Volcanoes and Earthquakes – Knowledge Organiser

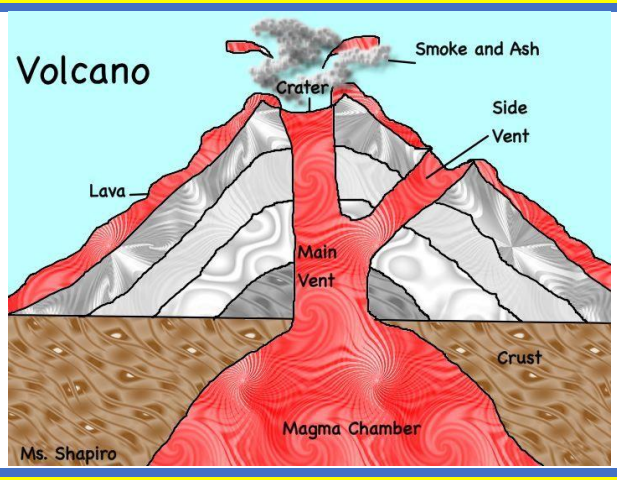
Key Vocabulary

- Volcano— an opening or rupture in the Earth's crust through which lava, ash and gases escape.
- Magma—a molten substance beneath the Earth's crust.
- Lava — molten, hot rock flowing from a volcano.
- Crater— the mouth of a volcano.
- Eruption— a volcano erupts when it shoots out lava/gas/ash
- Earthquake—a violent movement of parts of the Earth's surface.
- Epicentre— The point on the Earth's surface at the centre of an Earthquake.
- Earth's Crust and Core - the core is at the centre of the Earth. There is a solid inner core and outer liquid core of molten metal. The crust is the outer layer of the Earth's surface.
- Pompeii - a famous Roman city destroyed by a volcano in 79 AD.

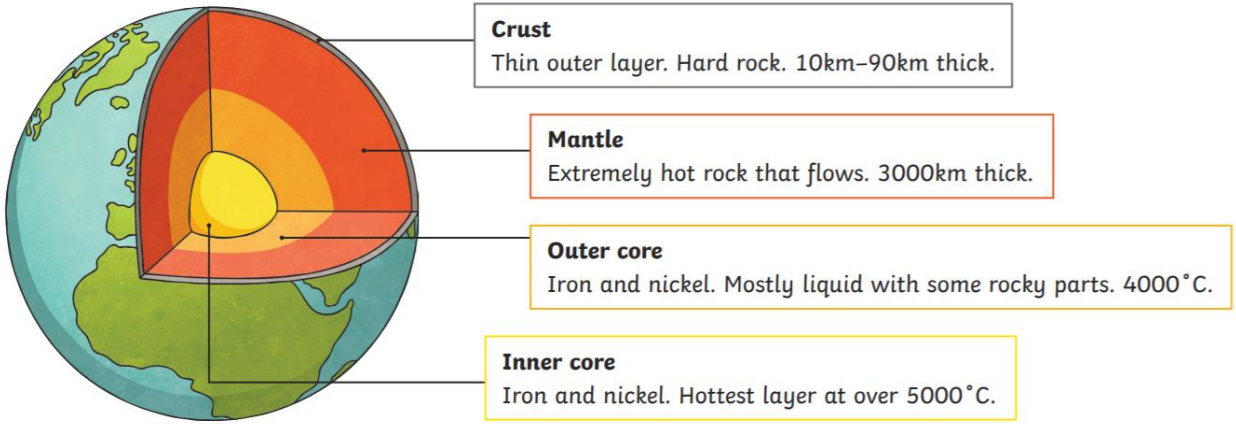
Geography Key Information Spring 2

Volcanoes

Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing magma to sometimes erupt through it. Some eruptions may consist of hot ash and rock but not magma.
Active volcanoes have erupted in the last 10 000 years.
Dormant volcanoes haven't erupted in the last 10 000 years but may erupt again.
Extinct volcanoes aren't expected to erupt again.



Layers of the Earth



Famous Volcanoes

Mount Vesuvius, near Naples, Italy

Krakatoa, Indonesia

Mount St. Helens, Washington, USA

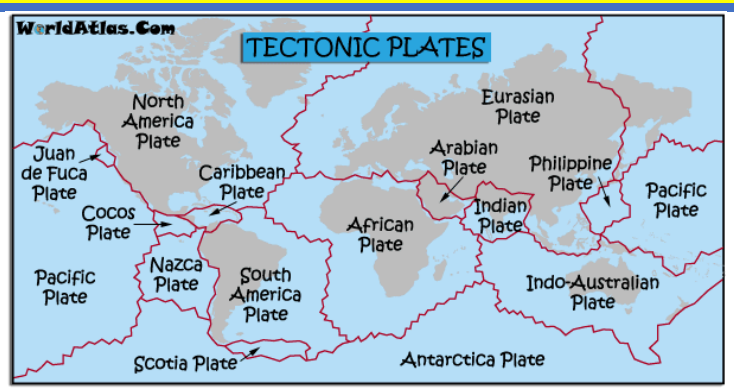
Eyjafjallajökull, Iceland

Key Information

Earthquakes

Earthquakes are caused when the earth's tectonic plates suddenly move. Most earthquakes occur near the tectonic plate boundaries. The Ring of Fire is the name of a plate margin which has lots of volcanoes and earthquakes.

Earthquakes can cause lots of damage to roads, buildings and property; this is an impact to human geography.



Questions and Answers

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 Lo, 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.
- The most powerful earthquake ever recorded on Earth was in Valdivia, Chile. Occurring in 1960, it had a magnitude of 9.5.