

## Chapter 12

Use with Section 2

## ENRICHMENT

## ● Energy from the Sun

**Determining Temperature Change**

Do the activity below to observe the different ways heat energy can be transferred.

**Materials**

dark-colored, small block of wood  
 thermometer  
 water  
 electric teapot or teapot and hot plate

coffee mug  
 ice cubes  
 room heater or register  
 clock or watch

**Procedure**

1. Place a wooden block in direct sunlight and record its temperature.
2. Measure and record the temperature of the block after two hours in the sun.
3. Heat water in the teapot and pour it into the mug. Record the temperature of the water.
4. Place two ice cubes in the water. After 10 minutes, measure and record the temperature of the water.
5. Record the temperature of the air as shown on the thermostat.
6. Ask an adult to turn up the thermostat.
7. Stand near the room heater or register, then stand near the cold air return. Record your observations.
8. After 20 minutes, again record the temperature shown on the thermostat.

**Analyze and Conclude**

1. What happened to the wood block? \_\_\_\_\_
2. What type of heat transfer caused what you noticed? \_\_\_\_\_  
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3. What happened to the temperature of the water when ice cubes were added? \_\_\_\_\_  
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4. Explain the method of heat transfer demonstrated by the ice in the water. \_\_\_\_\_  
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5. Explain what happened in the room when the thermostat was turned up. \_\_\_\_\_  
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6. Which method of heat transfer is demonstrated by the heating of the room? \_\_\_\_\_