

Name _____

The internal structure of the Earth

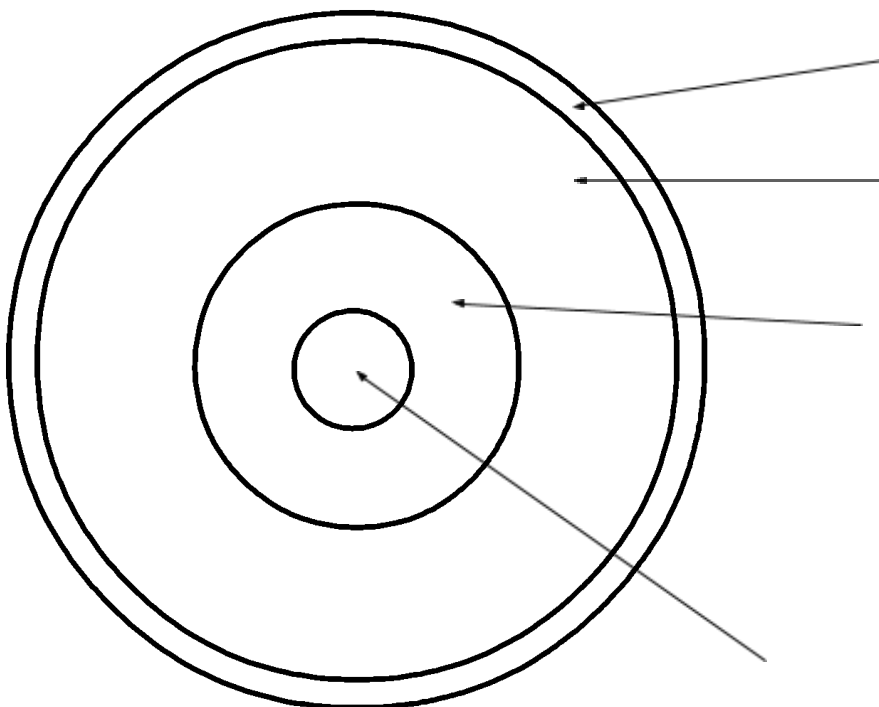
Read the definitions and fill in the blanks, and then label the diagram below

Crust - the _____ surface of the Earth. The crust is quite thin like the _____ of an orange and is thinner under the _____.

Inner core - the solid iron-nickel _____ of the Earth that is very _____ and under great pressure.

Mantle - a rocky _____ located under the _____. It is extremely hot - about _____ degrees C.

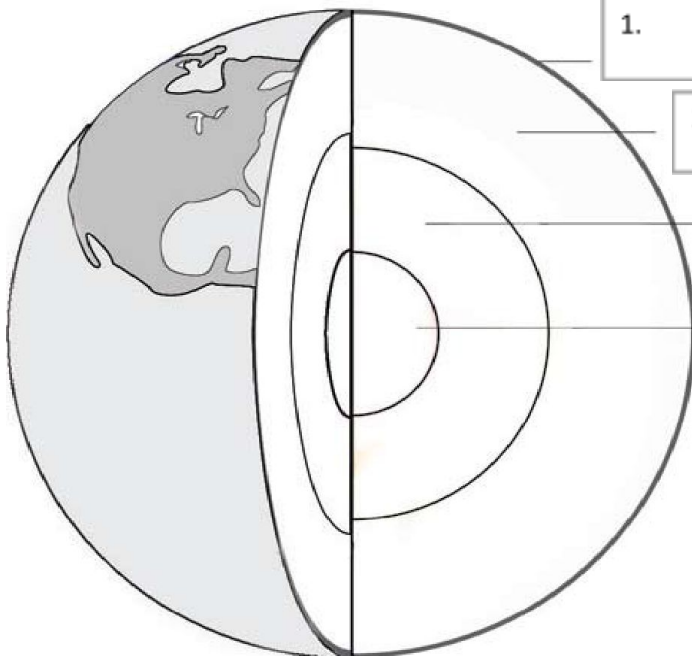
Outer core - made of metal so hot that it is _____. This layer moves slowly and produces a _____ field.



Earth's Structure Worksheet

Use information from the following website: to color in the earth and label

<http://www.learner.org/interactives/dynamicearth/structure.html>



1. _____

2. _____

3. _____

4. _____

1. _____ – hard and rigid, the Earth's outermost and _____ layer. Only a few miles (5 km) thick under the oceans and averaging 20 miles thick under the continents.

