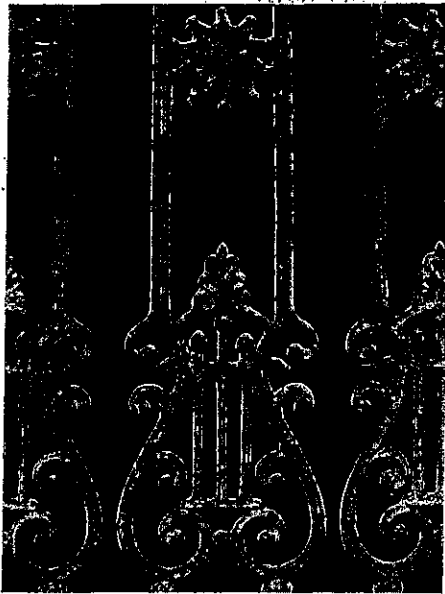


Elements



The iron in the gate, the gold in the jewelry, and the hydrogen and oxygen in the water are all elements.

Elements are the simplest form of matter. An element is matter that is made of only one kind of atom. All the atoms of an element are exactly the same. Gold is an element. All the atoms in a bar of gold are the same. Oxygen is also an element. Every oxygen atom is exactly the same. But oxygen atoms are very different from gold atoms.

Because elements are made of only one kind of atom, they cannot be broken down into different substances. No matter how tiny you cut an element, it will still be the element. One atom of gold is still gold.

You can think of an element as being like sand. Grains of sand are like the atoms in an element. The grains are all alike. You can separate sand any way you like, but it is still sand. Even a single grain of sand is still sand.

Every element is different from all other elements. Atoms of one element have a different number of particles than atoms of every other element. Only oxygen atoms have eight of each particle. Every other element has a different number.

Most elements are found in nature. Iron is an element that is found inside Earth. Wrought iron gates, fireplace grates, and bathtubs are made of iron. Gold is also an element that is found on Earth. Jewelry is often made of gold.

Some matter is made of more than one element. The air you breathe is oxygen, nitrogen, and other elements. Water is made of the elements hydrogen and oxygen. All matter is made of elements.

A. Fill in the missing words.

1. Elements are the simplest form of _____. (iron, matter)
2. An element is matter that is made of only one kind of _____ (atom, sand).
3. Every element is _____ all other elements. (different from, the same as)
4. Elements _____ be broken down into different substances. (can, cannot)
5. Fireplace grates and bathtubs are made of the element _____. (gold, iron)
6. The air you breathe is _____ element. (one, more than one)
7. All matter is made of _____. (elements, sand)
8. Atoms of one element have a different _____ of particles than atoms of every other element. (kind, number)

B. Make a list of at least three elements.

C. Answer True or False.

1. Elements are the simplest form of matter. _____
2. An element is made of many different kinds of atoms. _____
3. Every element is the same as every other element. _____
4. Elements can be broken down into other substances. _____
5. Iron and gold are elements. _____
6. Oxygen is one of the elements in air. _____
7. Some matter is made of more than one element. _____
8. Water is made of the elements iron and gold. _____