

Earth Scavenger Hunt – World Book ADVANCED

The earth is one tiny planet in the vastness of space. Even so, we know so much about how it began and what its processes are today. Learn more about the earth on the World Book Web and then find the answers to the following questions!

Find It!

1. Why are the earth and other large planets round?
2. What two elements make up silica in the earth's crust?
3. What is the difference between granite and basalt?
4. Give two examples of biogenic sedimentary rocks.
5. What direction do gyres flow?
6. How do scientists learn about the inner layers of the earth without being able to view it directly?
7. Why doesn't the rock at the center of the earth liquefy when it is at such a high temperature?
8. What is orogeny?
9. What are two supercontinents that have existed in the earth's history?
10. How old do scientists think the earth is?

Did You Know?

- ◆ In the 1700's and 1800's, two opposing theories developed about the history of the earth. The Plutonists believed rock was formed by the cooling of igneous rock after volcanic eruptions. The Neptunists thought the entire earth had been covered by oceans at one time and had since evaporated, leaving dry land in some places.
- ◆ In 2005, scientists of the American Geophysical Union reported that the earth's north magnetic pole had been moving rapidly towards Siberia. Scientists believe that the magnetic poles are created by the flow of iron in the earth's core, but do not know why the poles move.
- ◆ Researchers have used a technique called magnetotellurics to determine that the Australian continent was actually 3 separate continents 1.6 billion years ago.

Learn More!

- ◆ Geology is the field of science that studies how the earth was formed and how it changes. Learn more about the field of geology!
<http://www.worldbookonline.com/advanced/article?id=ar221100>
- ◆ Researchers strive to predict when and where earthquakes will occur. Learn more from this Special Report.
<http://www.worldbookonline.com/advanced/media?id=sr401008>
- ◆ Now that you know about the history of the earth, learn about how the moon was created!
<http://www.worldbookonline.com/advanced/article?id=ar370060>
- ◆ Learn about the continental drift:
<http://www.worldbookonline.com/advanced/media?id=am000002>

Answer Key

1. The earth and other large planets are round because of gravity, which pulls matter to the center of objects.
2. Silicone and oxygen
3. Basalt is composed of volcanic rocks that are iron-rich and silica-poor. Granite is composed of volcanic rocks that are silica-rich and iron-poor.
4. Coal and limestone
5. Gyres flow clockwise north of the equator and counterclockwise south of the equator.
6. Scientists study meteorites called chondrites to help estimate the chemical composition of the earth and use seismographs to study vibrations during earthquakes. The changes in vibrations help scientists understand the chemical composition of the materials they are traveling through.
7. The pressure of the surrounding layers of the earth cause the center of the earth to remain solid.
8. Orogeny is the series of events that occur when two continental plates collide and mountains are formed. The events include the elevation of mountains, folding and crumpling of rocks, volcanic activity, and the formation of plutonic and metamorphic rocks.
9. Rodinia and Pangaea
10. 4.6 billion years old