Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Guided Notes: Eath’s Plates

**Structure of the Earth**

The Earth is made up of 3 main layers:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Crust**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Crust**

* thick (10-70km)  
  - buoyant (less dense than oceanic crust)   
  - mostly old

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Crust**

* - thin (~7 km)  
  - dense (sinks under continental crust)  
  - young

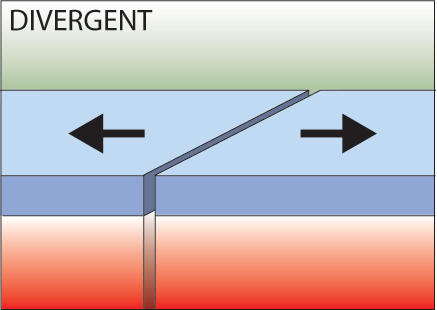
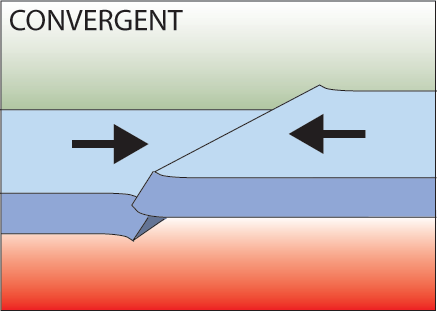
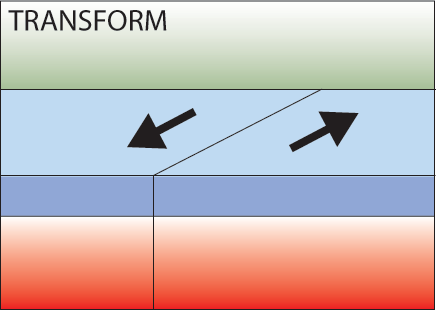
**Plate Tectonics**

* The Earth’s crust is divided into 12 major plates which are moved in various directions.
* This plate motion causes them to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, pull apart, or scrape against each other.
* Each type of interaction causes a characteristic set of Earth structures or “tectonic” features.
* The word, tectonic, refers to the deformation of the crust as a consequence of plate interaction.

**What are tectonic plates made of?**

* Plates are made of rigid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **T**he lithosphere is made up of the crust and the upper part of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Plate Movement**

* “Plates” of lithosphere are moved around by the underlying hot mantle convection cells
* Divergent
* Convergent
* Transform

**Divergent Boundaries**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ridges
  + As plates move apart new material is erupted to fill the gap

**Convergent Boundaries**

* There are three styles of convergent plate boundaries
  + Continent-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ collision
  + Continent-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ crust collision
  + Ocean-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ collision
* Subduction
  + Oceanic lithosphere subducts underneath the continental lithosphere
  + Oceanic lithosphere heats and dehydrates as it subsides
  + The melt rises forming volcanism
  + E.g. The Andes

**Transform Boundaries**

* Where plates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ past each other

**Volcanoes are formed by:**

* Subduction
* Rifting
* Hotspots