Earthquake Explorers with Finn the Dolphin

Learning objective: To identify the physical features of an earthquake and understand how they occur at plate boundaries.

Finn the dolphin has been mapping the ocean floor and has discovered some shaky secrets! Look at the list of terms below. Use the information to label the diagram of an earthquake and match each term to the correct definition. In the boxes provided, write the number of the matching definition next to the corresponding term.

Word bank: Epicentre · Focus · Seismic Waves · Tectonic Plates · Fault Line

1. 1. Fault Line: The crack in the Earth's crust where movement occurs. 2. Focus: The point underground where the earthquake begins. 3. Epicentre: The spot on the surface directly above the focus. 4. Seismic Waves: The energy that travels outwards, causing the ground to shake. 5. Tectonic Plates: Large sections of the Earth's crust that move slowly. (5 marks)

2. Explain why earthquakes often happen near the edges of tectonic plates rather than in the middle of them. (2 marks)

3. If a city spends £500,000 on earthquake-proof building designs, but the materials cost £350,000 and the labour costs £200,000, how much over budget are they in pounds? (2 marks)

4. What is the name of the scientific instrument used to measure the intensity of the shaking caused by an earthquake? (1 mark)

5. True or False: The Epicentre is located deep inside the Earth's mantle. Give a reason for your answer. (2 marks)

Draw: Draw a cross-section of the Earth's crust showing two tectonic plates pushing against each other. Label the 'Focus' deep underground and the 'Epicentre' directly above it on the surface.

Extension challenge: Research the 'Ring of Fire'. Write a short paragraph explaining why this area experiences so many earthquakes and volcanic eruptions, and how people living there adapt their homes to stay safe.