

**1. Using chemical properties, list the 3 main layers of Earth from the most dense to the least dense.**

**2. Using physical properties, list the 6 layers of earth from the least dense to the most dense.**

**3. The thinnest layer (35km) of solid rock that surrounds Earth's surface is the \_\_\_\_.**

**4. Which physical property layer contains the crust and the uppermost part of the mantle?**

**5. Which layer is the plastic part of the mantle that allows the plates (lithosphere) to move around on it?**

**6. A sphere of hot, mostly solid iron inside the earth is the \_\_\_\_  
\_\_\_\_.**



**7. A layer of (liquid) iron and nickel that surrounds the inner core is the \_\_\_\_.**

**8. A thick layer of hot, mostly solid material that surrounds the outer core is the \_\_\_\_.**



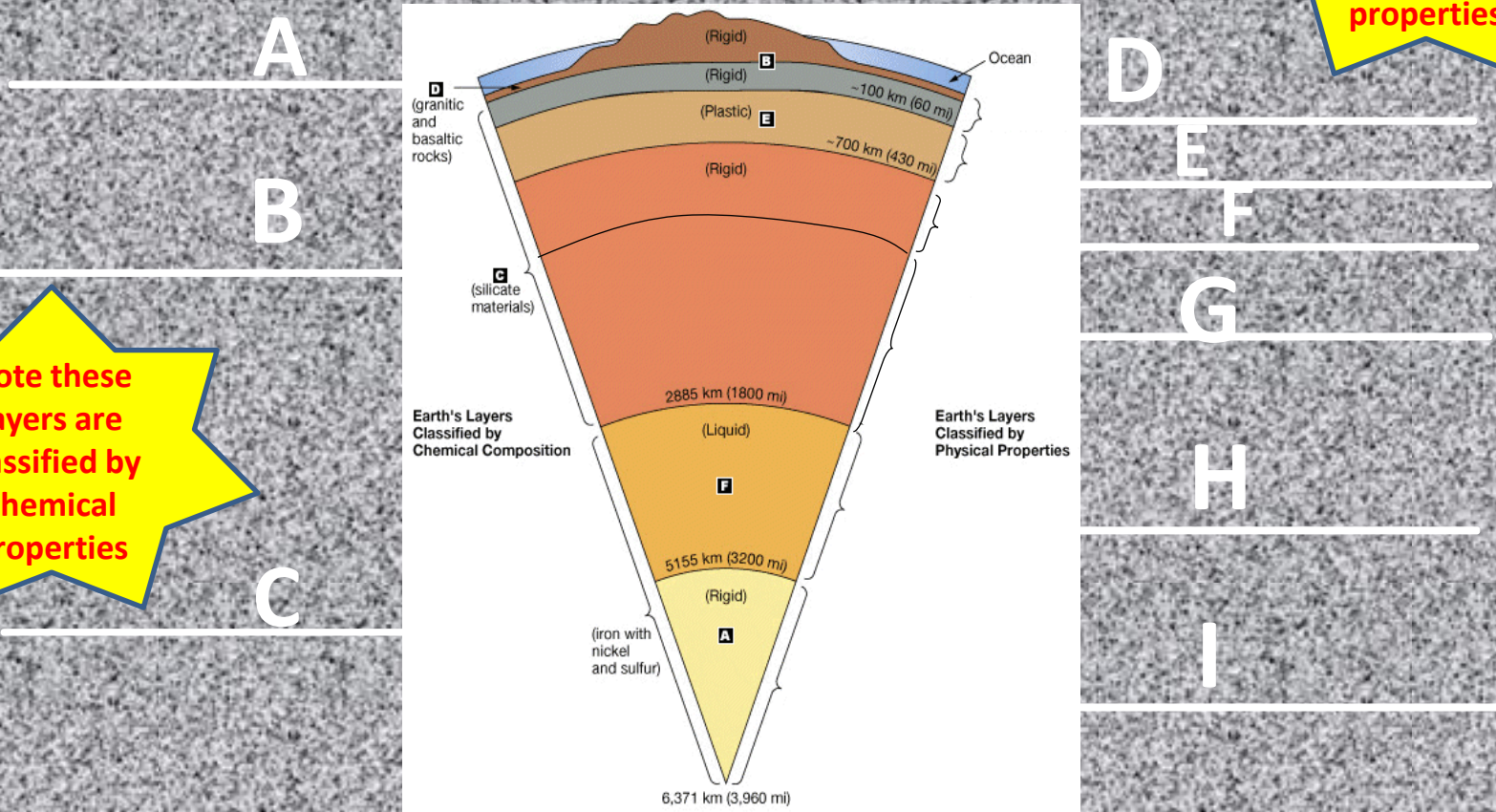
**9. The different layers formed on earth are due to the different \_\_\_\_\_ of the materials.**

