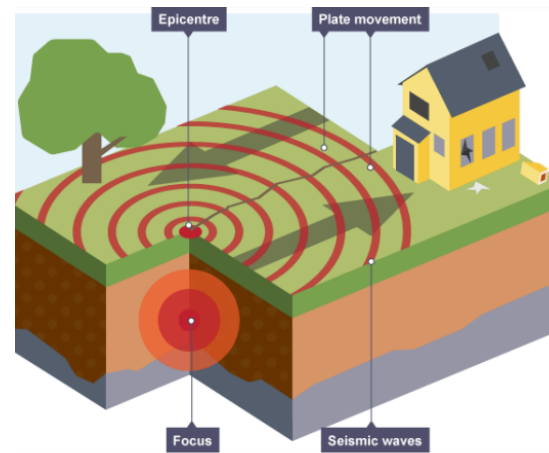
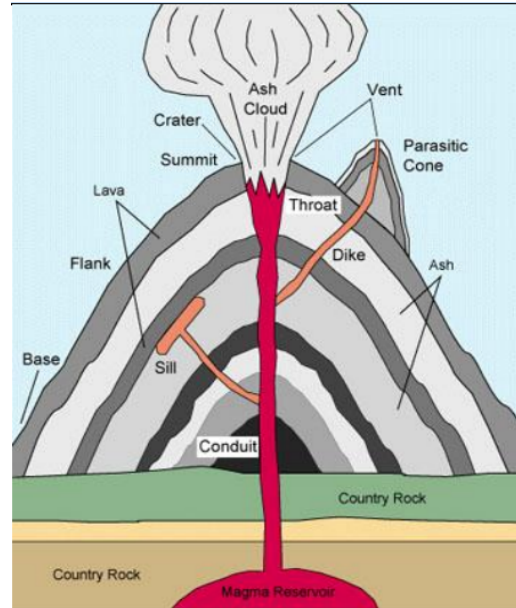
1. Magma rises through cracks or weakness in the Earth's crust.
2. Pressure builds up inside the Earth.
3. When this pressure is released, e.g. as a result of plate movement, magma explodes to the surface causing a volcanic eruption.
4. The lava from the eruption cools to Form new crust.
5. Over time,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

What causes an earthquake?

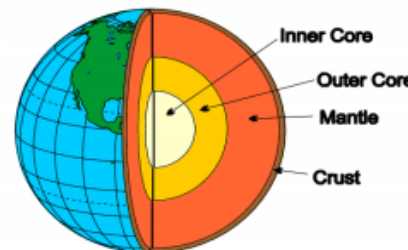
An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics). Earthquakes can happen along any type of plate boundary. Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other and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

Where are some of the world's most famous volcanoes?

- Mount Vesuvius, near Naples, Italy
- Krakatoa, Indonesia
- Mount St. Helens, Washington, USA
- Mount Tambora, Indonesia
- Mauna Loa, Hawaii
- Eyjafjallajökull, Iceland
- Mount Pelée, Martinique Caribbean



The Structure of the Earth



Key Vocabulary

Volcano: a vent in the earth's surface from which lava and gases pour during an eruption.

Earthquake: when tectonic plates rub together, the movement forces waves of energy to come to the earth's surface. This causes tremors and shakes - and this is what causes earthquakes.

Tectonic plates: the earth is made up of huge pieces of flat rock called tectonic plates.

Magma: molten (liquid) rock beneath the earth's surface.

Lava: molten rock flowing from the vent of a volcano during an eruption.

Eruption: the name of the process in which solids, liquids or gases are expelled through a vent in the earth's surface.

Earth's crust: the Earth's surface is covered by its thinnest layer, the crust.

Epicentre: an earthquake epicentre is the point on the Earth's surface directly above the earthquake focus.

Tsunami: an earthquake that occurs at the bottom of the sea that can push water upwards and create massive waves.

Magnitude - a measure of the energy of an earthquake, measured on the Richter scale.

Tremors - a vibration caused by slippage of the Earth's crust at a fault, especially before or after a major earthquake.