

Plate Tectonics Study Guide

- Be able to list and describe the layers of the Earth.
- Name the two types of crust and how they are different.
- Know how the crust and mantle are related.
- What is the difference between the two layers of the mantle (upper mantle and lower mantle)?
- What is the difference between the two layers of the core (inner and outer)?
- How are convection currents occurring on Earth?
- What sets convection currents into motion in the Earth?
- Know who Alfred Wegener is and what his theory is.
- What piece of evidence did Wegener use to prove his theory?
- What is Pangaea and when did it exist?
- HOW did the continents drift apart? What process moved them?
- What is the theory of plate tectonics?
- How do the plates move?
- Describe the three plate boundaries and what landforms are created at each (convergent, divergent, and transform)

ANSWERS TO SOME QUESTIONS.....

- ❖ A break in Earth's crust where rocks have slipped past each other is a.....fault
- ❖ Scientists rejected Wegener's theory b/c he could not..... explain what force moved the continents
- ❖ What erupts thru the valley of the mid-ocean ridge.....molten material
- ❖ The process by which oceanic crust sinks beneath trenches.....subduction
- ❖ Earth's lithosphere is broken into separate sections.....plates
- ❖ A boundary where two plates slip past each othertransform

- ❖ A boundary where two plates collide.....convergent
- ❖ A boundary where two plates move away from each other.....divergent
- ❖ The part of the mantle that can bend like plastic.....asthenosphere
- ❖ The process that continually adds new material to the ocean floor.....sea-floor spreading
- ❖ Includes all of the crust and upper part of the mantle.....lithosphere\
- ❖ A measure of how much mass there is in a volume of a substance.....density
- ❖ This forms along a divergent boundary on land.....rift-valley
- ❖ Supercontinent that began to break apart about 225 million years ago.....Pangaea
- ❖ Oceanic crust cools and becomes more dense as it moves away from.....mid-ocean ridge
- ❖ How can we study the core of the Earth.....seismic waves
- ❖ What produces seismic waves.....earthquakes
- ❖ What is the core composed of.....Nickel and Iron
- ❖ What is the reason for the iron in the inner core to be solid.....pressure
- ❖ What changes from the center of Earth to the surface.....pressure & temp. decreases
- ❖ How is oceanic crust different than continental crust..... thinner, denser
- ❖ What factors/evidence supported continental drift theory..... Fossil records
- ❖ Name some major plates.....Pacific, Eurasian, African, North American
- ❖ Deepest part of the ocean.....deep ocean trenches
- ❖ How do scientists believe that lithospheric plates move.....convection currents
- ❖ When one ocean plate collides with another the subduction forms a ...trench