**10. As you move deeper into the earth \_\_ and \_\_ increase.**

**11. How much mass is  
contained in a given volume is  
\_\_\_\_\_.**

# 12. Label the layers

Note these layers are classified by physical properties



Note these layers are classified by chemical properties

A

B

C

D

E

F

G

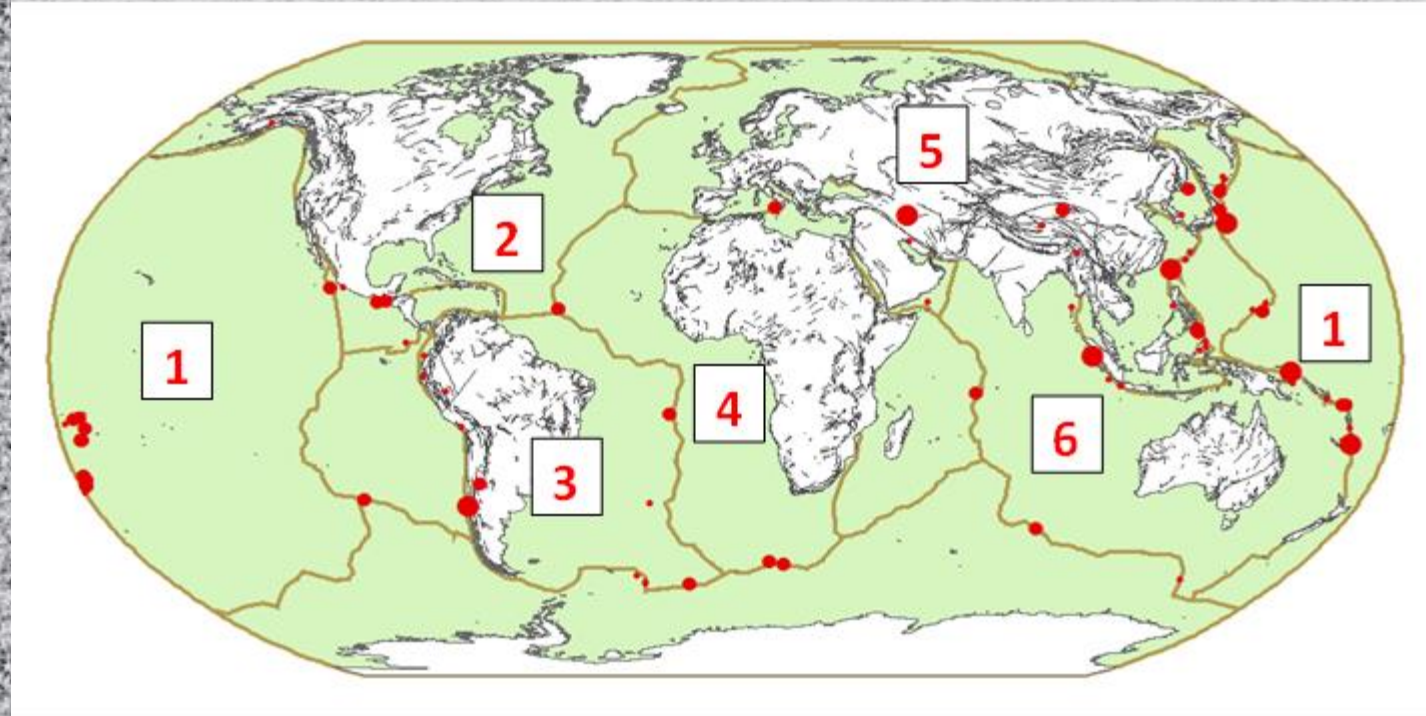
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**13. The (a)\_\_\_ energy in the core heats up the lower part of the plastic (b)\_\_\_ . The (c)\_\_\_ dense warm material rises to the top of the asthenosphere. When the material begins to cool, it starts to (d)\_\_\_ toward the bottom of the asthenosphere. Then the current warms up again and rises and then cools and sinks. The cycle goes on and on. This is know as (e)\_\_\_ .**



