

Name: _____

Date: _____ Period: _____

Packet: Crustal Activity

CLASS NOTES

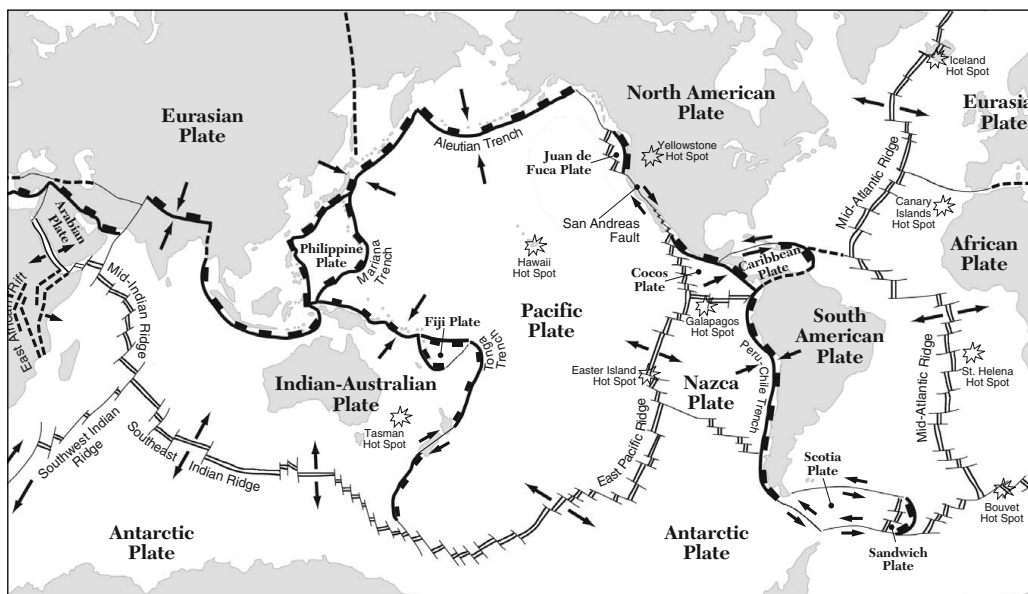
- Plate Tectonics - _____

 - Plates - _____

 - Lithosphere - _____

 - Asthenosphere - _____

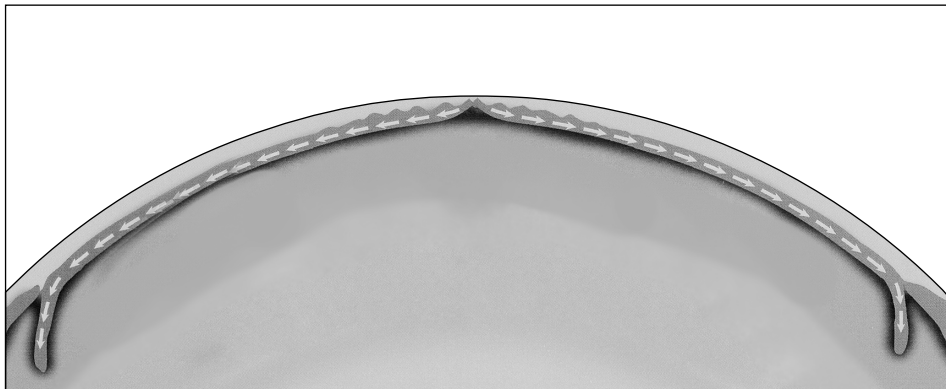
-
- Earth's surface consists of a _____ major plates and some minor ones
 - The plates are moving at rates close to _____ cm/year



Earth's Major Plates

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- 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
[draw arrows to represent the flow of molten material]

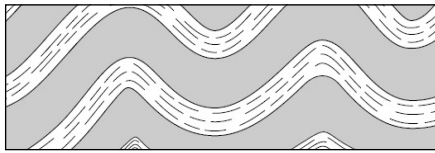
- The idea of continental drift had been around since the early 1900's, but lacked enough scientific evidence to support the theory
- New advancements after World War II help provide the evidences needed to validate the Theory of Plate Tectonics
- Evidence of Plate Tectonics
 1. Earthquakes - when scientists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

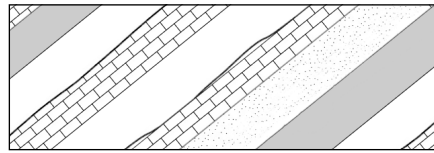
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- Evidence of Plate Tectonics [continued]:

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



Folded Rock Layers



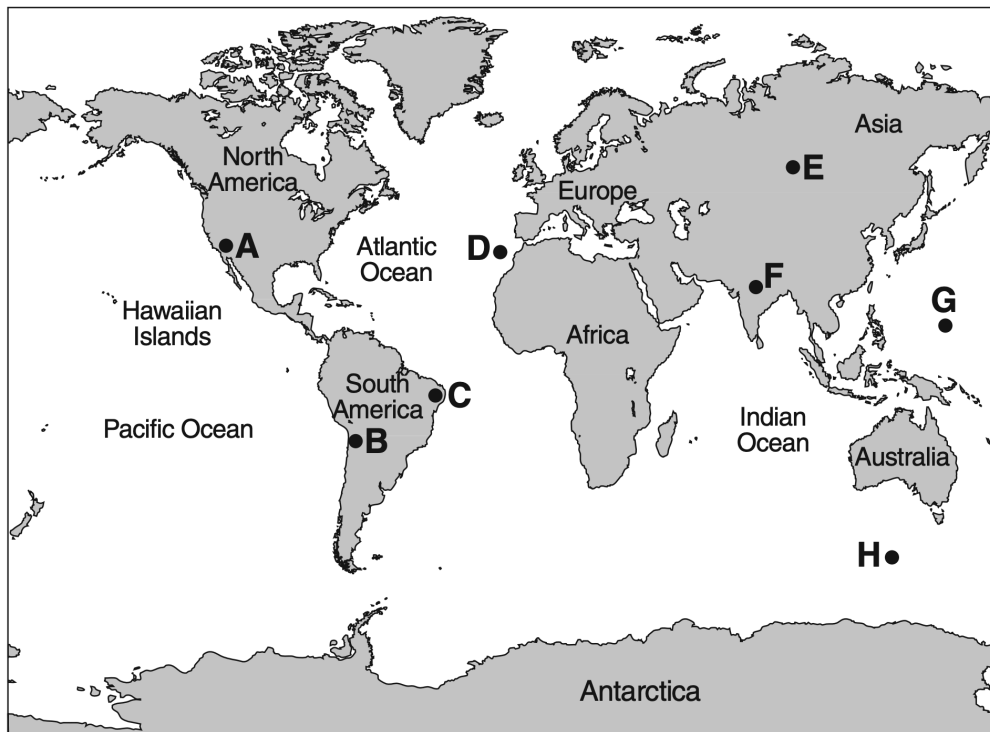
Tilted Rock Layers

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

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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

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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.