

Name: _____ Date: _____

Feeling the Tremor: A 6th Grade Tectonics Investigation

Learners translate seismic data into geological insights by analyzing how plate friction and magma viscosity shape our world's volatile landscapes.

1. When the oceanic Nazca Plate slides beneath the continental South American Plate, it creates a deep-sea trench and a mountain range. What is the specific name for this process?

- A. Rifting
- B. Seafloor Spreading
- C. Subduction
- D. Transform Sliding

2. The 'Ring of Fire' is a massive chain of volcanoes and earthquake sites located primarily around the edges of the Atlantic Ocean.

- A. True
- B. False

3. Scientists use a device called a _____ to record the vibrations and waves produced by the shifting of Earth's crust during an earthquake.

- A. Barometer
- B. Seismograph
- C. Hydrometer
- D. Anemometer

4. Which type of seismic wave travels the fastest and is the first to be detected by monitoring stations after an earthquake occurs?

- A. S-waves (Secondary)
- B. Surface waves
- C. P-waves (Primary)
- D. Love waves

5. The point on the Earth's surface directly above the underground location where an earthquake starts is known as the _____.

- A. Focus
- B. Epicenter
- C. Magma Chamber
- D. Vent

6. Viscosity refers to a liquid's resistance to flow; silica-rich magma usually has high viscosity, leading to more explosive volcanic eruptions.

- A. True

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B. False

7. What is the primary heat source that creates convection currents in the mantle, causing the lithospheric plates to move?

- A. Solar radiation from the sun
- B. Friction from ocean tides
- C. Radioactive decay in the core
- D. The greenhouse effect

8. In 1883, the eruption of _____ in Indonesia was so loud it was heard 3,000 miles away and caused a global drop in temperature due to ash in the sky.

- A. Krakatoa
- B. Mount St. Helens
- C. Mauna Loa
- D. Mount Etna

9. A stratovolcano (composite volcano) is typically wide and flat, formed by runny, low-viscosity lava flows that spread over long distances.

- A. True
- B. False

10. At a transform boundary, such as the North Anatolian Fault in Turkey, plates move in which direction relative to each other?

- A. They pull away from each other
- B. They collide head-on
- C. They slide horizontally past each other
- D. One plate sinks beneath the other