# 14. Label the numbered tectonic plates.



1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_



**15. Draw arrows showing which direction divergent plates move relative to each other.**

**16. What geological events occur at divergent boundaries? Include oceanic-oceanic and continental-continental.**

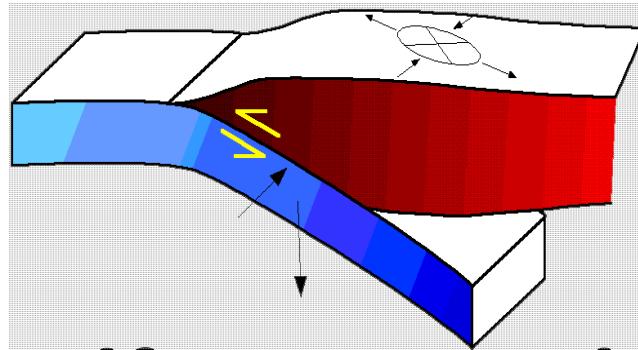
**17. Draw arrows showing which direction convergent plates move relative to each other.**

**18. What geological events occur at convergent boundaries between two continental crusts? Between two oceanic crusts?**

**19. Draw arrows showing which direction Transform plates move relative to each other.**

**20. What geological events occur at transform boundaries?**

**21. Explain what is happening at a subduction zone between oceanic and continental plates.**



**What landforms result in this movement?**

**Check  
your  
answers!**

**1. Using chemical properties, list the 3 main layers of Earth from the most dense to the least dense.**

**Core, Mantle, Crust**



**2. Using physical properties, list the 6 layers of earth from the least dense to the most dense.**

**Lithosphere, asthenosphere, upper mantle, lower mantle, outer core, inner core**

**3. The thinnest layer (35km) of solid rock that surrounds Earth's surface is the \_\_\_\_.** crust

**4. Which physical property layer contains the crust and the uppermost part of the mantle?**  
**lithosphere**

**5. Which layer is the plastic part of the mantle that allows the plates (lithosphere) to move around on it? asthenosphere**

