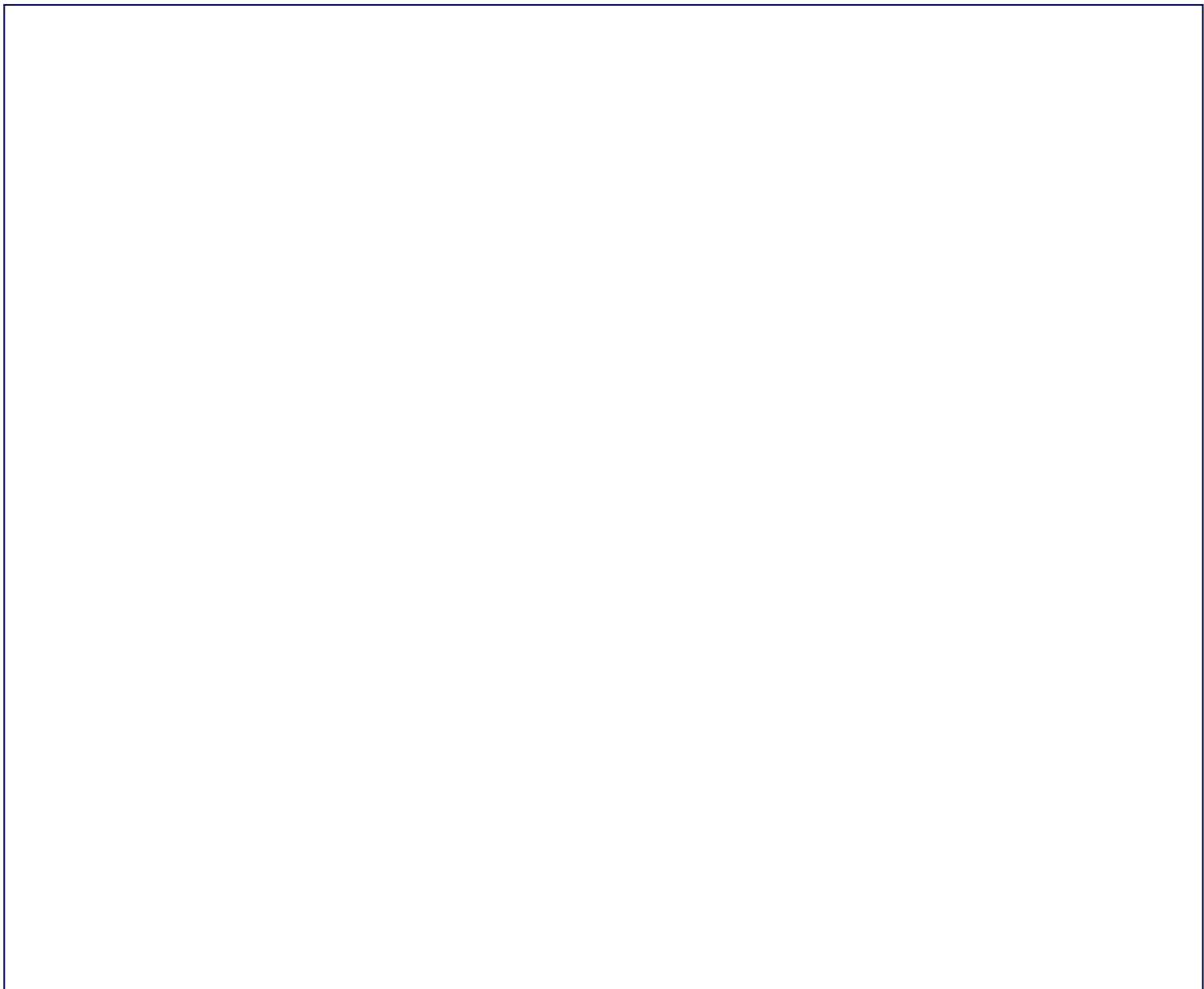


Volcanic Landscapes: A Geological Masterclass

Learning objective: To identify and illustrate the physical features of a volcano and explain the processes involved in its formation.

Follow the drawing prompts to construct a detailed cross-section of a volcano. Ensure your labels are accurate and use a ruler for your leader lines. Use scientific precision to depict the layers of the Earth's crust.

Draw: Draw a cross-section of a stratovolcano on A4 paper. Use a landscape orientation. Start by sketching a large, symmetrical cone shape. Inside the cone, draw a central pipe (the conduit) leading down to a large, bulbous magma chamber at the base. Add a smaller secondary vent branching off the side. Sketch a plume of ash rising from the crater at the top, using stippling (dots) for texture. Show a river of lava flowing down one side of the mountain. Use shading to distinguish between layers of hardened ash and solidified lava flows.



Label words: Magma chamber · Main vent · Crater · Lava flow · Secondary vent · Ash cloud · Conduit · Crust

Steps:

1. Label your drawing with the provided word bank. Ensure the leader lines point exactly to the correct geological feature.
2. Explain why the pressure within the magma chamber increases before an eruption.

3. Compare and contrast the terms 'magma' and 'lava'.
4. Justify why volcanoes are often found along the boundaries of tectonic plates.
5. What might happen to the surrounding landscape if a volcanic eruption were followed by heavy rainfall?
6. If a farmer had to pay £450 to relocate their livestock due to an impending eruption, and the government offered a grant covering 60% of the cost, how much would the farmer have to pay themselves?