**Layers of The Earth Guided Notes**

**Essential Question:**How are layers of the Earth different from one another?

**Standard:**

1. Ask questions to compare and contrast the Earth’s crust, mantle, inner and outer core, including temperature, density, thickness, and composition.

**Slide 4: The Earth is made up of 4 main layers:**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Slide 5: Crust**



**Slide 6: Crust**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the Earth that ranges from only \_\_\_\_\_\_\_\_\_\_\_ in some areas of the ocean floor to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ under mountains.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ large amounts of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: oceanic crust and continental crust
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on which the continents and oceans rest

**Slide 7: Mantle
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**Slide 8: Mantle**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (like hot asphalt or fudge)
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the Earth (making up \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the Earth’s mass)
* The hot material (magma) in the mantle rises to the top of the mantle, cools, then sinks, reheats, and rises again. These \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cause changes in the Earth’s surface

**Slide 9: Core**

**Slide 10: Outer Core**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_metal that is about \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Located about \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and is about\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Composed of the melted metals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



 

**Slide 11: Inner Core**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sphere composed mostly of \_\_\_\_\_\_\_\_\_\_\_\_\_
* It is believed to be as hot as 6,650°C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Heat in the core is probably generated by the radioactive decay of uranium and other elements
* It \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the outer core, mantle, and crust \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it tremendously

**Slide 10:**



**Slide 11: The Lithosphere**

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(crust and upper mantle) is divided into separate plates which move very slowly in response to the “convecting” part of the mantle.

**Slide 12:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ increases as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 

**Slide 13:**

Look at the information in the graph and table below. What’s the relationship between depth and density/pressure?

Which layer of the Earth has the greatest temperature, pressure, and density?