3. _____ – The **only** _____ layer of the Earth – a sea of mostly iron and nickel. It is roughly 1800 – 3200 miles below the surface and about 1400 miles thick. Temperatures reach _____ ° C.

4. _____ – An extremely hot, solid sphere of mostly _____ and _____ at the center of the Earth. It is 3200 to 2 to 3960 miles below the surface and about 750 miles in diameter.

2. _____ – Divided into two sub regions, upper and lower, this dense layer made of hot semi rock is located directly below the _____ and is about 1800 miles thick.

Lithosphere – made up of the crust and tiny bit of the mantle, this layer is divided into several constantly (very slowly) moving plates of _____ that hold the continents and oceans

Asthenosphere – The plates of the lithosphere move (_____) on this hot, malleable semi liquid zone in the upper mantle, directly below the lithosphere.

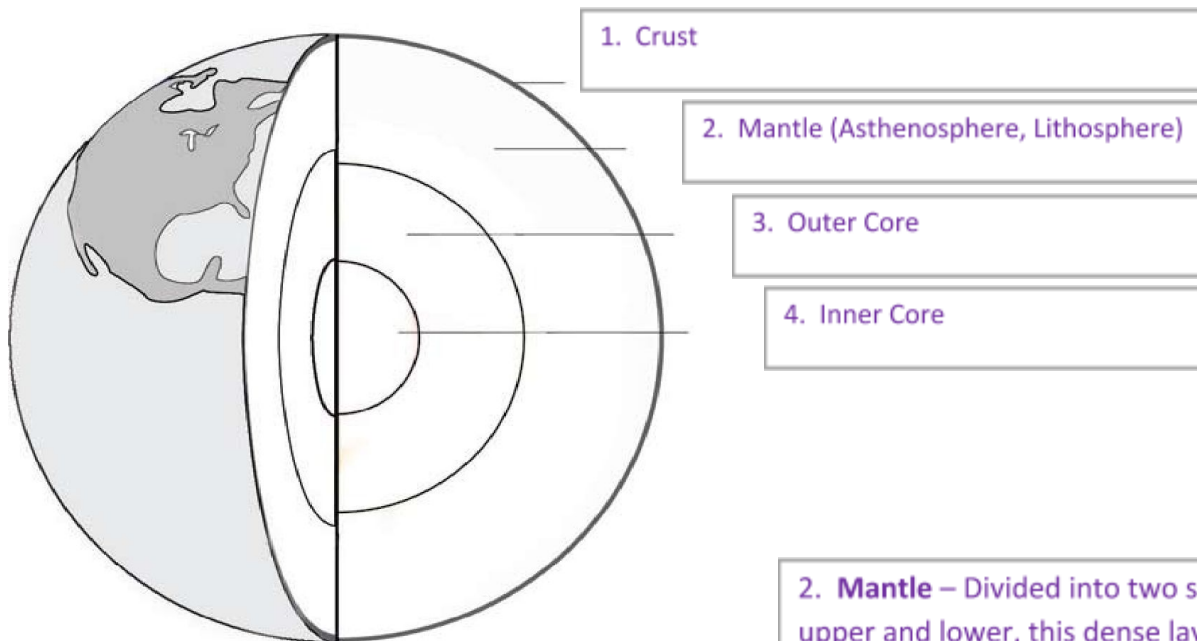
How do you think scientists discovered the layers of our Earth?

Earth's Structure Worksheet

Use information from the following website:

<http://www.learner.org/interactives/dynamicearth/structure.html>

Label the Layers of the Earth.



Write information about each layer in the boxes below.

1. **Crust** – hard and rigid, the Earth's outermost and thinnest layer. Only a few miles (5 km) thick under the oceans and averaging 20 miles (20 km) thick under the continents.

3. **Outer Core** – The outer core is the only liquid layer of the Earth – a sea of mostly iron and nickel. It is roughly 1800 – 3200 miles below the surface and about 1400 miles thick. Temperatures reach 6,000° C.

4. **Inner Core** – An extremely hot, solid sphere of mostly iron and nickel at the center of the Earth. It is 3200 to 2 to 3960 miles below the surface and about 750 miles in diameter.

