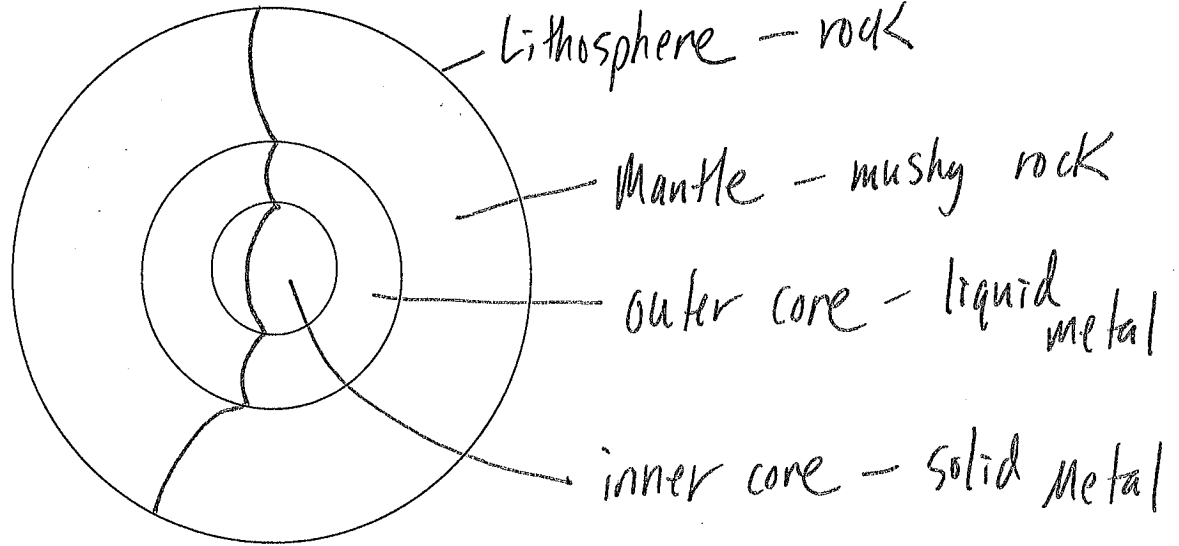


Thanks for a great Trimester!! - Ms. C

1. Name the four main layers of the planet and write what they are composed (made) of.



2. Describe how we know these layers are there, if we have never drilled that deep.

-we study seismography which show waves travel faster and slower depending on the layer.

3. When an Earthquake wave travels through the earth, what does it look like? Draw on Earth above. Also What are the differences between P and S waves? Why do they bend as they go through the planet? P waves: compressional, fastest wave

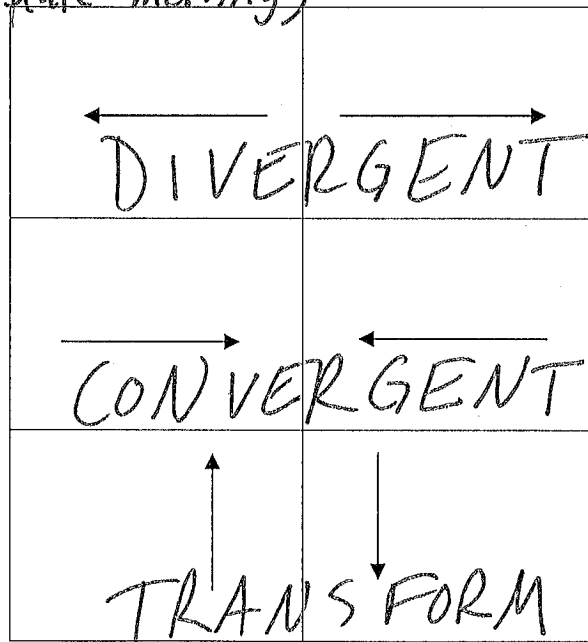
S waves - transverse waves, slowest ~~slow down~~ slow down in liquids - refract/bend.

4. Where do powerful Earthquakes and active Volcanoes occur in relation to a plate and it's edge? Powerful E.Q + Volcanoes happen at the edge of plates... Near plate boundaries

5. Where does the magma come from that forms volcanoes at plate boundaries?

A subducting plate (ocean plate melting)