6. A sphere of hot, mostly solid iron inside the earth is the \_\_\_\_\_. **inner core**

**7. A layer of (liquid) iron and nickel that surrounds the inner core is the \_\_\_\_\_. **outer core****



**8. A thick layer of hot, mostly solid material that surrounds the outer core is the \_\_\_\_.**

**mantle**

**9. The different layers formed on earth are due to the different \_\_\_\_\_ of the materials. densities**

**10. As you move deeper into the earth \_\_ and \_\_ increase.**  
**Temperature and pressure**

**11. How much mass is contained in a given volume is \_\_\_\_.** density

# 12. Label the layers

Note these layers are classified by physical properties

crust

mantle

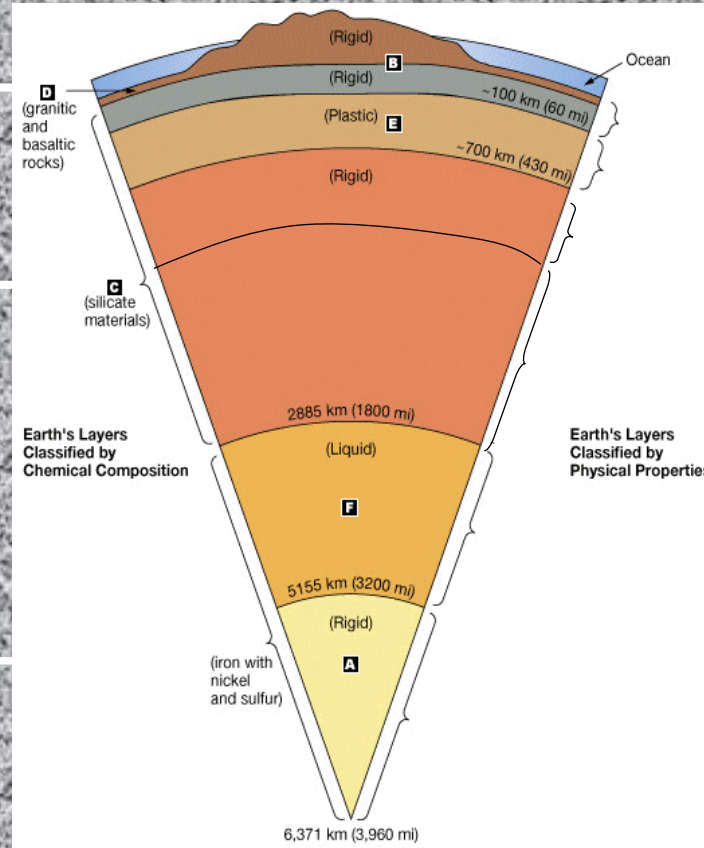
Note these layers are classified by chemical properties

