

Year 4 Geography Assessment: The Power of Volcanoes

Learning objective: To demonstrate knowledge of volcanic structure, the location of the Ring of Fire, and the impact of volcanic eruptions on the physical landscape.

Read each question carefully. Use your geographical vocabulary to provide clear, detailed answers. Ensure your spelling of scientific terms is accurate.

Finn the dolphin has been mapping the ocean floor near the Pacific Ocean. He has noticed that many volcanoes are located along the edges where giant sections of the Earth's crust meet. When these sections move, pressure builds up deep underground, leading to dramatic changes on the surface of our planet.

Word bank: Magma · Lava · Crater · Tectonic plates · Vent · Eruption · Ash cloud · Ring of Fire

1. Define the difference between 'magma' and 'lava'. (2 marks)

2. Name the specific area around the Pacific Ocean where a high number of the world's active volcanoes are located. (1 mark)

3. Describe the process of a volcanic eruption. Use the terms 'vent' and 'pressure' in your explanation. (3 marks)

4. Explain why volcanic soil is often very fertile for farmers living near an extinct volcano. (2 marks)

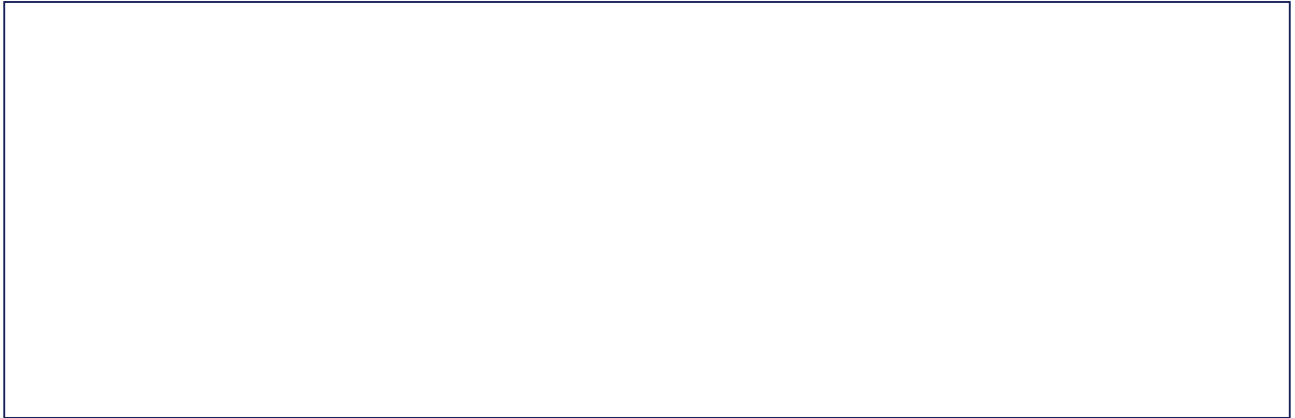
5. Compare and contrast a dormant volcano and an active volcano. (3 marks)

6. Justify why scientists like Bea the honeybee would monitor gas emissions from a volcano before an eruption occurs. (4 marks)

7. What might happen to the local climate and air quality immediately following a massive volcanic eruption? Explain your reasoning. (5 marks)

8. Identify one positive and one negative impact of volcanoes on human settlements. (5 marks)

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



Extension challenge: Imagine you are a volcanologist. Write a short diary entry (100 words) describing the experience of witnessing a gentle lava flow. Include observations about the temperature, the sound, and the appearance of the landscape after the lava cools. Total: /25