

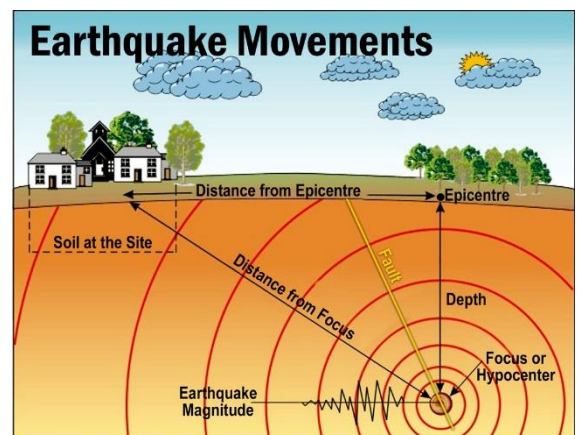
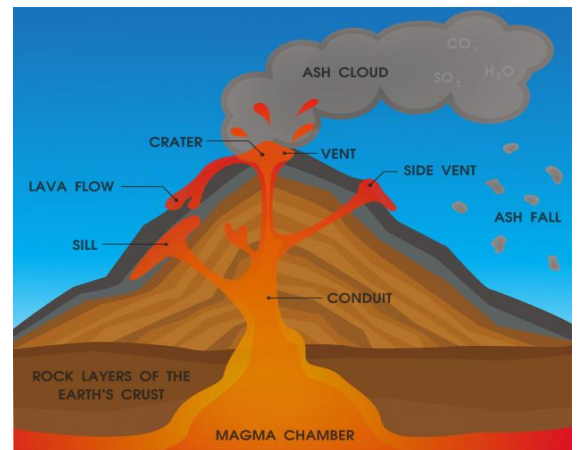
Year 6 Geography Knowledge Organiser Term 5

What impact does the Forces of Nature have on some people's lives?

Key vocabulary:

volcano	A volcano is a landform (usually a mountain) where molten rock erupts through the surface of the planet.
magma	Hot fluid or semi-fluid rock below the earth's surface.
lava	Molten rock flowing across the surface of the earth.
crater	The area around the opening of a volcano or geyser that is shaped like a bowl.
earth's crust	The outside layer of the earth.
eruption	An explosion of steam/lava from a volcano.
earthquake	Earthquakes are the shaking, rolling or sudden shock of the earth's surface.
dormant	A volcano that is not currently erupting but has in the past.
tectonic plates	The huge slabs of moving rocks which makes the earth's crust.
epicentre	The place on the surface where the centre of the earthquake was.
extinct	A volcano that is not expected to ever erupt again.
seismic waves	Waves of energy that travel through the Earth's layers, and are a result of earthquakes and volcanic eruptions.

How are volcanoes formed?	Magma rises through cracks or weaknesses in the Earth's crust which causes pressure to build up inside the earth. When the pressure is released, magma explodes to the surface causing a volcanic eruption. The lava from the eruption cools to form a new crust. 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. 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.



Earthquake magnitudes are measured on the Richter Scale (1 – 10). Many earthquakes occur every day, but they are small (1-2) and don't cause any damage. Major earthquakes (7-8) can lead to many deaths and cause severe damage to buildings.

In February 2011, there was a major earthquake that struck Christchurch, NZ. Many buildings were destroyed. NZ has many earthquakes because it lies where two tectonic plates are coming together – the Indo-Australian Plate and the Pacific Plate.

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 Io, 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.
- 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.

Volcanoes in Context: *Hiemaey Iceland*

- The island of **Hiemaey** (pronounced Hay-my) is the largest and only inhabited island of the Westman Islands, Iceland (population 4500).
- The Westman Islands form the most southerly region of Iceland and are very active volcanically.
- The island came to international attention in 1973 with the eruption of the **Eldfell** volcano which destroyed many buildings and forced a month-long evacuation of the entire population to mainland Iceland
- One fifth of the town was destroyed before the lava flow was halted by the application of 8.8 billion litres of cold seawater.
- Today, the two volcanoes of Eldfell and Helgafell dominate the island and everyone lives quite literally in their shadow



