

Earthquake Explorers: A Seismic Challenge with Finn the Dolphin

Learning objective: To understand the causes, effects, and measurement of earthquakes, as well as the geography of tectonic plates.

Join Finn the Dolphin as he dives into the science of the Earth's crust! Read the questions carefully and use your knowledge of geography to select the correct answers. Good luck, young explorers!

Answer Key: 1. B (Crust), 2. True, 3. Seismograph, 4. C (Fault line), 5. False (It measures magnitude), 6. A (Epicentre), 7. True, 8. Magnitude, 9. D (They move slowly), 10. True.

Word bank: Tectonic plates · Epicentre · Seismograph · Crust · Tremor · Richter scale · Fault line · Magnitude

1. 1. What is the name of the thin, outermost layer of the Earth where we live? A) The Core B) The Crust* C) The Mantle D) The Atmosphere (1 mark)

2. 2. True or False: Earthquakes are caused by the movement of giant slabs of rock beneath the Earth's surface. (1 mark)

3. 3. What is the name of the scientific instrument used to detect and record the intensity of an earthquake? (1 mark)

4. 4. A crack in the Earth's surface where tectonic plates meet is called a: A) Canyon B) Volcano C) Fault line* D) Trench (1 mark)

5. 5. True or False: The Richter scale is used to measure how much it rains during an earthquake. (1 mark)

6. 6. What do we call the point on the Earth's surface directly above where an earthquake begins? A) Epicentre* B) Focus C) Zenith D) Crater (1 mark)

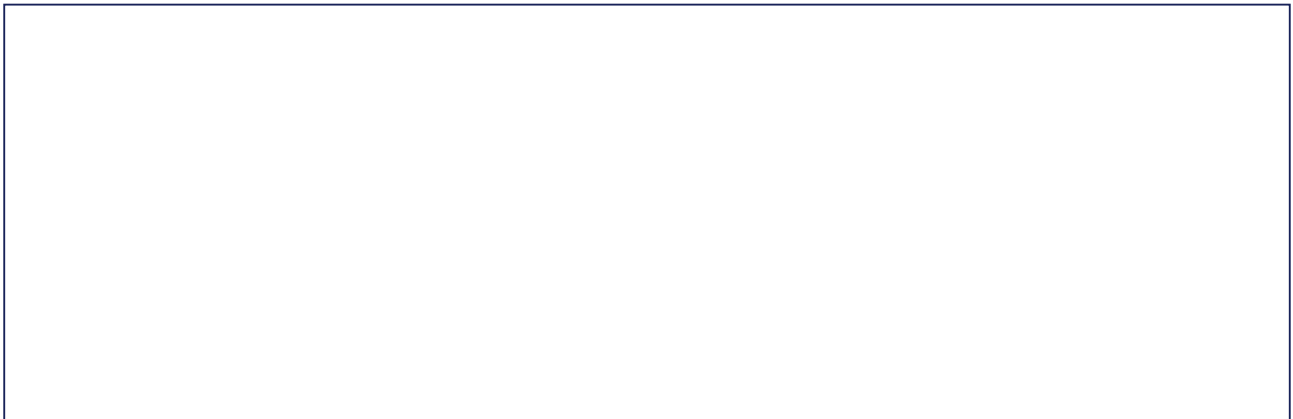
7. 7. True or False: Earthquakes can sometimes occur under the ocean, which may cause large waves called tsunamis. (1 mark)

8. 8. What word describes the total energy released by an earthquake? (Hint: Begins with M) (1 mark)

9. 9. How do tectonic plates behave? A) They stay perfectly still B) They spin like tops C) They melt into liquid D) They move very slowly* (1 mark)

10. 10. True or False: Not all earthquakes are strong enough to be felt by humans. (1 mark)

Draw: Draw a diagram of the Earth cut in half like an apple, labelling the crust, the mantle, and the core. Use arrows to show how tectonic plates might push against each other.



Extension challenge: 1. Explain why some countries experience more frequent earthquakes than others. 2. Compare and contrast how life might be different for people living near a fault line compared to those who do not. 3. Justify your answer: Why is it important for architects to design earthquake-resistant buildings? 4. What might happen if the tectonic plates suddenly stopped moving forever? 5. If you were designing a safety kit for an earthquake, what five items would be most essential and why? 6. Research the 'Ring of Fire'—why is this area so geologically active, and which countries does it affect?