Fiery Foundations: Understanding Volcanoes with Finn

Learning objective: To identify the key parts of a volcano and explain the geographical process of how they are formed using tectonic plate terminology.

Use your knowledge of physical geography to answer the following questions. Refer to the word bank if you need help with scientific terminology.

Finn the dolphin has been mapping the ocean floor and has discovered many volcanic mountains beneath the waves. Use your understanding of the Earth's structure to complete these tasks.

Word bank: Tectonic plates · Magma · Lava · Crust · Mantle · Vent · Eruption · Pacific Ring of Fire

1. Finn explains that volcanoes often form where tectonic plates meet. Describe what happens to the Earth's crust at these plate boundaries to create a volcano. (2 marks)

2. What is the difference between magma and lava? Explain the change in terminology during an eruption. (2 marks)

3. Look at the 'Pacific Ring of Fire'. Why do you think it is given this name based on the concentration of volcanic activity in that region? (2 marks)

4. Identify and label the 'vent' of a volcano. Why is this part essential for an eruption to occur? (2 marks)

5. Volcanoes can be classified as active, dormant, or extinct. If a volcano has not erupted for 10,000 years, which category does it likely fall into and why? (2 marks)

Draw: Draw a cross-section diagram of a composite volcano. Label the magma chamber, the main vent, the crater, and the layers of ash and lava flow.

Extension challenge: Research a famous volcanic eruption from history, such as Mount Vesuvius or Mount St. Helens. Write a short paragraph explaining the impact the eruption had on the surrounding local geography and human settlements.