

Name: _____

Date: _____ Period: _____

Plate Tectonics

The Physical Setting: Earth Science

Worksheet: Crustal Boundaries

1. The west coast of South America is best described as
 - a. convergent plate boundary
 - b. divergent plate boundary
 - c. transform plate boundary
 - d. none of the above
2. The island of Hawaii (approximately 20° N 157° W) has volcanic eruptions that are inferred to be caused by the movement of the lithospheric plate over a hot spot in the mantle below. Hawaii is located near the middle of which tectonic plate?
 - a. Philippine plate
 - b. Nazca plate
 - c. North American plate
 - d. Pacific plate
3. According to the reference map of Tectonic Plates, the border between the South American plate and the African plate is best described as
 - a. converging and located at an oceanic ridge
 - b. converging and located at an oceanic trench
 - c. diverging and located at an oceanic ridge
 - d. diverging and located at an oceanic trench
4. What is the direction of crustal movement of the Indian-Australian plate?
 - a. northward
 - b. southward
 - c. northwestward
 - d. southeastward
5. When a continental crustal plate collides with an oceanic crustal plate, the continental crust is forced to move over the oceanic crust. What is the primary reason that the continental crust stays on top of the oceanic crust?
 - a. Continental crust is less dense
 - b. Continental crust deforms less easily
 - c. Continental crust melts at higher temperatures
 - d. Continental crust contains more mafic minerals
6. Based on the theory of plate tectonics, it is inferred that over the past 250 million years North America has moved toward the
 - a. northwest
 - b. southwest
 - c. southeast
 - d. northeast

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7. According to tectonic plate maps, New York State is presently located
 - a. at a convergent plate boundary
 - b. above a mantle hot spot
 - c. above a mid-ocean ridge
 - d. near the center of a large plate

8. The movement of tectonic plates is inferred by many scientists to be driven by
 - a. tidal motions in the hydrosphere
 - b. density differences in the troposphere
 - c. convection currents in the asthenosphere
 - d. solidification in the lithosphere

9. Which two tectonic plates are separated by a mid-ocean ridge?
 - a. Indian-Australian and Eurasian
 - b. Indian-Australian and Pacific
 - c. North American and South American
 - d. North American and Eurasian

10. At the Aleutian Trench and the Peru-Chile Trench, tectonic plates are generally
 - a. diverging
 - b. moving along a transform boundary
 - c. moving over a mantle hot spot
 - d. converging

11. Evidence found in rocks suggests that, through geologic time, Earth's magnetic poles have
 - a. maintained their present positions
 - b. corresponded exactly with Earth's geographic poles
 - c. maintained their constant strength
 - d. reversed their magnetic polarities

12. Magnetic readings taken across mid-ocean ridges provide evidence that
 - a. the sea-floor is spreading
 - b. the ocean basins are older than the continents
 - c. the mid-ocean ridges are higher than the nearby plains
 - d. Earth's rate of rotation has changed

13. Hot springs on the ocean floor near the mid-ocean ridges provide evidence that
 - a. convection currents exist in the asthenosphere
 - b. meteor craters are found beneath the oceans
 - c. climate change has melted huge glaciers
 - d. marine fossils have been uplifted to high elevations

14. As distance from the center of the mid-ocean ridge increase, the age of the rock
 - a. decreases
 - b. increases
 - c. remains the same
 - d. increases and decreases in a cyclic pattern