

A

Activity

Rocks and Minerals

One Ore in the Water

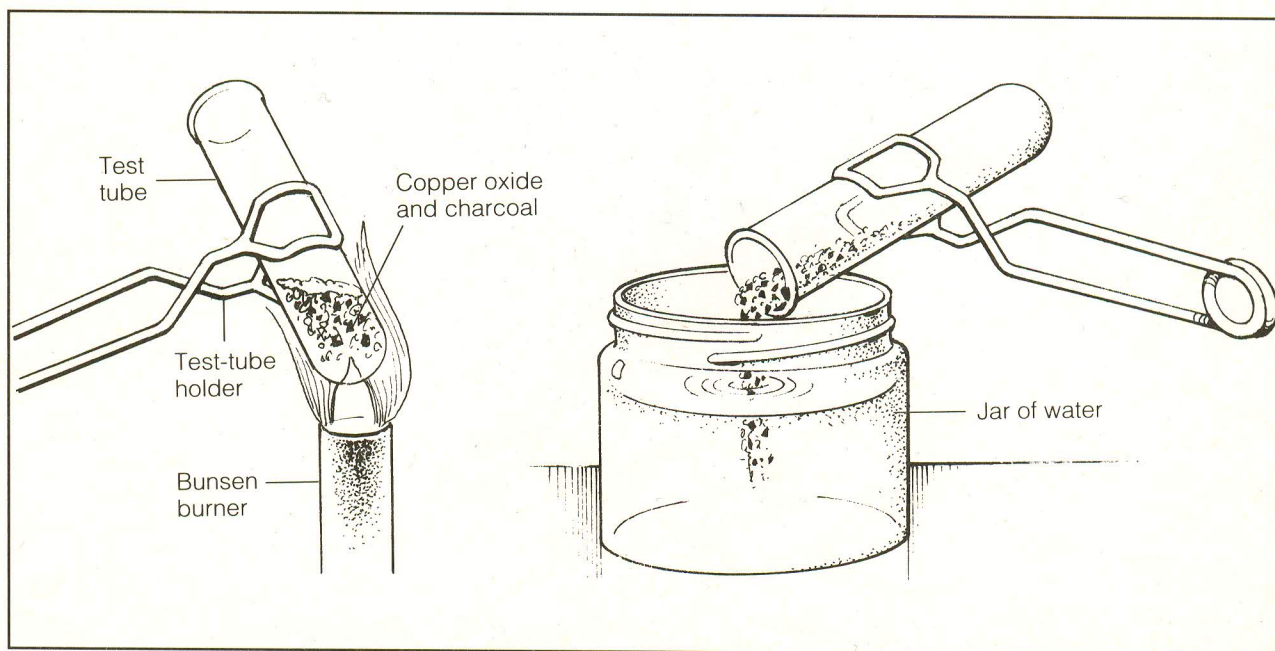
Many of the metals we use are pure elements—they contain only one kind of atom. But in nature, most substances exist as combinations of different kinds of atoms. How are the desirable metal atoms separated from the other, less desirable atoms? Discover one method by doing the following activity.

What You'll Need

black copper oxide
powdered charcoal
test tube
test-tube holder
Bunsen burner
jar

What You'll Do

1. Put some copper oxide and powdered charcoal into a test tube.
2. Holding the test tube with a test-tube holder, carefully heat the copper oxide and charcoal over a Bunsen burner. **CAUTION:** Make sure you know the proper way to light and use a Bunsen burner. Be very careful when working with an open flame. Always point the mouth of the test tube away from you and others.
3. Pour the heated mixture into a jar of water.



What You'll Discover

1. What happened when you poured the heated mixture into the water?

2. Why do you think this occurred?

3. How can metals such as copper be removed from ores such as copper oxide?

4. Thin deposits of nearly pure metal are sometimes found in places where solid rock has come into contact with hot magma rising from deep within the Earth. Using what you have learned about removing metal from ores in this activity, explain why these deposits form.
