Plate Tectonics & Ocean Floor Quiz – STUDY GUIDE

What are the 4 pieces of evidence Alfred Wegener used to support his Continental Drift Hypothesis?

1. ___ Continents seem to fit together (South America & Africa fit like puzzle pieces) ___
2. ___ Similar Fossils (Fossils of land animals on continents now separated by oceans) ___
3. ___ Similar Rocks & Mountain Ranges (Same mountain ranges on continents separated by oceans) ___
4. ___ Glacial Evidence in the Tropics (Evidence of glaciers in areas where it is now warm) ___

Why was Wegener’s hypothesis not accepted by the scientific community? ____________________________

___ He could not prove how the continents were “drifting” ____________________________

What are the 3 pieces of evidence that support the current theory of Plate Tectonics?

1. ___ Location of Earthquakes & Volcanoes (match up with the plate boundaries) _____________
2. ___ Rocks are older further from the Ridge (Rocks at the Mid-Ocean ridge are young) _____________
3. ___ Magnetic Polarity Reversals (magnetic orientation of Earth flips every ~250,000 yrs) ___

What is occurring inside Earth’s mantle that causes Seafloor Spreading and ultimately drives the movement of the Tectonic Plates? ___ Convection Currents ____________________________

Old ocean floor is destroyed at ___ Trenches (Subduction Zones) ____________.

New ocean floor is created at ___ Mid-Ocean Ridges (Mid-Atlantic Ridge, East Pacific Rise) ___.

A: ___ Continental Slope _______

B: ___ Seamount _________________

C: ___ Abyssal Plain _______________

D: ___ Rift Valley ________________

E: ___ Volcanic Island ______________

F: ___ Continental Shelf ____________

G: ___ Deep-Ocean Trench _______

Use the word bank to correctly name each of the ocean floor features that are labeled in the diagram above.

<table>
<thead>
<tr>
<th>WORD BANK</th>
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<tbody>
<tr>
<td>- Volcanic Island</td>
<td>- Deep-Ocean Trench</td>
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<tr>
<td>- Continental Shelf</td>
<td>- Rift Valley</td>
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Next to each number, write the name of the Tectonic Plate that is labeled on the map above.

1) ____ African Plate
2) ____ Eurasian Plate
3) ____ South American Plate
4) ____ North American Plate
5) ____ Australian Plate
6) ____ Antarctic Plate
7) ____ Nazca Plate
8) ____ Pacific Plate
9) ____ Indian Plate
10) ____ Juan de Fuca Plate

For each geologic feature, write the letter(s) in the correct location on the map above. The letters for the East Pacific Rise have already been drawn on the map for you.

**Geologic Feature** | **Letters**
--- | ---
East Pacific Rise | P-P-P-P-P (done for you!)
San Andreas Fault | S.A.F.
Himalaya Mountains | H-H-H-H-H
Mariana Trench | M.T.
Hawaii | HAW
Mt. St. Helens (Cascade Mtns.) | M.S.H.

Under each diagram below, write the type of plate boundary shown (Transform, Divergent, or Convergent).

- Transform
- Convergent
- Divergent
Which diagram above represents an “Active” continental margin? _B___
Which diagram above represents a “Passive” continental margin? _A___
What is the main difference between “Active” and “Passive” continental margins? ______________________

Passive – No plate motion    Active – Ocean plate subducting under another plate____________

- Granite
- Deep-Ocean Trenches
- Subduction
- Mid-Ocean Ridge

- Hot Spot
- Convection Currents
- Basalt
- Density

- Strike-Slip Fault
- Mantle
- Folded Mountains
- Volcanic Mountains

Use the word bank above to complete each statement.

1. The ___Mid-Ocean Ridge___ is a divergent boundary that runs along the middle of the ocean floor.

2. Seafloor spreading is the result of ___Convection Currents___ that occur inside the Earth.

3. A ___Hot Spot___ forms when magma burns through the crust in the middle of a plate (Ex: Hawaii, Yellowstone).

4. Continent-Continent convergent boundaries create ___Folded Mountains___ (Ex: Himalayas).

5. ___Subduction___ is the process of an ocean plate diving underneath another plate.

6. Continental crust is composed mostly of ___Granite___.

7. Oceanic crust is composed mostly of ___Basalt___.

8. A ___Strike-Slip Fault___ forms at transform boundaries, like the San Andreas Fault in California.

9. Oceanic crust will always subduct under continental crust because it has a higher ___Density___.

10. Continent-Ocean convergent boundaries create ___Volcanic Mountains___ on land (Ex: Andes Mtns.).

11. Continent-Ocean convergent boundaries create ___Deep-Ocean Trenches___ in the ocean (Ex: Mariana).

12. Convection currents in the ___Mantle___ drive the movement of tectonic plates.