

Name: _____ Date: _____

Crack the Crust: Tectonic Force 7th Grade Quiz

Imagine the floor beneath your desk is a floating puzzle piece; analyzing seismic data and volcanic chemistry helps predict where these massive plates shift.

1. The Aleutian Islands in Alaska formed because one oceanic plate was forced beneath another. What is the specific name for this geological process?

- A. Rifting
- B. Subduction
- C. Striking
- D. Shearing

2. True or False: The epicenter of an earthquake is the exact point underground where the rock first breaks or shifts.

- A. True
- B. False

3. Continental crust is primarily composed of _____, which makes it less dense and thicker than the basaltic oceanic crust.

- A. Peridotite
- B. Iron-nickel
- C. Granite
- D. Obsidian

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

- A. S-waves (Secondary)
- B. L-waves (Love)
- C. R-waves (Rayleigh)
- D. P-waves (Primary)

5. True or False: Shield volcanoes, like those found on the Galapagos Islands, typically have quiet eruptions with thin, runny lava flows.

- A. True
- B. False

6. The _____ is the plastic-like layer of the upper mantle where convection currents provide the force necessary to move the tectonic plates above.

- A. Lithosphere
- B. Asthenosphere
- C. Inner Core

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D. Mesosphere

7. At the Dead Sea Transform boundary, the plates move horizontally past one another. Why are there rarely any volcanoes found at this type of boundary?

- A. Magma is too cold to rise
- B. The crust is too thick for lava
- C. Crust is neither created nor destroyed
- D. Pressure is only released through air

8. True or False: Magnetic 'stripes' on the ocean floor provide evidence that the Earth's magnetic poles have reversed many times in the past.

- A. True
- B. False

9. Mount St. Helens is a composite volcano (stratovolcano). What characteristic best describes this type of volcano?

- A. A flat hole in the ground
- B. A small mound of loose cinders
- C. Tall peaks with alternating layers of ash and lava
- D. A wide mountain made only of liquid flow

10. In 1815, the eruption of Mount Tambora caused a 'Year Without a Summer' because of the massive amount of _____ injected into the stratosphere.

- A. Oxygen gas
- B. Volcanic ash and sulfur aerosols
- C. Water vapor
- D. Molten granite