

Upper Key Stage Two Forest Academy
 Knowledge Organiser: Out of This World (Part 1)

I am learning to.....

- Identify what tectonic plates are
- Explain what earthquakes and volcanoes are
- Use an atlas to locate and label different countries and continents in the Northern and Southern Hemisphere
- Locate the key physical characteristics and relate these features to tourism.

Key Vocabulary:

Crater	A cup-shaped depression in the surface of the earth, caused by volcanic activity.
crust	The Earth's crust is its outer layer.
core	The central part of the earth, beneath the mantle.
earthquake	A sudden violent shaking of the ground, typically causing great destruction, because of movements within the Earth's crust or volcanic action.
epicentre	The point on the Earth's surface at the centre of an earthquake.
inner core	The Earth's inner layer of solid rock.
magma	A molten substance beneath the Earth's crust.
magnitude	The strength of an earthquake.
mantle	Under the crust is the mantle forming about half of the Earth.
outer core	A layer of the earth that is semi-molten rock.
Richter scale	A scale to measure the magnitude of an earthquake.
tectonic plates	The Earth's crust is divided into sections which can move and are called tectonic plates.
seismic waves	An elastic wave in the earth produced by an earthquake or other means.
seismologists	A scientist who studies earthquakes.
volcanic eruption	An opening in the earth's crust from which lava, ash and hot gases flow or are ejected during an eruption.

Tectonic Plates

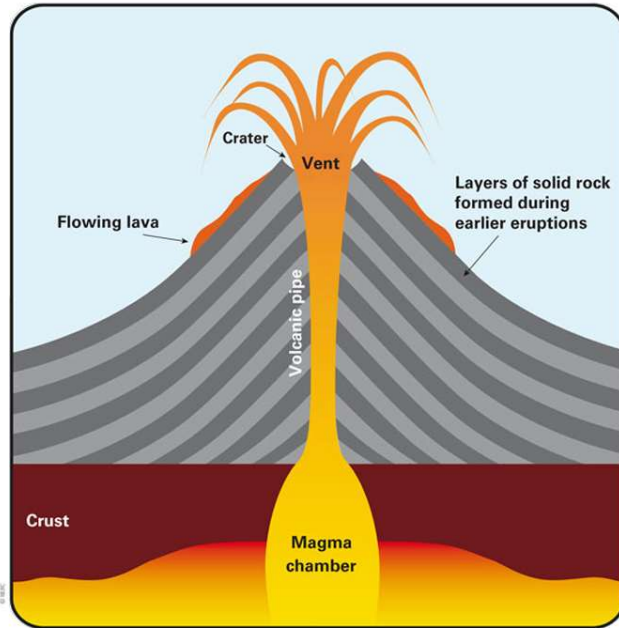


What Are Tectonic Plates?

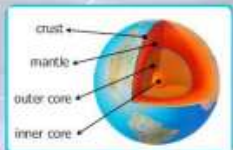
The Earth's surface is called the crust. It is made up of different rocky sections called tectonic plates, which fit together like a puzzle covering earth.

Tectonic plates are located all over the world. They cover the Earth's inner layers and act as a sort of shell below the ground and the sea. The plates that are below the continents (land) are known as continental plates. The plates that are covered by ocean are called oceanic plates. These are thinner and heavier. There are seven major tectonic plates that cover the earth.

Types of volcanoes



Active	A volcano that has erupted since the last ice age (i.e., in the past 10,000 years)
Dormant	A volcano that hasn't erupted in the past 10,000 years, but which is expected to erupt again
Extinct	A volcano that nobody expects to ever erupt again



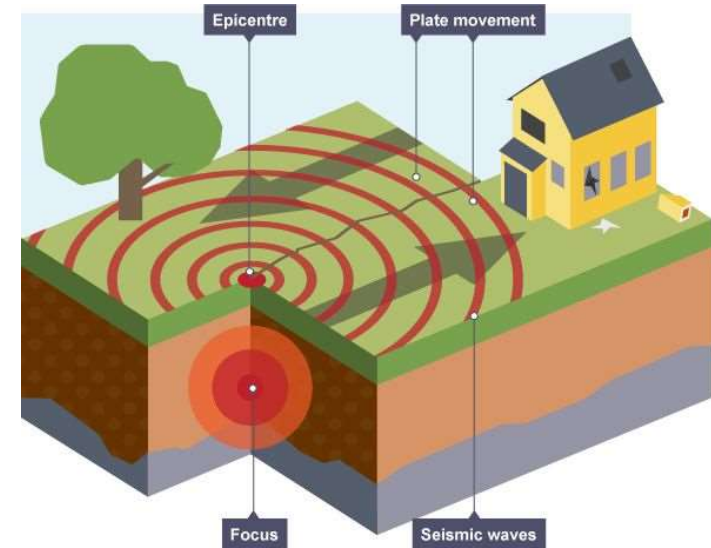
The Earth is made up of several layers. Underneath the crust is the **mantle**. This layer consists of semi-molten rock.

In some areas, the mantle becomes so pressurised that it becomes a liquid called **magma**. The liquid then escapes through vents in the crust. This is what a volcano is.

The magma builds up in a magma chamber until the pressure is too much and it has to be released.



Earthquakes



Why Do Earthquakes Happen?

- Earthquakes usually occur on the edges of large sections of the Earth's crust called tectonic plates. These plates slowly move over a long period of time. Sometimes, the edges, which are called fault lines, can get stuck, but the plates keep moving.
- Pressure slowly starts to build up where the edges are stuck and, once the pressure gets strong enough, the plates will suddenly move causing an earthquake.

Measuring Earthquakes

- Scientists, known as seismologists, use the Moment Magnitude Scale (MMS) to determine the magnitude (strength) of an earthquake.
- The MMS measures the total energy of an earthquake, called the seismic moment.