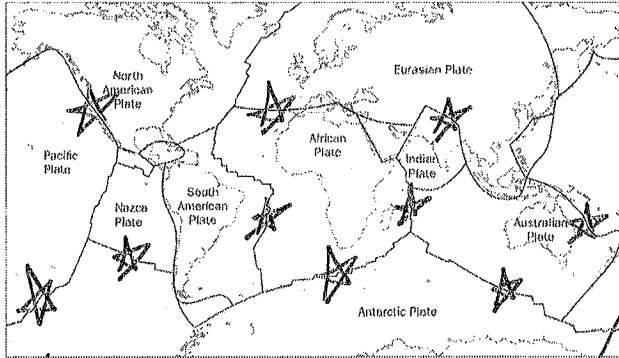
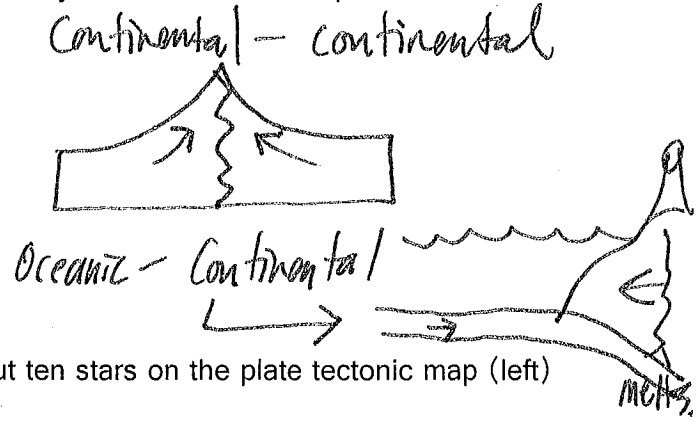
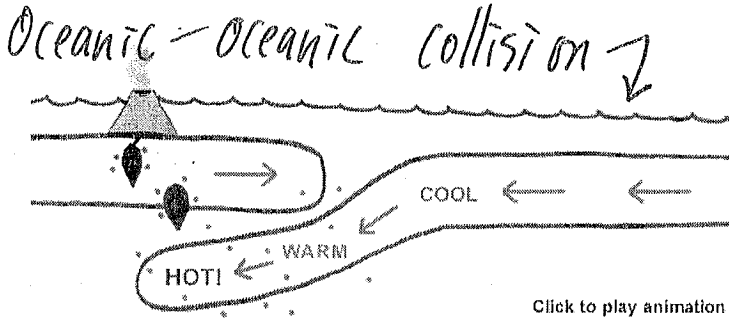
6. Name the following boundaries:



7. What do you call a divergent boundary in the ocean?

Mid Ocean Ridge (MOR)

8. Are ocean plates younger near the mid ocean ridge? Or farther away from the ridge? (use page 25 in your textbooks) *Younger near MOR.*
9. Name the following collision, and draw the other two that you learned in the space below.



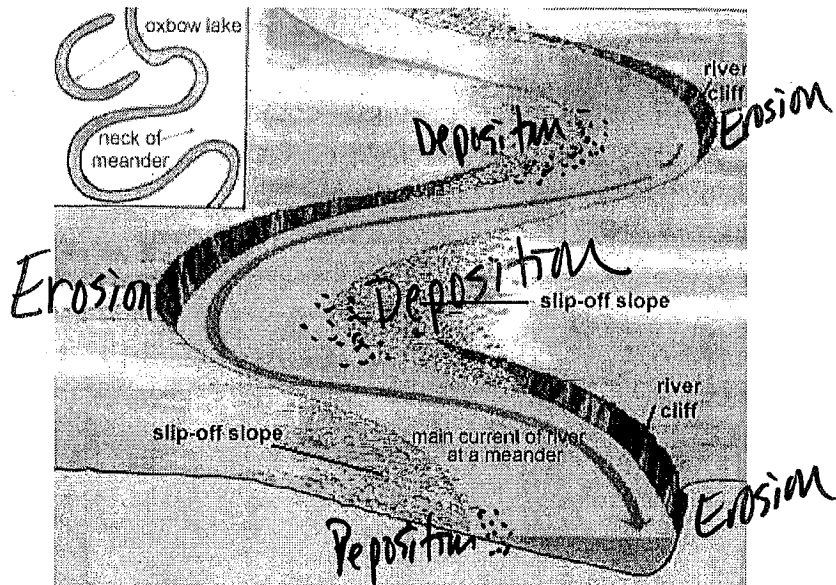
10. Put ten stars on the plate tectonic map (left) where you would guess a major earthquake or volcano could occur.

(★'s have to be on a plate boundary)

10. In this meander, where is erosion and deposition occurring? Use dots to represent the sand bar.

11. In this picture, label where Erosion is happening and also where Deposition is occurring. and Explain why that is happening.

Erosion happens on the outside curve because that's where the water travels the fastest. Slowest on inside curve.



12. What are constructive forces? Destructive forces?

Constructive: build up land, creating land forms.

