

Volcanoes and Earthquakes

Key facts and vocabulary for volcanoes:

Volcanoes are openings in the Earth's surface. When they are active they can let ash, gas and hot magma escape in sometimes violent and spectacular eruptions.

The word volcano originally comes from the name of the **Roman god of fire, Vulcan**.

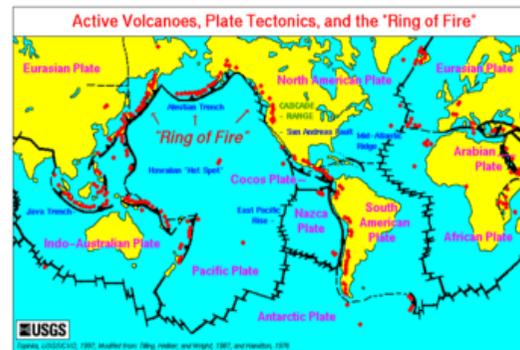
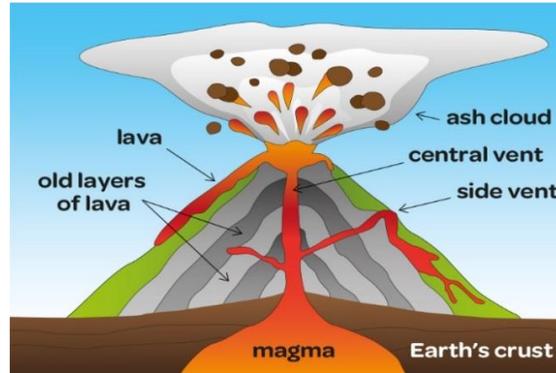
Volcanoes are usually located where tectonic plates meet. This is especially true for the **Pacific Ring of Fire**, an area around the Pacific Ocean where over 75% of the volcanoes on Earth are found.

While most **volcanoes** form near tectonic boundaries, they can also form in areas that contain abnormally hot rock inside the Earth. Known as mantle plumes, these hotspots are found at a number of locations around the globe with the most notable being in Hawaii.

Hot liquid rock under the Earth's surface is known as **magma**, it is called **lava** after it comes out of a volcano.

Volcanic eruptions can send ash high into the air, over 30km (17 miles) above the Earth's surface.

The Earth's crust is made up of **7 tectonic plates** which are constantly moving.



Key facts and vocabulary for Earthquakes:

Earthquakes involve the powerful movement of rocks in the Earth's crust. The rapid release of energy creates seismic waves that travel through the earth.

The damage caused by earthquakes also depends on their depth and fault type.

Seismometers are used to measure the magnitude of earthquakes. You are unlikely to feel a magnitude 3 earthquake but a magnitude 6 earthquake could potentially cause large damage.

The Richter scale is used to measure the strength of an earthquake using a number from 1 to 10, with 1 being the weakest and 10 being the most powerful.

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.



Key Vocabulary:

Active Volcano: A volcano which has erupted within the last 10,000 years.

Dormant Volcano: A volcano which has not erupted for a while but which could possibly erupt again.

Extinct Volcano: A volcano which has not erupted for the last 10,000 years and is not expected to erupt again.

Magnitude: Magnitude is used to describe the size of the earthquake.

Fault Plane: A fault is a weak point within a tectonic plate where pressure from beneath the surface can break through and causing shaking in an earthquake.

Epicentre: The epicentre of an earthquake is the point on the surface of Earth directly above the epicentre.

Mount Vesuvius is an active volcano located in Italy which is in southern Europe.

Two million people live on the lower slopes of the volcano.

Mount Vesuvius is about **4,190 feet high** and measures about **30 miles around its base**. Geologists estimate it to be about **17,000 years old**.

Vesuvius is the only volcano on the European mainland that has erupted during the last century and is still active. It has **erupted over 50 times during the last 2,000 years**.