NAME DATE CLASS

Chapter 22

ENRICHMENT

Use with Section 1

• What is a solution?

Solid Solutions

How did people first learn to use metals? How did they learn to heat ore until it was hot enough to shape? How did they learn to combine metals to form alloys? The answers are lost in history, but scholars have discovered some pieces of the story and can fill in the missing parts with pretty good guesses.

1. Ancient people found and used soft metals, such as gold and tin. In fact, the story of the Golden Fleece may be part myth and part description of how the ancient Greeks used sheep wool to filter gold dust out of streambeds.
2. Around 6000 B.C., people knew how to make fires that were hot enough to fire pottery.
3. Ancient people sometimes used an ore known as malachite to make jewelry and paints. Malachite is a green compound of copper carbonate.
4. The use of copper was widespread. Egyptians used it to decorate temples. The largest ancient copper mine, however, was halfway around the world in Northern Michigan. That mine was in use as early as 4000 B.C.
5. By 3000 B.C., metal molds were used in Mesopotamia.
6. The first alloy was bronze—a mixture of copper and arsenic. Bronze was stronger and more easily shaped than any single metal.
7. Bronze soon was made of copper and tin instead of copper and arsenic. The change was probably brought about because arsenic is so poisonous.
8. Ancient people traded in both tin and copper. Artifacts found in the city of Hissarlik (on the same site as ancient Troy) showed that they had traded tin and bronze with both Egypt and Spain.

In the space below, use one or more of the statements above to tell a story describing EITHER how ancient people first learned to cause physical changes in metal OR how ancient people first learned to make an alloy.

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