

# Plate Tectonics

## Structure of Earth

Earth's interior is made mostly of \_\_\_\_\_, but it's not all \_\_\_\_\_. There are \_\_\_\_\_ main layers of different forms of rock.

\_\_\_\_\_ - is solid. \_\_\_\_\_ from upper layers causes it to be solid.

\_\_\_\_\_ - is liquid.

\_\_\_\_\_ - is the \_\_\_\_\_ layer and is described as \_\_\_\_\_. It has the characteristics of a \_\_\_\_\_, but flows as a \_\_\_\_\_ under pressure.

\_\_\_\_\_ - (outermost layer)- varies in thickness & composition.

Oceanic crust is more \_\_\_\_\_ than Continental crust.

## Science and New Ideas

\_\_\_\_\_ - states the continents have moved horizontally to their current locations.

\_\_\_\_\_ - believed that all continents were connected as one large land mass called \_\_\_\_\_, ( means all land ).

## Evidence for Continental Drift

### Fossil Clues

A \_\_\_\_\_ was found in \_\_\_\_\_ and \_\_\_\_\_.

A \_\_\_\_\_ was found on several continents.

\_\_\_\_\_ clues found on several continents indicate that these continents were covered with \_\_\_\_\_.

### Rock Clues

Similar \_\_\_\_\_ structures are found on different continents.

Parts of the \_\_\_\_\_ Mtns. are similar to those found on \_\_\_\_\_ & Western \_\_\_\_\_. South \_\_\_\_\_ & western \_\_\_\_\_ have similar rock structures.

\_\_\_\_\_, \_\_\_\_\_, & \_\_\_\_\_ were the main points of evidence for continental drift.

### Sea-floor Spreading

\_\_\_\_\_ - form an underwater mountain ranges that extend through the center of much of Earth's Oceans.

\_\_\_\_\_ - hot-\_\_\_\_\_ dense material in the mantle is forced upward to the surface at a mid-ocean ridge. It turns & flows sideways, carrying the sea floor away from the ridge in both directions. In early 1960's, Princeton scientist, \_\_\_\_\_ suggested this explanation.

## Magnetic Clues

\_\_\_\_\_ - is iron minerals such as basalt align themselves according to the magnetic orientation at the time the rocks form.

If \_\_\_\_\_ magnetic field is \_\_\_\_\_, new iron minerals would reflect that magnetic reversal.

\_\_\_\_\_ - is an instrument that records magnetic data. The \_\_\_\_\_ of the rocks reverses back & forth in strips parallel to the mid-ocean ridge.

## Plate Tectonics

The theory of \_\_\_\_\_ states that Earth's crust & upper mantle are broken into sections called \_\_\_\_\_.

\_\_\_\_\_ - is the upper mantle & the crust that makes up a plate.

\_\_\_\_\_ - is the plastic-like layer below the lithosphere.

## Plate Boundaries

\_\_\_\_\_ - can interact with each other three ways. Plates move toward each other & collide, can pull apart, or move past one another.

\_\_\_\_\_, \_\_\_\_\_, & volcanoes are tectonic activities.

\_\_\_\_\_ - is the boundary between two plates that are moving apart from one another. Ex. \_\_\_\_\_.

\_\_\_\_\_ - is where two plates collide or the disappearance of crust can occur when sea floor cools, becomes denser, & sinks.

### Three types of Convergent Boundaries

1. Ocean Plate collides with Continental Plate- Denser Ocean plate sinks under Continental Plate.

\_\_\_\_\_ is where an oceanic plate descends into the upper mantle.  
\_\_\_\_\_ occur here.

2. Ocean Plate collides with Ocean Plate- A \_\_\_\_\_ trench is formed. New magma that is produced rises to form \_\_\_\_\_ island arcs. Ex. \_\_\_\_\_

3. Continental Plate collide with Continental Plate-The two Continental Plates crumple up & Form \_\_\_\_\_. Ex. \_\_\_\_\_

\_\_\_\_\_ - is a boundary in which two plates slide past each other.  
Ex. \_\_\_\_\_

\_\_\_\_\_ - is the entire cycle of heating, rising, cooling, & sinking. This process is thought to be the force behind \_\_\_\_\_.