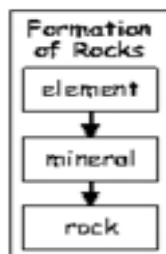


30—Earth Materials and Their Uses

A ¹The earth is made up of a variety of materials, such as rocks, minerals, and metals. ²People can use these resources in many ways—but first, they have to get them.

B ³We get many earth materials by digging into the earth's crust. ⁴The **earth's crust** is a thin layer of solid rock that makes up the earth's outer layer. ⁵It is about 20 miles (32 km) thick.

C ⁶**Rock** is made of one or more minerals stuck together. ⁷**Minerals** are solid, nonliving substances found in the earth's crust. ⁸A mineral is made of elements and compounds. ⁹For example, limestone is a mineral made up of calcium, carbon, and oxygen. ¹⁰An **element** is a basic substance made of only one kind of matter.



D ¹¹People use rocks to build things, such as stone walls. ¹²Rocks are also used to make other building materials, such as concrete.

E ¹³Minerals have many uses. ¹⁴For example, table salt is used to make food taste better. ¹⁵Minerals such as diamonds and gemstones are used to make jewelry. ¹⁶Because they are so hard, diamonds are also used in drills or cutting machines. ¹⁷Coins used to be made from *pure* materials such as gold and silver. ¹⁸Each of these metals is

made of a single element. ¹⁹Can you give two examples of metals used to build things like bridges and automobiles?

F ²⁰People also use the earth as a source of energy. ²¹For example, the inside of the earth is so hot that its heat can be used to boil water. ²²Boiling water makes steam. ²³Steam is a force that can be used to produce electricity. ²⁴The energy in hot water can also be used to heat homes. ²⁵Some of the earth's minerals are also used as a source of energy. ²⁶For example, radioactive elements like uranium are used to produce nuclear energy. ²⁷Fossil fuels like fuel oil and coal also come from the earth.

G ²⁸The water that covers most of the surface of the earth is another natural resource. ²⁹We use the oceans in transporting goods and people by boat. ³⁰If necessary, we can remove the salt to make drinking water. ³¹We can even use the motion of ocean waves to produce electricity.

H ³²The circle graph below shows the major elements that make up the earth's crust. ³³About how much of the earth's crust is made up of oxygen?

