

Name: _____ Date: _____

Answer Key: Wrangle the Ring of Fire: A 6th Grade Tectonics Quiz

Students identify basic lithospheric movements and seismic features as they trace the physical evidence of Earth's shifting outer shell.

1. Which layer of the Earth is broken into large pieces called tectonic plates?

Answer: B) Lithosphere

The lithosphere is the rigid outer shell of Earth, consisting of the crust and the topmost part of the mantle, which is divided into tectonic plates.

2. The point on Earth's surface directly above where an earthquake starts is called the epicenter.

Answer: A) True

The epicenter is the map location on the surface, while the 'focus' or 'hypocenter' is where the actual rupture occurs underground.

3. When two tectonic plates move away from each other, like at the Great Rift Valley in Africa, it is known as a _____ boundary.

Answer: C) Divergent

Divergent boundaries occur where plates pull apart, often creating rift valleys or mid-ocean ridges.

4. What instrument do scientists use to record the vibrations produced by an earthquake?

Answer: B) Seismograph

A seismograph (or seismometer) detects and records the force and duration of seismic waves.

5. Magma is the name for molten rock once it has reached the Earth's surface.

Answer: B) False

Molten rock is called magma when it is underground; it is called lava once it breaks through to the surface.

6. The _____ is a massive horseshoe-shaped area in the Pacific Ocean where many earthquakes and volcanic eruptions occur.

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Answer: B) Ring of Fire

The Ring of Fire is a major area in the basin of the Pacific Ocean where many tectonic plates meet.

7. What often forms when one oceanic plate is pushed under another plate in a process called subduction?

Answer: A) Deep-ocean trench

Subduction zones, where one plate sinks beneath another, typically create deep-ocean trenches and volcanic arcs.

8. Earthquakes only happen at the edges of tectonic plates.

Answer: B) False

While most occur at boundaries, 'intraplate' earthquakes can happen in the middle of plates due to ancient faults or internal stresses.

9. The _____ scale is a tool used by scientists to rank the magnitude or strength of an earthquake.

Answer: C) Richter

The Richter scale (and the similar Moment Magnitude Scale) measures the energy released by an earthquake.

10. Mount St. Helens and Mount Fuji are examples of what type of volcano, known for its cone shape and explosive eruptions?

Answer: B) Composite volcano

Composite volcanoes (or stratovolcanoes) are tall, cone-shaped mountains built from layers of lava and ash.