

Extreme Earth: Volcanoes

Aim: Describe and understand key aspects of physical geography in the context of volcanoes. To explain how volcanoes are formed.	Success Criteria: I can show you how tectonic plates move. I can tell you how a volcano is formed. I can name some of the parts of a volcano. I can tell you what happens when a volcano erupts.	Resources: Lesson Pack Blue and orange card Washing-up liquid Baking soda Vinegar Red food colouring Plastic cup Bottle of sparkling water
	Key/New Words: Volcano, eruption, magma, main vent, crater, magma chamber.	Preparation: Credit card sized cut outs of orange and blue card (one of each) - per child How Is a Volcano Made Activity Sheet - per child

Prior Learning: Children should know the layers that make up the Earth.

Learning Sequence

	Can You Remember What's Under Your Feet? Recap the layers that make up the Earth using the Lesson Presentation .	
	Eyjafjallajökull: Show children the video of Eyjafjallajökull erupting in 2010. How would you describe the eruption? What can you see?	
	Tectonic Plates: Share the information on the Lesson Presentation .	
	How Can You Move Your Plates? Children use their pieces of coloured card to investigate ways that tectonic plates can move around together. Ask them to think about what effect the movements might have. Listen for children discussing their ideas and using vocabulary related to the layers of the Earth. Reveal the three ways plates can move, looking at each one in turn. Allow children time to act out the movement with their pieces of card. Who can suggest what might happen to rock that slides underneath into the mantle (it will melt) or what might happen as the plates move apart (liquid rock or magma is exposed)?	
	What Have Tectonic Plates Got to Do with Volcanoes? Look at the photograph of the Thingvellir Valley in Iceland. This is where the North American and Eurasian plates are separating. Share the facts about the valley on the Lesson Presentation .	
	How Are Volcanoes Made? Talk through the volcano's life cycle – point out the layers on the diagram. A new layer is made each time the volcano erupts.	
	What's It All Called? Share the labelled cross-section diagram. Could we really see all this if we looked at a volcano? (No, it is a cut-through diagram so we can see what is going on inside).	
 <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Sort the events in a volcano's life cycle.</p> </div> <div style="text-align: center;">  <p>Explain the events in a volcano's life cycle.</p> </div> <div style="text-align: center;">  <p>Explain the events in a volcano's life cycle.</p> </div> </div>		
	Go With the Flow! Model how a volcano might erupt by using the Make Your Own Volcano Science Activity . Why does it happen? What do the bubbles tell you about what has happened? (A gas has been made; a chemical reaction or change has taken place). Explain if necessary that eruptions don't occur because of a reaction in a volcano, but because of an increase in pressure – demonstrate this by shaking a bottle of sparkling water and then opening it to clarify the difference – the gases were already in the water, opening the bottle didn't create them.	

Taskit
Modelit: Children could use paper mache or clay to create a realistic volcano model.