Earthquake Investigator: Field Report with Finn the Dolphin

Learning objective: To understand the causes of earthquakes and the effects of tectonic plate movement on the Earth's crust.

Use this field report to record your findings after researching how earthquakes occur. Finn the Dolphin has been mapping the ocean floor and has discovered some fascinating evidence about tectonic plates. Fill in each section using your knowledge of geography and the word bank provided to help you explain the science behind these powerful events.

Word bank: Tectonic plates · Crust · Epicentre · Seismograph · Magnitude · Friction · Fault line · Lithosphere

1. The Earth's Structure: Describe the layers of the Earth and explain how the movement of tectonic plates leads to an earthquake. (3 marks)

2. The Fault Line: Define what a fault line is and explain why rocks often get 'stuck' before an earthquake occurs. (2 marks)

3. Measuring the Shakes: Explain how a seismograph works and why scientists use the 'magnitude' scale to measure the intensity of an earthquake. (3 marks)

4. The Epicentre: In your own words, explain the difference between the focus (hypocentre) of an earthquake and the epicentre on the surface. (2 marks)

5. Safety and Preparation: List three safety precautions that people living in earthquake-prone regions should take to protect themselves. (3 marks)

Extension challenge: Research a significant historical earthquake. Create a brief case study noting the date, location, magnitude, and the impact it had on the local geography and community.