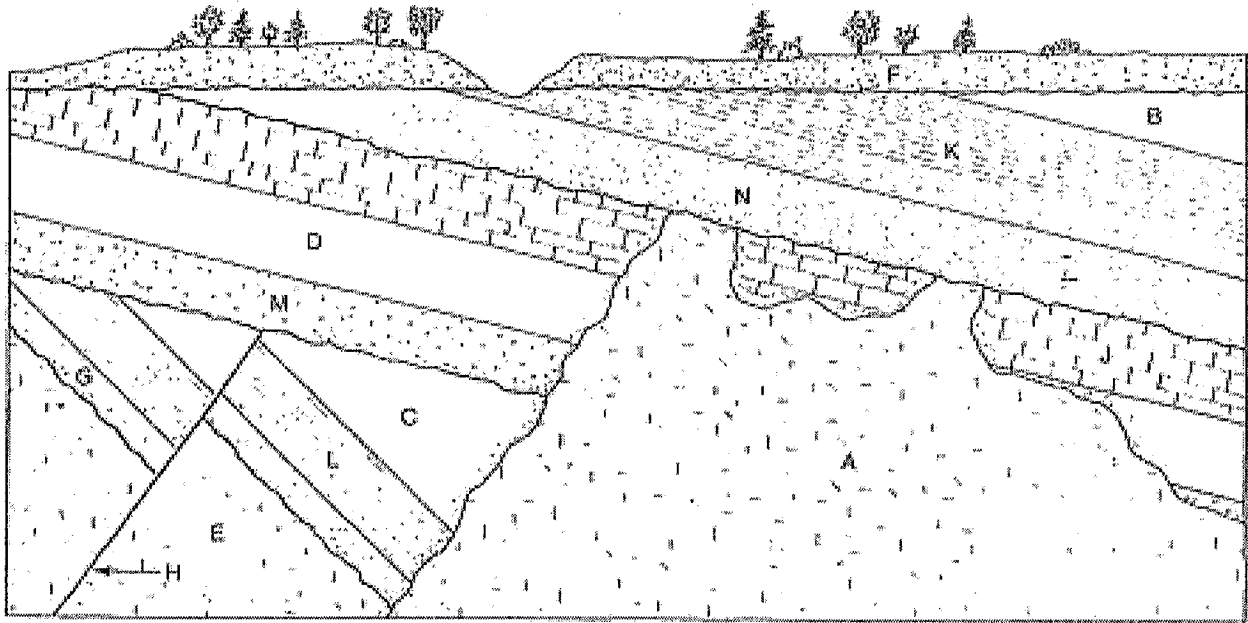
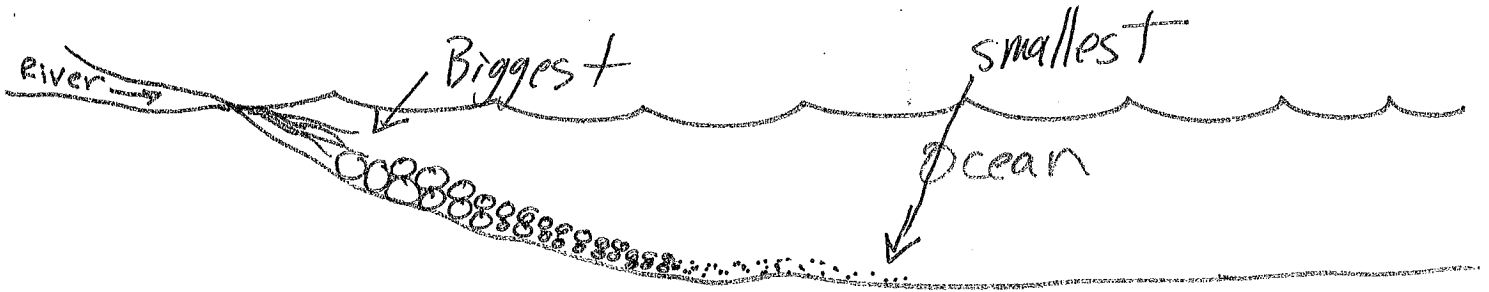
Destructive: wearing down & destroying land.

13. What is the lithosphere always doing? *moving*, and *changing*

14. What is Weathering? *when rocks are broken into smaller pieces.*

15. What is Erosion? *when weathered rocks and soil are moved to another location.*

16. This river is flowing into the ocean and creating a delta, show how the size of sediments changes at the ocean gets deeper. (draw in the rocks)



17. Put these layers in order from OLDEST....to YOUNGEST

E, G, L, C, H, M, D, J, A, N, K, B, F

18. How do each of the following rocks form?

- a. Sedimentary - when rocks and dirt are deposited into a body of water and then the water dries up and sediments dry up/harden.
- b. Igneous - Liquid Rock (Molten) cooling
- c. Metamorphic - existing rock changed by heat & pressure (chemical change)

19. Why do some Igneous rocks have large Crystals and some no crystals?

Large crystals form from magma cooling slowly inside the planet.

20. Describe what a physical and chemical change is. No crystals = the opposite.

Chemical change: creates a new substance. Physical = only changes the appearance.

21. What are Pure Substances? Give some examples

Pure substances: Elements and compounds.

