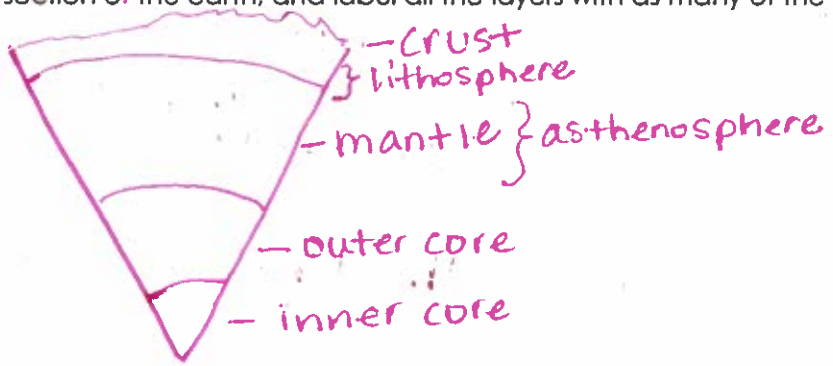
Study Guide for Geology Exam 2016

Name:
Date:
Color: KEY

1. inference what geologists have to make because we can't see inside the earth
2. oceanic crust the part of the Earth's crust that is made of basaltic (made of basalt), dark colored rock, under the oceans.
3. lava molten rock that has erupted onto the Earth surface; also rock that forms when that molten rock cools and hardens.
4. hotspot an eruption that happens from a plume of hot magma from inside the Earth, NOT ON A plate boundary.
5. seafloor spreading molten rock rises from below mid-ocean ridges, cools and solidifies
6. magma molten rock under the surface of the Earth
7. continental crust the part of the Earth's crust that is made of granitic, high silicon content rocks (where volcanoes spew andesite and rhyolite)
8. convection currents the movement of heat in a FLUID.
9. midocean ridge the formation that occurs at a divergent boundary of oceanic crust
10. density the amount of mass of an object divided by its volume
11. hypothesis an idea you can test
12. prediction what you think will happen
13. What does the theory of plate tectonics provides the current explanation for?
    how plates move ~ continental drift
14. What is happening EVERY DAY to the Earth's crust?
    they are slowly moving
15. In December 2004, an earthquake registering 9.0 on the Richter scale was recorded off the coast of Sumatra. What is a common secondary effect of this type of earthquake?
    tsunami
16. Which accurately describes the relationship between earthquakes and volcanoes?
    they are often located where plates meet (plate boundaries)
17. Earth's core is composed mainly of what? The mantle? The crust? basalt & granite
    → iron & nickel
18. Draw a cross section of the earth, and label all the layers with as many of the words you now know as you can.



19. What do Magnetic stripes and the age of the seafloor tell us about?

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20. The plates move due to what going on inside the earth? Convection currents

21. List the three plate boundaries and illustrate them with arrows (be sure to label ALL!).

convergent boundaries → ←
divergent boundaries ← →
transform boundaries ⇉ ⇇

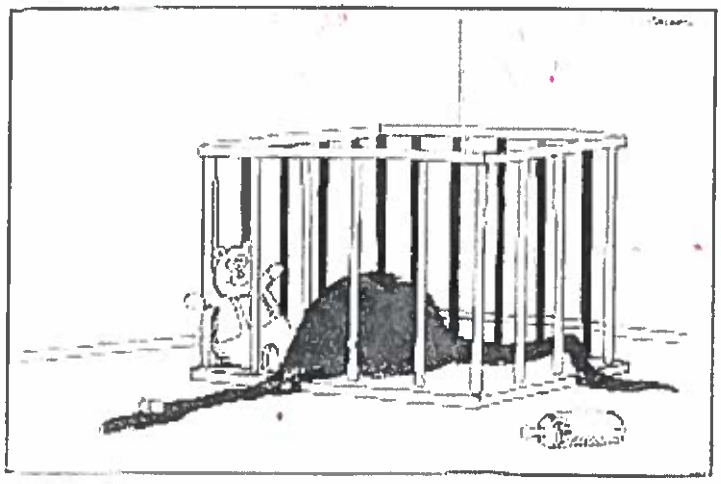
22. Explain why Continental Drift is now called Plate Tectonics (use evidence to explain the change).

Alfred wegener couldn't explain why the continents drifted but he thought they had drifted apart. Then Harry Hess proposed the idea of seafloor spreading where the ocean floor moves like a conveyor belt carrying the continents with them. This is Plate Tectonics.

23. Mountaintop fossil
The York family went hiking on a tall mountain in Georgia. Mrs. York picked up a shell fossil on the top of the mountain. The fossil was once a shelled organism that lived in the ocean. The family had different ideas about how the fossil ended up there.
This is what they thought:
Mrs. York: A bird picked up the organism and dropped the shell as it flew over the mountain.
Mr. York: Water, ice or wind eventually carried the fossil to the top of the mountain.
Kathleen: A mountain formed in an area that was once covered by ocean.
MacKenzie: The fossil flowed out of a volcano that rose up from the ocean floor.
Whose idea do you MOST AGREE with and why? Describe your ideas about how a fossil could end up on the top of a tall mountain.

24. Which feature would be very unusual if found somewhere on Earth's surface? A volcano under the sea; a large, nonvolcanic mountain on a flat plain; a mountain range near the seacoast; or a deep underwater trench near a continental shelf. Explain your reasoning.

If it was a flat plain there would be a whole mountain range due to a convergent boundary.



23. Make one qualitative observation about the picture:
a dinosaur is bigger than the crate

24. Make one quantitative observation about the picture: there is one teddy bear

25. Make one inference about the picture:
the dinosaur is growing

26. Make one prediction about the picture:
the dinosaur will need a new crate