

Knowledge Organiser Volcanoes Year 3/4



Key vocabulary

Tectonic plates: Large pieces of the Earth's crust that move slowly over the mantle.

Dormant: A volcano that is not currently erupting but may erupt again in the future.

Active: A volcano that is erupting now or has erupted recently and is likely to erupt again.

Shield: A broad volcano with gently sloping sides formed by layers of runny lava.

Composite cone: A steep-sided volcano made from alternating layers of lava and ash.

Upper mantle: The layer of the Earth directly beneath the crust where tectonic plates move.

Mantle: The thick layer of hot, semi-molten rock between the Earth's crust and core.

Core: The central part of the Earth, made mostly of iron and nickel.

Earthquake: A sudden shaking of the ground caused by movement of tectonic plates.

Tremor: A small or slight earthquake or shaking of the Earth.

Magma: Molten rock found beneath the Earth's surface.

Richter scale: A scale used to measure the strength (magnitude) of an earthquake.

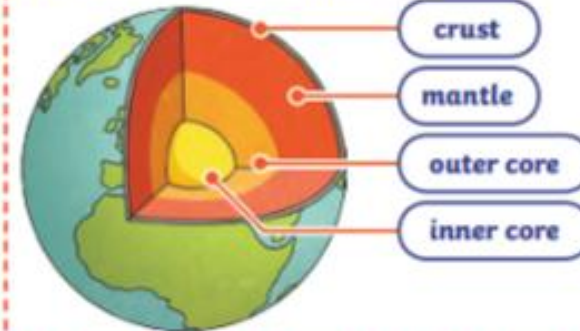
Lava: Magma that has reached the Earth's surface.

Rocks: Naturally occurring solid materials that make up the Earth's crust.

Magnitude: A measure of the size or strength of an earthquake.



The Earth's Structure



Tectonic Plates

The Earth's crust is made up of different rocky sections called tectonic plates, which fit together like a puzzle covering the Earth. Most tectonic activity occurs along the plate boundaries (convergent, divergent and transform). Some **volcanoes** form over hotspots in the **mantle**, e.g. Hawaii.



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Key Knowledge

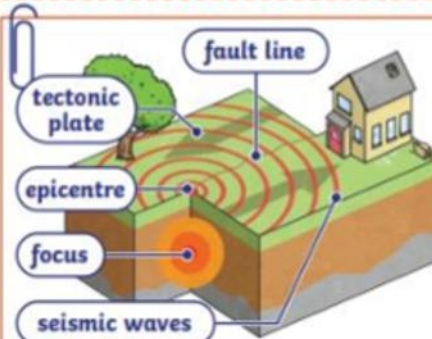
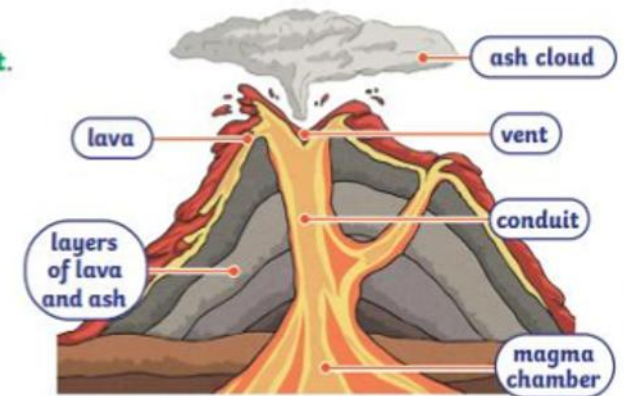
- 1) How is the Earth constructed.
- Name and describe the layers of the Earth.
- 2) Where are volcanoes found in the world?
- To explain where and why volcanoes are formed.
- Investigate maps to see where they are.
- 3) Why and where do we get volcanoes?
- To explain why volcanoes happen.
- To understand tectonic plates.
- 4) What are the effects of a volcanic eruption?
- To recognise the positive effects of an eruption.
- To identify the negative effects of an eruption.
- 5) What are earthquakes and where do we get them?
- To know what an Earthquake is.
- To know why they occur.



Volcanoes

Pressure builds below the Earth's **crust**. Alongside plate boundaries, **magma**, hot ash and gas rises and escapes, forming a **volcano**. The shape of a **volcano** depends on the type of **eruption** that occurs.

- Composite **volcanoes** are cone shaped with steep sides and have explosive eruptions due to its sticky **magma**.
- Shield **volcanoes** are bowl/shield shaped with wide gentle slopes due to its runny **lava** travelling distances before it cools down and hardens.



Earthquakes

An **earthquake** is the shaking of the Earth's **crust**. When the tectonic plates scrape or slip against each other, or sometimes get stuck, friction builds up deep underground.

- **Earthquakes** create fault lines, which are cracks or fractures in the Earth's surface.
- They can cause severe damage to roads and buildings.

Why Do People Live Near Tectonic Hazards?



fertile soil



geothermal energy



mining



tourism

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