

Knowledge Organiser

Subject: Geography Unit: What causes volcanoes and how do they affect lives?

Overview:

During this sequence of learning, pupils will look at the physical geography of Iceland and why volcanoes occur and where. They will also look at how volcanic eruptions affect the physical geography of an area and how lives are affected.

What should I already know?

- Earthquakes and volcanoes are examples of natural disasters.
- Both Earthquakes and volcanoes occur at plate boundaries. Plates are large slabs of rock which make up the Earth's surface and these are constantly moving.
- The damage caused by an earthquake is not always reflective of the magnitude of it. Smaller earthquakes have been known to cause more damage if the area is poorer.
- A volcano is where there is an opening in the Earth's crust which allows magma to reach the surface.

Vocabulary:

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| Magma | Molten rock which is under the Earth's surface. |
| Lava | Rock in a liquid form which flows from a volcano or opening in the Earth's surface. |
| Geysers | A natural pool of hot water which sometimes erupts sending steam and hot water gushing into the air. |

What will I know by the end of the unit?

- The island of Hiemaey is the largest and only inhabited island of the Westman Islands in Iceland.
- Volcanoes can release gases, ash and rock along with lava.
- There are no active volcanoes within the UK but there used to be in the past.
- The physical geography of Hiemaey is very barren - this is partly due to volcanic eruptions from the past. There are also geysers and glaciers on the Island.
- There are volcanoes in Iceland because of its location on top of the boundary where two plates meet. Geographers call this boundary the Mid-Atlantic Ridge. As these plates are slowly moving apart from each other, it creates a gap which means magma can then reach the surface.



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| Glaciers | A large area of thick ice which remains frozen from one year to the next. |
| Archipelago | A geographical name for a group, chain, cluster or collection of islands. |
| Evacuation | To leave a place because it is dangerous and go and live somewhere else. |
| Barren | A place where very little grows. |



- Eldfell is one of the volcanoes on Hiemaey and is active. The rock surface on the top of Eldfell is still warm from its last eruption. In the early hours of the 23rd January in 1973, magma began rising up the crack between the Eurasian Plate and the North American



Plate and eventually after three months the volcano had formed.

- When the volcano erupted, it threatened to devastate the whole island. Most of the population was evacuated to the main island but a number of men stayed behind to try and save the houses. The eruption continued for months and those left behind fought hard to save the harbour. This was essential as fishing was the islands main source of income and without the harbour this would not have been possible.
- They sprayed sea water directly onto the lava which cooled it and caused it to harden.
- People continue to live on Hiemaey even with the threat from volcanoes because of the jobs that are available. The most important economic activity on the island is fishing. The fish that is caught off the coast of the island is processed, packed and then exported to different countries such as Nigeria and Africa.

Active volcano

A volcano that is likely to erupt again.

Dormant volcano

A volcano that has not erupted for a long time but is capable of erupting again.

Erupt

To become active and eject lava, ash and gases.

Physical geography of Hiemaey

