

# Plate Tectonic Theory Study Guide

1. Who was Alfred Wegner?

Developed the Theory of Continental Drift and was the first to propose the Theory of Plate Tectonics

2. Where do crustal features, such as volcanoes and mountains, form on Earth?

Along Plate Boundaries- Where two tectonic plates meet

3. What is the Theory of Continental Drift?

Developed by Alfred Wagener: The Super Continent Pangaea slowly drifted apart into the continent locations we see today

4. How is new oceanic crust formed?

At a divergent boundary where two plates separate and move apart from one another. Magma rises, cools, and creates new crust.

5. What does the discovery of similar fossils on different continents provide evidence of?

Continental Drift. The continents were once together and have moved away from each other.

6. At which tectonic plate boundary can young land formations be found?

Divergent Boundaries at mid ocean ridges

7. What information supports the evidence that geological features, such as the Appalachian Mountains, match on continents across the ocean?

Continents drift over time, mountains form at plate boundaries, and theory of plate tectonics.

8. Why do the continents look like they fit together like a puzzle?

They were once all joined together in a super continent named Pangea.

9. What is Pangaea?

The Supercontinent that contained all the continents that exist today

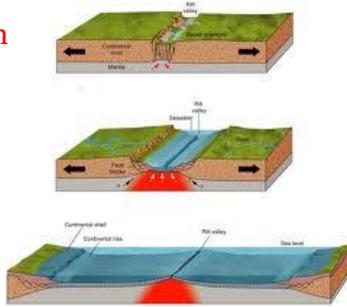
10. What is a Divergent Boundary? What types of landforms does it form?

Two plates spreading apart in opposite directions causing new rock to form

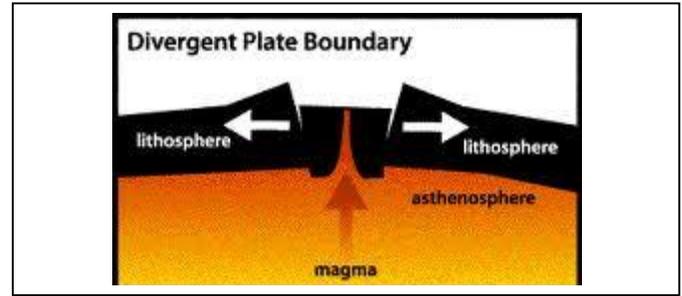
Forms:

Mid ocean ridges

Rift Valley



Draw a picture of a Divergent Boundary



11. What is a Transform Boundary? What types of landforms does it form?

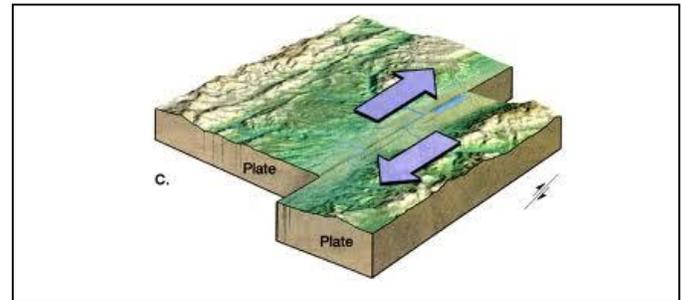
Two plates sliding past each other creating stress

Forms:

Faults

Earthquakes

Draw a picture of a Transform Boundary



12. What is a Convergent Boundary? What types of landforms does it form?

Two plates colliding. Moving toward each other

Forms:

Folded Mountains

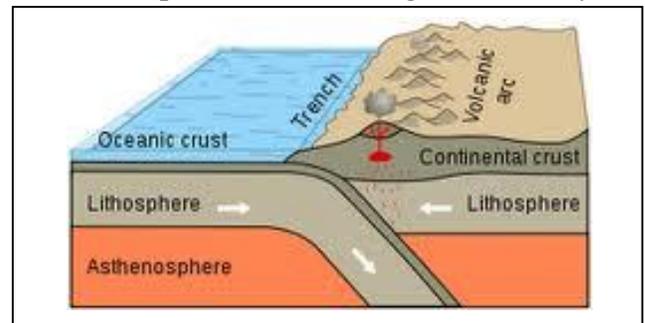
Volcanoes

Trench

Volcanic Island

Subduction Zone

Draw a picture of a Convergent Boundary



13. What forms when 2 continental crusts converge?

Mountains

14. What forms when an oceanic and continental crust converge?

Volcanoes, subduction zones, and Trench

15. How are volcanic islands formed?

When the older ocean crusts slides under a younger oceanic crust and melts into magma. This creates a volcano and can result in a volcanic island.

16. What is convection current?

Causes the movement of tectonic plates through rising and sinking of magma

17. Why does the Earth not get any bigger when new land is produced by divergent boundaries?

While new land is being created through divergent boundaries, older crust is being destroyed in convergent boundaries

18. What evidence was discovered in the 1960's that helped support the Theory of Plate Tectonics?

Sea floor spreading

19. Which plate boundary is responsible for forming Rift Valleys?

Divergent Boundaries

20. Which plate boundary is responsible for forming mid ocean ridges?

Divergent Boundaries

21. What is the Ring of Fire and which plate boundaries created it?

A chain of Volcanoes and Volcanic islands in the Pacific Ocean that were formed through Convergent Boundaries

22. If you look at a map of the Earth, which 2 continents look like they fit together like pieces of a puzzle?

South America and Africa

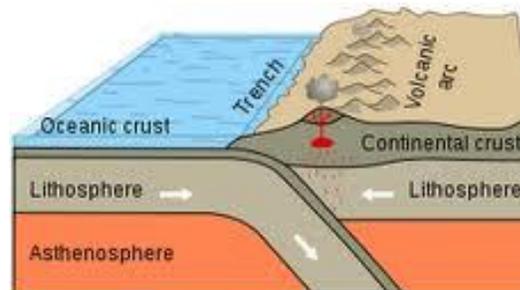
23. How are mountains formed?

Convergent Boundary where pressure from below Earth's crust causes the Earth's crust to fold

24. At which boundary can a trench be found?

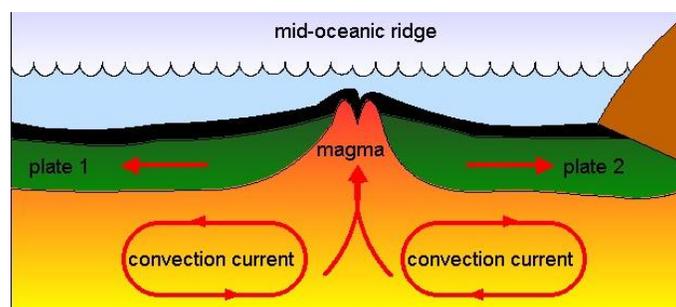
Convergent Boundary when one plate dips below another plate.

25. What is happening to the oceanic crust in the subduction zone below?



Ocean crust is being destroyed

26. Where is the youngest crust found in the picture below?



At mid-ocean ridges where two oceanic plates separate and magma comes up to create new crust.