# **How Does Matter Change?**

## **Science Words**

### Say each word quietly to yourself. Then read the meaning.

#### Read the tip to help you remember.

**physical change** [FIZ•ih•kuhl CHAYNJ] a change in matter that does not result in a change in the type of matter

Matter has physical properties, such as color, size, shape, and mass. A *physical change* is a change in a physical property. Soaking, shredding, and crumpling paper are *physical changes* because they change the physical properties of the paper.

**chemical change** [KEM•ih•kuhl CHAYNJ] a change in matter that results in a change in the identity of the matter

*Chemical* and *create* begin with the same sound. A *chemical change* creates a different type of matter. Baked apples have different properties from raw apples because a chemical change takes place during baking.

reaction [ree•AK•shuhn] the process in which new substances are formed during a chemical change

*Reaction* contains the word *react*. When someone says something funny, you might react by smiling. The *reaction* you have produces a smile. The smile is a change. In science, a *reaction* produces a change.

## **How Does Matter Change?**

### **Science Concepts**

#### Read the Ideas more than once. Do your best to remember them.

- 1. Physical changes do not change the type of matter, but chemical changes do.
- 2. You can observe the physical properties of matter without changing the type of matter.
- 3. You cannot observe the chemical properties of matter without changing the matter.
- 4. A chemical change, such as rotting, results in a change in the type of matter.
- 5. Except for water, matter expands when it heats up and contracts when it cools down.
- 6. When it cools, water expands and becomes less dense, which is why ice floats in water.
- 7. How quickly a change in matter takes place is the rate of change.
- 8. More heat energy increases the rate of change, causing change to take place more quickly.
- 9. Food stays fresh in the refrigerator because low temperature slows the rate of change.
- 10. A low fever helps fight disease because the higher temperature kills harmful bacteria.