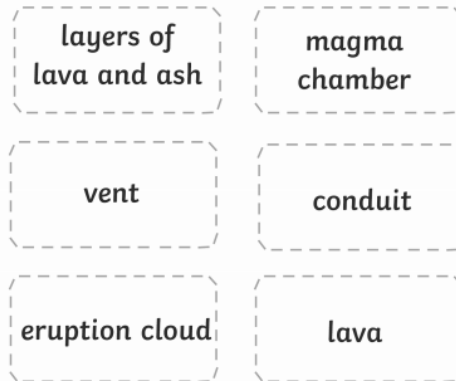
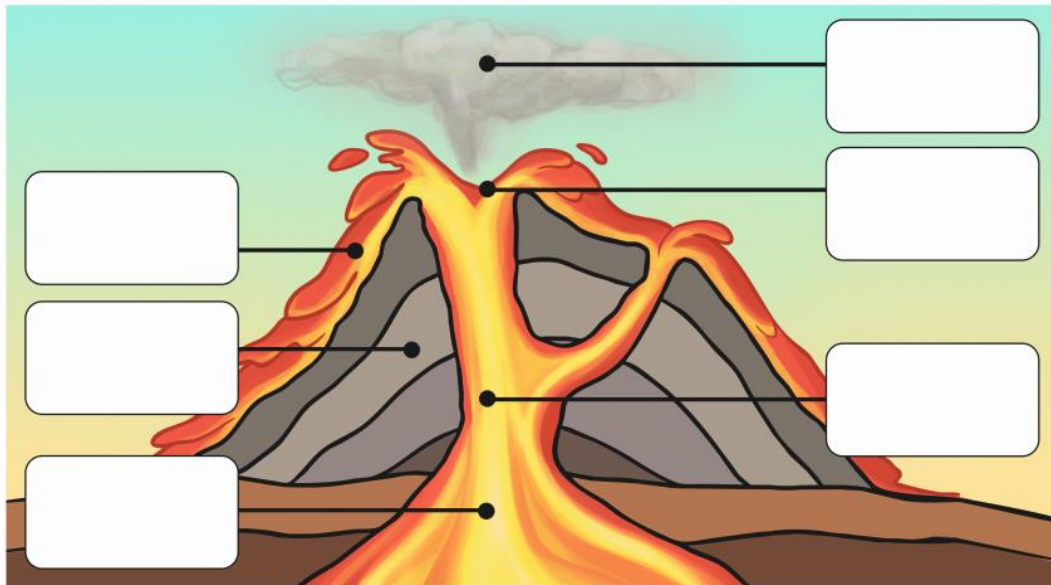
Eldfell Volcano during the eruption in 1973

What will I know at the end of this unit?

- How mountains and volcanoes are formed.
- The name of mountains and volcanoes from around the world.
- How the earth is formed.
- How earthquakes and volcanoes are caused.
- Why people might choose to live in areas where natural disasters occur.

Quiz

1. Label the parts of a volcano (2 marks):



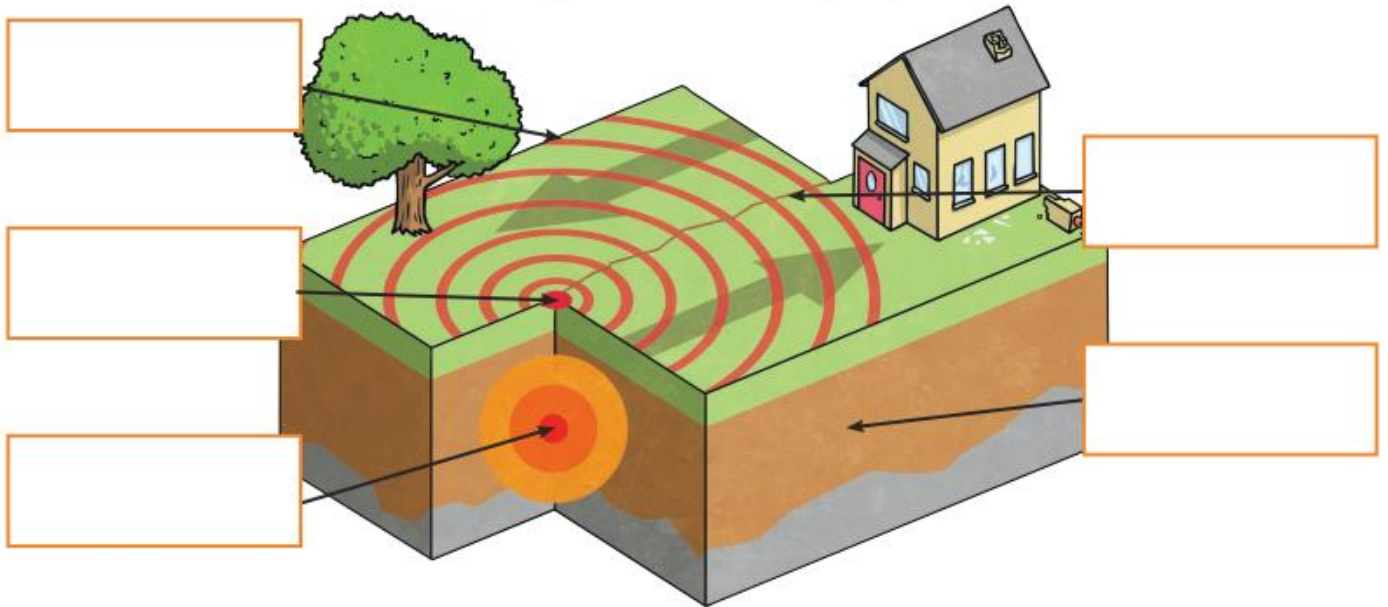
2. What is the definition of an extinct volcano?

- A volcano that is likely to erupt
- A volcano that has erupted in the past and may still erupt again.
- A volcano that is not expected to erupt again.

3. What is the richter scale?

- A device that measures the number of earthquakes.
- A device that measures the intensity of earthquakes.
- A device that names earthquakes.

4. Label the parts of the earthquake (2 marks).



earth's crust	epicentre	hypocentre	fault line	tectonic plate
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5. What is the name of the volcano in Hiemaey that erupted in 1973?

- a. Helgafell
- b. Lanfell
- c. Eldfell
- d. Tanfell

6. Explain in your own words why the people of Hiemaey continue to live in the shadow of an active volcano:

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2 marks

7. Name 3 things you should do to keep safe in case of an earthquake:

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