

LAYERS OF THE EARTH WEBQUEST

Use the links to help you answer the following questions.

1. Write the names of the layers of the Earth in order from the center to the outside of the planet. <http://pubs.usgs.gov/gip/dynamic/inside.html>

a. What does “lithos” mean?

b. What does “asthenes” mean?

Use this website to answer questions 2 - 8

<http://volcano.oregonstate.edu/earths-layers-lesson-1>

2. Use the triangular diagram to answer these questions: a. Name the thickest layer ...

b. Name the thinnest layer ...

c. Calculation challenge. Perhaps you have imagined digging a tunnel through the earth that comes out the other side. Figure it out ... How many miles would you have to dig? (Don't forget to add on the other side!)

3. Write 4 facts about the Earth's Crust.

4. The crust and the upper layer of the mantle together make up a zone of rigid, brittle rock called the _____.

5. Write three facts about the Mantle.

6. What are the Convection Currents?

7. a) Name two metals found in the Outer Core.

b) The border between the Outer core and the Inner Core is how many miles beneath the crust?

8. a) The Inner core is under so much pressure it does not move like a liquid. Instead, it _____.

b) What do scientists estimate is the temperature at the center of the Earth?

Quick Quiz:

1. Name the four layers of the Earth in order from the outside to the center of the Earth.

2. What causes the mantle to "flow"?

3. What are the two main metals that make up the outer and inner core?

4. Describe in your own words how the Earth's layers were formed. "*The Four Layers*" will help you.

Use this website to answer questions 9 - 10

http://www.windows2universe.org/earth/geology/geopeople_intro.html

9. A scientist who studies rocks is a _____.

10. What does a Geomorphologist study? _____.

Use this website to answer questions 11 - 12

http://www.windows2universe.org/earth/interior_surface.html

11. Each of the 4 layers contains different _____ and _____.

12. There are six circles in the blue box. Answer the questions below from the information in the separate blue boxes:

a) Box 1 – What fraction of Earth's surface is covered by grasslands?

b) Box 2 - What two elements combine to form the mineral pyrite? _____ and _____.

c) Box 3 – Earth's surface has a very low number of impact craters. What are the two main reasons for this?

d) Box 4 – What feature of Earth's surface is discussed in this box?

e) Box 5 – Earthquakes often occur underwater. What warning was issued for the earthquake described in this box?

f) Box 6 – Three conditions can contribute to formation of a sinkhole. What are they?

_____, _____, and _____.

13. Elements are substances that cannot be broken down into simpler substances by ordinary chemical means. There are 92 naturally-occurring elements in the Universe, all made in stars. Ten elements make up nearly all (99.795%) of Earth's crust. The list of those elements is at this website:

http://education.jlab.org/glossary/abund_ele.html

Read the list and then select ONE of those elements, click on it, and describe one way people can use that element.

ELEMENT selected: _____

Human use for it:

14. Next, click on this link to examine the 10 Most Abundant Compounds in the Earth's Crust:

http://education.jlab.org/glossary/abund_com.html

A compound is a substance composed of two or more elements. The 10 compounds on this list compose 99.72% of Earth's crust.

What do all 10 of the compounds on this list have in common?