Ag, H₂O, SiO₄, C, N, O, C₆H₁₂O₁₆, CO₂, CaCO₃,

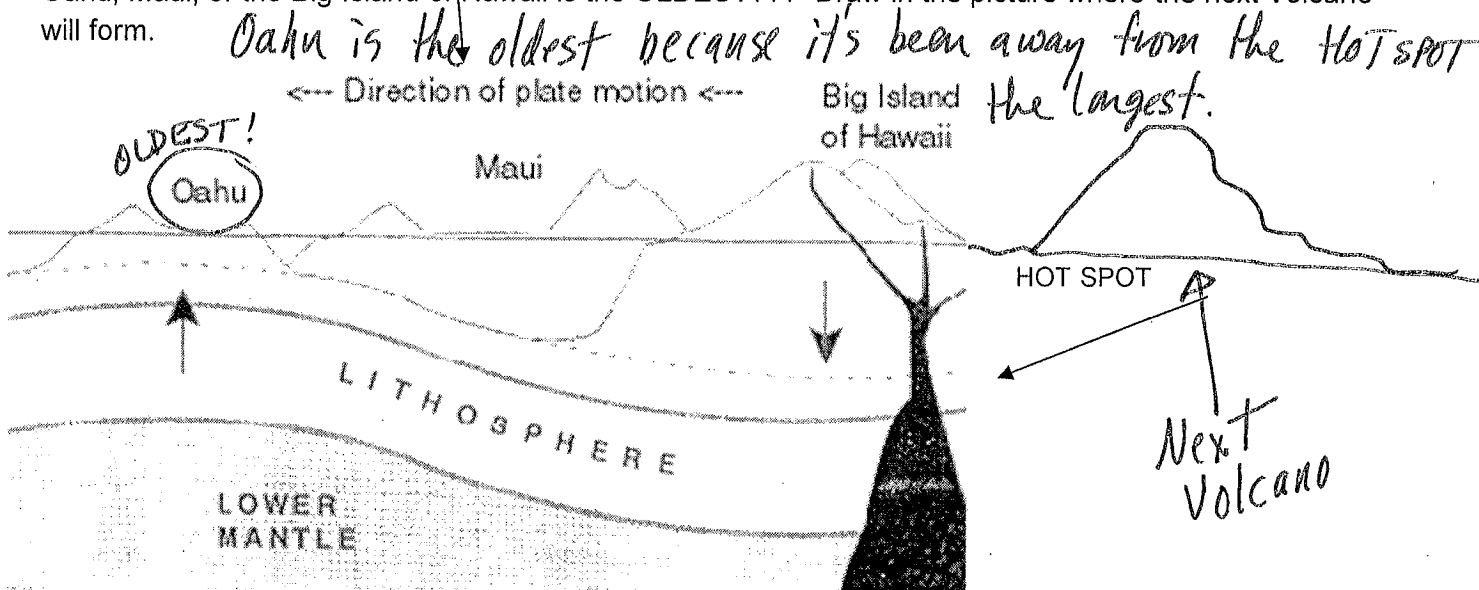
22. Decide if the following are chemical or physical changes:

- a. Cracking a rock with a hammer - P
- b. A firework exploding - C
- c. Freezing water inside a rock - P
- d. Acid rain "eating" a marble statue - C
- e. A root breaking a rock in half - P
- f. Dissolving sugar in water to make Kool-Aid. - P
- g. Baking a cake - C

23. In lab when you mixed the two liquids together and created the bright yellow precipitate what happened to the weight? stayed the same

- a. Why did it stay the same? matter cannot be created or destroyed
- b. What Law is this? Law of Conservation of Matter / Mass

24. Look at the Direction of plate motion. Observe where the hot spot is (Active Volcano). Then explain if Oahu, Maui, or the Big Island of Hawaii is the OLDEST??? Draw in the picture where the next Volcano will form.



Science with Sponge Bob....

Mr. Krabbs wants to make Bikini Bottoms a nicer place to live. He has created a new sauce that he thinks will reduce the production of body gas associated with eating crabby patties from the Krusty Krab. He recruits 100 customers with a history of gas problems. He has 50 of them (Group A) eat crabby patties with the new sauce. The other 50 (Group B) eat crabby patties with sauce that looks just like new sauce but is really just mixture of mayonnaise and food coloring. Both groups were told that they were getting the sauce that would reduce gas production. Two hours after eating the crabby patties, 30 customers in group A reported having fewer gas problems and 8 customers in group B reported having fewer gas problems.

24. What are two constant/control variables? *# of people in each group, both eating crabby patties*

25. What is the independent variable? (what changes)

The type of sauce

26. What is the dependent variable? (what is measured)

the # of people with Gas.

27. What should Mr. Krabbs' conclusion be?

New sauce appears to reduce the production of body gas!