CLASS NOTES

• Plate Tectonics - _______________________________________________________________________

• Plates - ______________________________________________________________________________

• Lithosphere - __________________________________________________________________________

• Asthenosphere - _______________________________________________________________________

• Earth’s surface consists of a _____________ major plates and some minor ones
• The plates are moving at rates close to ________ cm/year
Packet: Crustal Activity

- **Convection Currents** - driving force of plate movement
  - Magma heats up causing it to __________ and __________
  - Magma cools down causing it to __________ and __________
- The ____________ lithosphere is moving on top of the partially __________ asthenosphere due to ____________ differences

![Convection Currents](image)

- The idea of continental drift had been around since the early 1900's, but lacked enough scientific evidence to support the theory
- New advancements after World War II help provide the evidences needed to validate the Theory of Plate Tectonics

- **Evidence of Plate Tectonics**
  1. Earthquakes - when scientists plotted the locations of earthquakes they realized that they do not occur at random location, but run along ___________________________ outlining the ______________
  2. Volcanic Evidences - ___________________________
     - Ring of Fire - isolated belt around the ______________, where ________ of the world's volcanoes exist
Evidence of Plate Tectonics [continued]:

3. Rock Evidence - horizontally deposited rock layers sometimes ____________________ and ____________________ when plates interact

4. Mountain Evidence - as plates collide they sometimes are pushed ____________________ or ____________________

5. Fossil Evidence - fossilized shallow ____________________ organisms can be found at high elevations in rock layers
PART I QUESTIONS: MULTIPLE CHOICE

Base your answers to questions 1 through 3 on the world map below and your knowledge of Earth Science. Points A through H represent locations on Earth’s surface.

1. Which two lettered locations are least likely to experience volcanic activity or earthquakes.
   a. A and B  
   b. A and E  
   c. C and E  
   d. B and C

2. Identify the tectonic feature created at location B.
   a. Himalayan Mountains  
   b. Andes Mountains  
   c. San Andreas Fault  
   d. Hawaiian Hotspot

3. Identify the tectonic feature created at location F.
   a. Himalayan Mountains  
   b. Andes Mountains  
   c. San Andreas Fault  
   d. Hawaiian Hotspot
4. Which coastal area is most likely to experience a severe earthquake?
   a. east coast of North America
   b. east coast of Australia
   c. west coast of Africa
   d. west coast of South America

5. The primary cause of convection currents in Earth’s mantle is believed to be caused by
   a. differences in densities of earth materials
   b. subsidence of the crust
   c. occurrence of earthquakes
   d. rotation of the Earth

6. Folded sedimentary rock layers are usually caused by
   a. deposition of sediments in folded layers
   b. differences in sediment density during deposition
   c. a rise in sea level after deposition
   d. crustal movement occurring after deposition

7. The best evidence of crustal movement would be provided by
   a. dinosaur tracks found in the surface bedrock
   b. marine fossils found on a mountaintop
   c. weathered bedrock found at the bottom of a cliff
   d. ripple marks found in sandy sediment

8. The best evidence of crustal uplift would be provided by
   a. marine fossils in the Rocky Mountains
   b. sediments in the Gulf of Mexico
   c. trenches in the Pacific Ocean floor
   d. igneous rock deep within the Earth

9. Volcanic activity around the world supports the inference that volcanoes are mostly located in
   a. the centers of landscape regions
   b. the central regions of the continents
   c. zones of crustal activity
   d. zones in late stages of erosion

10. Which coastal area is most likely to experience a severe earthquake?
    a. west coast of America
    b. central Australia
    c. west coast of Africa
    d. east coast of South America

11. Which best describes a major characteristic of both volcanoes and earthquakes?
    a. They are related to the formation of glaciers.
    b. They are restricted to the Southern Hemisphere.
    c. They are located in the same geographic areas.
    d. They are centered at the poles.