

Grade 4 Geography Assessment: The Shaking Earth

Learning objective: To demonstrate understanding of how earthquakes occur, where they happen, and their impact on the environment and human life.

Read each question carefully. Answer in full sentences where required. Ensure your handwriting is clear and neat.

Finn the dolphin has been exploring the ocean floor near deep underwater trenches. He has noticed that the Earth's outer layer is not one solid piece, but is broken into large sections that constantly move. When these sections rub against each other, they sometimes get stuck. When they finally snap free, a massive amount of energy is released, causing the ground to shake.

Word bank: Tectonic plates · Epicentre · Seismograph · Focus · Crust · Tremor · Richter scale

1. Using Finn's observations, explain what the Earth's outer layer is made of and how this relates to earthquakes. (2 marks)

2. Define the term 'epicentre' and explain how it differs from the 'focus' of an earthquake. (3 marks)

3. Which scientific instrument is used to detect and measure the intensity of an earthquake? (1 mark)

4. Explain why earthquakes are more likely to occur at the boundaries where tectonic plates meet. (3 marks)

5. Max the monkey is calculating the cost of earthquake-proof building materials. If one reinforced steel beam costs £45, how much would it cost to buy 8 beams for a community center project? (2 marks)

6. Describe two ways that a severe earthquake can change the landscape of an area. (4 marks)

7. Imagine you are a town planner. Write a 5-mark response explaining what steps you would take to keep people safe if an earthquake occurred, and why these preparations are important for a city's infrastructure. (10 marks)

Draw: Draw a labelled diagram showing the Earth's crust, the focus of an earthquake, and the epicentre on the surface.



Extension challenge: Total: /25. Extension: Research the 'Ring of Fire' and write a paragraph explaining why it is a high-risk area for seismic activity.