

Geography



Why would somebody live near a volcano?

Big Idea; The natural world is not always predictable – even though humans try their best to understand what’s going to happen

What should I already know?

- Volcanoes are example of physical features.
- The Earth’s crust is made up of tectonic plates.
- There are different types of rocks, formed by physical processes.
- The continents and oceans, and be able to locate these on a map.

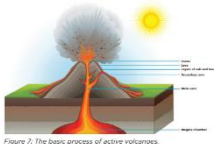
What will I know by the end of this unit?

The theory of plate tectonics can be used to explain where volcanoes are located in the world:



- The Earth’s **crust** is broken up into interlocking ‘**tectonic plates**’.
- The tectonic plates move (a few centimetres a year) towards, away from, or sliding past, each other. This results in **volcanoes** and earthquakes at their boundaries.
- An example of **diverging plates** is the mid-Atlantic ridge, where the Eurasian plate and the North American plate are moving apart.
- Iceland sits on this ridge and is very actively volcanic.

How volcanoes are formed:



- Along the lines of the tectonic plates, where the Earth’s crust is thinner and weaker, molten material can push through to the surface and erupt as a volcano.
- An example of this is where plates are pulling apart at a plate boundary.

Volcanoes can be dormant, active or extinct

- A **dormant** volcano is one that has been inactive for a long time, but it could **erupt** again the future.
- An **extinct** volcano is one which will never **erupt** again.
- An **active** volcano is one which has a recent history of eruptions.

The physical Geography of Heimaey is different to Wymondham

- Heimaey, is a small island 94 Miles from Reykjavik, the capital of Iceland.
- In 1973 the Eldfell volcano **erupted**, all the residents of Heimaey had to be evacuated
- The land is mountainous, with dark, volcanic soil.
- There are no **active** volcanoes in the UK but there are **extinct** volcanoes.

Humans live near, and may choose to visit volcanoes for a number of reasons.

- Volcanic land is very **fertile** and good for farming.
- Mining may also take place in the area around a volcano as it can be rich in mineral deposits.
- Energy can be generated from the Earth’s heat (**geothermal energy**)
- Tourism creates jobs for people, and lots of people want to visit volcanic regions to see the landscape and wildlife.

Humans try to measure and predict volcanic activity, but can’t control it.

- **Volcanologists** study volcanoes to understand how they work.
- Build-ups of pressure can take place deep underground and inside a volcano over many years.
- **Seismographs** detect vibrations, movements and tremors underground.
- Satellites can also track and calculate movement above ground.
- Cities or towns near volcanoes often have evacuations plans in case of an eruption.

Key vocabulary;

Volcano, crater, crust, dormant, extinct, erupt, fertile, tectonic plate, magma, lava, tourist.
Geothermal energy, seismology, volcanologist, divergent plate boundary, satellite.