core

lithosphere  
asthenosphere  
upper mantle  
lower mantle

outer core

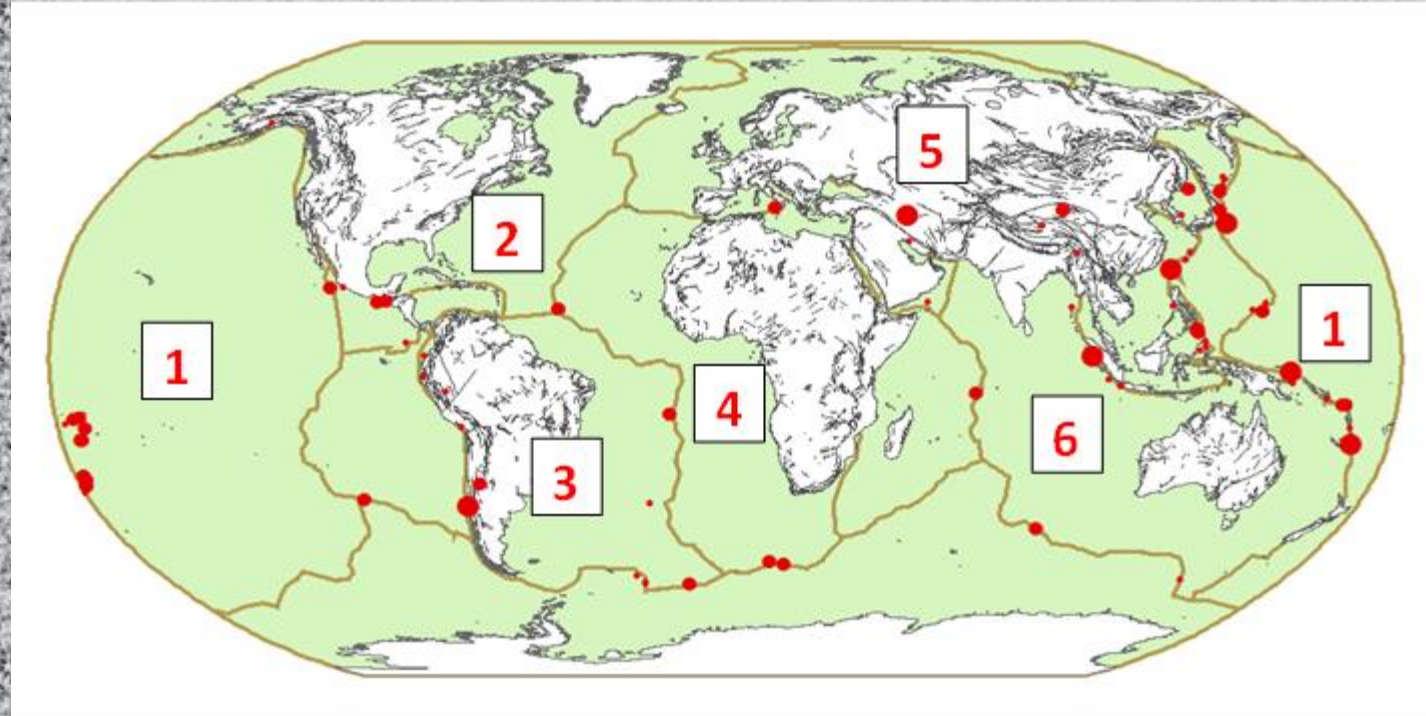
inner core





13. The (a)thermal energy in the core heats up the lower part of the plastic (b)asthenosphere. The (c)less dense warm material rises to the top of the asthenosphere. When the material begins to cool, it starts to (d)sink toward the bottom of the asthenosphere. Then the current warms up again and rises and then cools and sinks. The cycle goes on and on. This is know as (e)convection (currents).

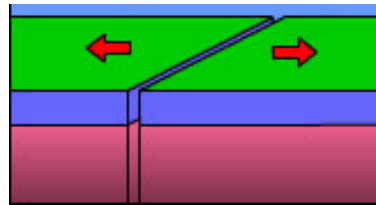
# 14. Label the tectonic plates



1. Pacific Plate
3. South American Plate
5. Eurasian Plate

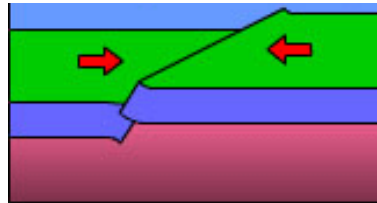
2. North American Plate
4. African Plate
6. Indo-Australian Plate

**15. Draw arrows showing which direction divergent plates move relative to each other.**



**16. What geological events occur at divergent boundaries? Oceanic-oceanic = Mid-Ocean Ridges, Seafloor spreading, new oceanic crust**  
**continental-continental = rift valleys, new continental crust**

**17. Draw arrows showing which direction convergent plates move relative to each other.**



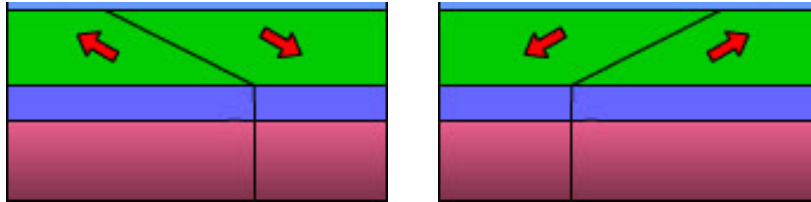
**18. What geological events occur at convergent boundaries between two continental crusts?**

**Mountain building**

**Between two oceanic crusts? Island arcs, ocean trenches due to subduction of the older plate**



**19. Draw arrows showing which direction Transform plates move relative to each other.**

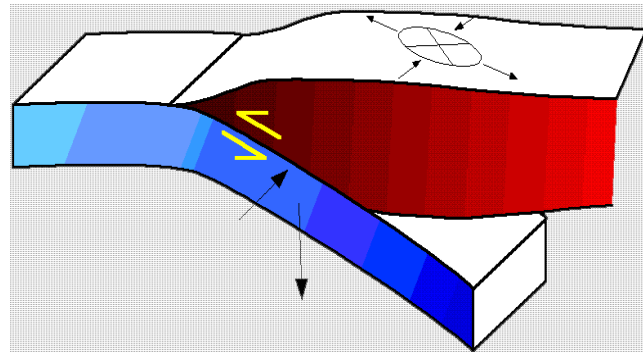


**20. What geological events occur at transform boundaries? earthquakes**



## 21. Explain what is happening at a subduction zone between oceanic and continental plates.

When an ocean plate collides with a continental plate, the denser ocean plate sinks below the continental plate.



A deep ocean trench forms in the ocean and volcanoes form on the continent.