

## ✓ CHECK YOUR LEARNING

### Suggested Answers

- The arrow shows which way the chemical reaction is going.
- acetic acid (vinegar) + sodium hydrogen carbonate (baking soda) → water + carbon dioxide + sodium acetate
  - aluminum + oxygen → aluminum oxide
  - propane + oxygen → water + carbon dioxide
- carbon + oxygen → carbon dioxide + energy
  - In this reaction, carbon is a solid, oxygen is a gas, and carbon dioxide is a gas.
  - A chemical change takes place because a new substance is formed and energy is released.
  - The charcoal would be completely burned.
- In this reaction, the reactants are  $\text{AgNO}_3$  and  $\text{NaCl}$ , and the products are  $\text{AgCl}$  and  $\text{NaNO}_3$ .
  - The chemicals that are dissolved in water are  $\text{AgNO}_3$ ,  $\text{NaCl}$ , and  $\text{NaNO}_3$ .
  - The white solid is  $\text{AgCl}$ .
  - Both reactants are liquids, which are ionic compounds that dissolve in water.
- The products of this reaction are  $\text{H}_2$ ,  $\text{ZnSO}_4$ , and energy.
  - Water is also present in the reaction vessel.
  - A reaction is occurring because energy is released and a new substance is formed.
  - The test tube will become warmer because energy is created during the reaction.
  - The reaction will have stopped when no more hydrogen gas is being released.
  - The zinc metal will gradually disappear.