

Mapping the Mountain: A Volcanic Journey with Finn

Learning objective: To identify and label the key physical features of a volcano and explain the process of an eruption.

Follow the drawing prompt to create your cross-section of a volcano. Use the word bank to label your diagram accurately. Once your diagram is complete, answer the challenge questions below to demonstrate your expert understanding.

Draw: Draw a large cross-section of a stratovolcano. Ensure the drawing shows the layers of rock inside the mountain. Include a large 'magma chamber' at the bottom, a 'main vent' running through the centre, and a 'crater' at the peak. Add a 'secondary cone' on the side of the mountain and show 'lava' spilling down the outer slope. Use vibrant colours to distinguish between the cooling rock layers and the flowing lava.



Label words: Magma chamber · Main vent · Crater · Lava flow · Volcanic ash · Crust · Secondary cone

Steps:

1. Step 1: Draw a large, mountain-shaped triangle. Step 2: Draw a vertical tube leading from the bottom to the top. Step 3: Add a pool of orange liquid at the base. Label these parts using the word bank.
2. Explain why the molten rock is called 'magma' when it is underground, but changes its name to 'lava' once it erupts onto the surface.

3. Compare and contrast the effect of a slow-moving lava flow with a cloud of volcanic ash on the surrounding environment.
4. Justify your answer: Why do you think some plants grow extremely well in soil that has been formed from old volcanic rock?
5. What might happen to the shape of the mountain if a secondary vent opens on the side of the volcano?