2. **Mantle** – Divided into two sub regions, upper and lower, this dense layer made of hot semi rock is located directly below the crust and is about 1800 miles thick.

Lithosphere – made up of the crust and tiny bit of the mantle, this layer is divided into several constantly (very **slowly**) moving plates of solid rock that hold the continents and oceans

Asthenosphere – The plates of the lithosphere move (or float_ on this hot, malleable semi liquid zone in the upper mantle, directly below the lithosphere.

How do you think scientists discovered the layers of our Earth?

Name: _____ Date: _____

Inside Earth WebQuest: Worksheet

Introduction:

A Webquest is a way for you to explore a topic, such as "The Layers of the Earth" and find useful information to help you understand the topic. In this webquest, you will be visiting web sites that will help you better understand the Earth's interior, continental drift, plate tectonics and how these topics fit together.

Directions:

Using search engines (google, bing, duck duck go, yahoo, ask, etc.) and the internet links provided answer the questions below to learn more about the layers of the earth.

Earth's Interior

Earth is many thousand kilometers in depth. If you could travel deep into the Earth's surface you would find it contains three main layers: the crust, the mantle and the core. To learn more about the layers of Earth, search the internet and click on the following links and answer the questions that follow:

Read the Definitions. Using the internet, answer the questions that follow:

crust - the rigid, rocky outer surface of the Earth, composed mostly of basalt and granite. The crust is thinner under the oceans.

Question: What type(s) of rock(s) are basalt and granite?

Question: How were these rocks formed?

inner core - the solid iron-nickel center of the Earth that is very hot and under great pressure.

Question: What is the inner core made of?

mantle - a rocky layer located under the crust - it is composed of silicon, oxygen, magnesium, iron, aluminum, and calcium. Convection (heat) currents carry heat from the hot inner mantle to the cooler outer mantle.

Question: The mantle is divided into two sections. What do we call the top half section of the mantle?

Question: What do we call the bottom half section of the mantle?

Question: The mantle the thickest layer of the Earth. How thick is it?

Question: What types of currents are formed in the mantle?

outer core - the molten iron-nickel layer that surrounds the inner core.

Question: What is the outer core made of?

Now, go to the following link:

[Composition of the Earth](http://www.ducksters.com/science/composition_of_the_earth.php)

(http://www.ducksters.com/science/composition_of_the_earth.php)

Composition of the Earth:

1. Is the Earth one solid piece of Rock?
2. Are some of the parts of the Earth constantly moving?
3. Why can we compare the Earth to an onion?
4. What are the four main layers of the Earth?
 - 1.
 - 2.
 - 3.
 - 4.
6. What is the crust?
7. Is the mantle thicker or thinner than the crust?
8. What are plate tectonics?
9. Do these plates move?
10. What happens when these plates bump up against one another?
11. Is the outer core a liquid or solid?
12. Why is the Earth's outer core so important to the Earth?
13. Why is the Earth's inner core a solid and not a liquid, even though it is very, very hot?

Now go to: [Earth Layers Interface](http://www.harcourtschool.com/activity/science_up_close/606/deploy/interface.html)

(http://www.harcourtschool.com/activity/science_up_close/606/deploy/interface.html)

Click **START**

Click on the diagram to learn more about the Earth's Layers. Answer the questions.

First, click on the **Crust**.

1. What can be found on the Earth's crust?
2. Where is the crust thicker - under the continental shelf or under the oceans?

Now click on the **Lithosphere**

3. The lithosphere contains part of the crust and the upper mantle. What does lithosphere mean?

4. What part of the Earth can be found in the lithosphere?

5. How can the lithosphere move?

Now, click on the **asthenosphere**

6. How does the rock move in the asthenosphere?

Now, Click on the **Mantle**.

7. What layers make up the mantle?

8. How thick is the mantle?

Now, Click on the **Outer Core**.

9. The outer core is "molten". What do you think that means?

10. The core is responsible for what?

Lastly, click on **inner core**.

11. Is the inner core a liquid or solid? Why?

12. How hot is the inner core?

Now, exit out of this section and go to: **[Label the Earth Diagram](http://www.enchantedlearning.com/subjects/astronomy/activities/label/labelearth.shtml)**
(**<http://www.enchantedlearning.com/subjects/astronomy/activities/label/labelearth.shtml>**)

Label and color the Earth Diagram

