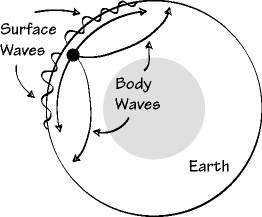
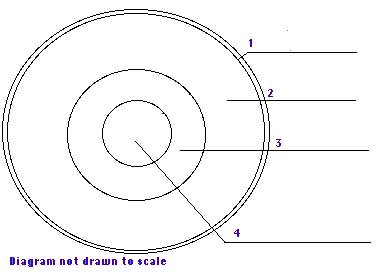
**Inside the Earth Guide**

How do scientists know what is inside the Earth?

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=5C_TPgv-mdekOM&tbnid=Ihy13XsJvrxTdM:&ved=0CAUQjRw&url=http://epicentral.net/seismic-wave-types/&ei=4tlNUvKVIomA9gTQj4GwDw&bvm=bv.53537100,d.eWU&psig=AFQjCNHhETrb0DsRKideMxUx6B4Ps5Kxvg&ust=1380920037044138)

\*\*\*Temperature **and** pressure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as you get deeper into the earth!

LABEL THE 4 LAYERS IN THE PICTURE below:

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=IIrc-PcR7bzn3M&tbnid=XxTdfCSwJGiDsM:&ved=0CAUQjRw&url=http://volcano.oregonstate.edu/vwdocs/vwlessons/lessons/Ch1CMA/Answer_Key_Test1.html&ei=99pNUvvsH4XY9ATX6IHACg&bvm=bv.53537100,d.eWU&psig=AFQjCNFcg1TURFfA7ze5BUhZyT34mygZcw&ust=1380920433436164)

**CRUST (SOLID rock, mountains & soil):**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ layer (skin)

Thinnest under \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(5 km)

Thickest under \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(100 km)

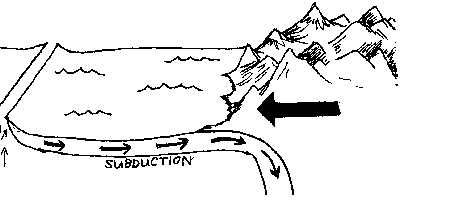
Temp: near freezing to \_\_\_\_\_\_\_\_\_\_ °C

**Two types of crust**:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (basalt)
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (granite)

Circle above which type of crust is MOST dense.

In the diagram below, label the continental and oceanic crust:



**MANTLE (HOT/bendable ROCK!):**

About \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km thick (thickest/largest of the 4 layers)

**Why** is the mantle DENSER than the crust?

Temp: \_\_\_\_\_\_\_\_\_ °C to \_\_\_\_\_\_\_\_\_\_\_\_ °C

Note: very top of mantle is \_\_\_\_\_\_\_\_\_\_\_\_

**CORE (inner layer):**

Mostly made of \_\_\_\_\_\_\_\_\_\_ and nickel (very dense metals—so densest layer)

What are the two parts of the core?

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_ core (**liquid** metal)

--temp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_°C and about 2250 km thick

* 2. \_\_\_\_\_\_\_\_\_\_\_\_\_ core (\_\_\_\_\_\_\_ metal because of the \_\_\_\_\_\_\_\_\_\_\_\_)

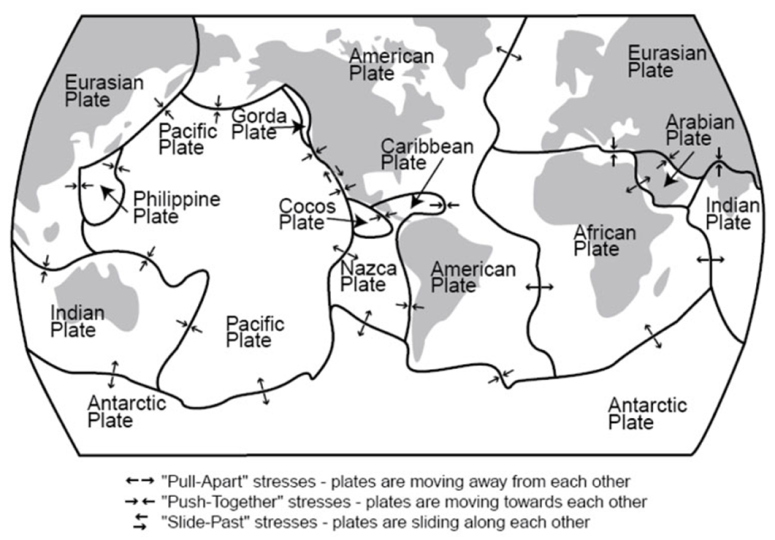
--temp: 5000--\_\_\_\_\_\_\_\_\_\_\_\_\_\_°C and about \_\_\_\_\_\_\_\_ km thick

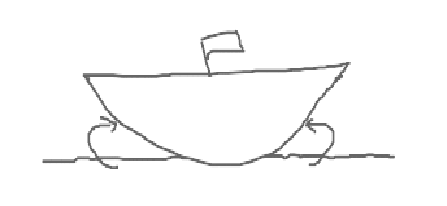
***SO WHAT DOES THIS HAVE TO DO WITH PLATE TECTONICS?***

Two parts of the earth:

1. \_\_\_\_\_\_\_\_\_\_\_\_sphere—the SOLID/rigid outer part of earth (\_\_\_\_\_\_\_\_\_\_\_ and upper mantle)—this part of the earth is broken into tectonic \_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_sphere—the soft, thick LIQUID/hot plastic-like part of mantle (flows slowly)

The lithosphere \_\_\_\_\_\_\_\_\_\_\_\_ on the asthenosphere.





**How does heat move around (heat transfer)?**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_--heat from sun
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_--from touching
3. \*\*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   * **warm** (less dense) \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   * **cold** (more dense) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Where does the convection heat come from?

Lithospheric is divided into 10 major tectonic plates (most contain oceanic and continental crust).

Example: we live on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ plate

What’s so interesting about California? (Label where it is located)