Name _____ Unit 10 Plate Tectonics
Period _____ Date_____ Earth Science

I. The Lithosphere is Moving

a. _____*lithosphere*_____ - the crust and upper mantel of the Earth.
b. The lithosphere moves because of _____ _____ within the Earth's interior. This causes difference in densities.

II. Evidence of Crustal Movement

a. _____ occur along faults
  i. There are three types of faults
    1. _____ - land moves down
    2. _____ - land moves up
    3. _____ - land moves side by side
b. volcanic eruptions
c. displaced structures – broken fences
d. Benchmark references are in different positions
  i. _____ - are pieces of metal that humans put into the ground to record the latitude, longitude and elevation of the land in a certain spot.
e. _____ or _____ rock

III. Isostacy

a. _____ - is the condition of balance/equilibrium within the segments of the Earth's crust.

IV. Plate Tectonics Theory

a. The Earth's surface is broken down into lithospheric plates that _____.
b. DD make CC which make PT
c. _____ _____ make _____ _____ which make _____ _____.
d. This theory has _____ with time.
e. The theory explains _____, _____, _____< and _____ of rocks.
f. The lithospheric plate motions indicates that the Earth is a dynamic geologic system.
g. The lithosphere consists of separate plates that ride on the more fluid _____.
  i. _____ - the part of the Earth's interior beloe the lithosphere that acts as a plastic in response to stress
h. lithospheric plates move _____ in relationship with one another.

i. Surface features associated with plate tectonics include:
   i. _____ - hot, young rock in the middle of ocean. Older rock moves away from the middle.
   ii. _____-land stretching apart to make oceans (happening in Africa)
   iii. _____ - deep spots in the oceans made by subduction
   iv. _____ _____- areas where the lithosphere is pushing down
   v. _____ _____ - islands that were made because of subduction –
   vi. mountain ranges
   vii. _____ _____ - places where the rock is coming up in the middle of a plate ????
   viii. _____ patterns – can see patterns in ocean – proves sea floor spreading
   ix. _____ patterns – young in middle of ocean – proves sea floor spreading

V. **Evidence of Plate Tectonics**
   a. Matching rock features
   b. The apparent _____ together of the continents
   c. Fossils of _____ plants are found in Antarctica
   d. Earthquake and volcanic activity at plate boundaries
   e. The mid-ocean ridges are _____ _____. (sea floor spreading)

VI. **Types of Plate Boundaries**
   a. _____ - plate boundaries are moving away from each other
      i. new _____ and _____ valleys are a result.
   b. _____ - plate boundaries are moving towards each other
      i. _____ are formed, earthquakes, _____ will result in trenches in the ocean.
   c. _____- plate boundaries are moving at angles to each other
      i. faults and _____ are a result

VII. **Convection Currents**
   a. Are caused by the outward transfer of the _____ energy from the Earth.
   b. Move the lithospheric _____ across the Earth's surface.
   c. Cause the sea floor to _____, mid-ocean ridges to form, and the hotter than normal temperatures at the mid-ocean ridges.

VIII. **Model of the Earth's Interior**
   a. The outer core is _____. We know this because S waves will not pass through.
   b. Continental crust – thicker, felsic, less dense and float on oceanic crust (granitic)
   c. Oceanic crust – less thick, mafic, more dense (basaltic)
   d. ****Know how to use the diagram on page 10 of your ESRT