

## SECTION

## 1

## Section Focus

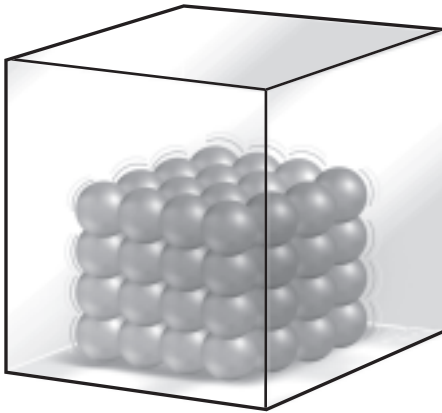
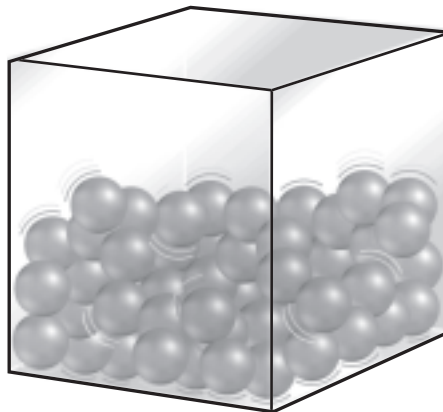
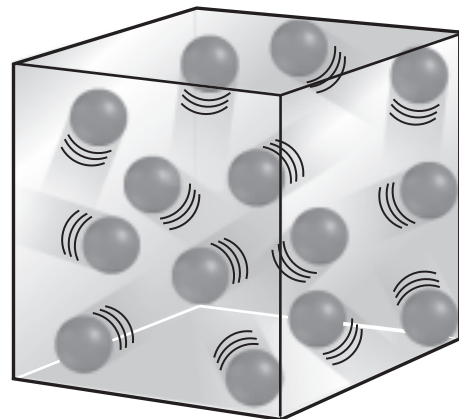
## Transparency Activity

# Water Works

Sculptors use a variety of materials to create their works of art. Those who sculpt marble or wood expect their work to last for many years. Ice sculptors, on the other hand, know that the Sun will soon turn their intricate works into pools of water.



1. What happens to molecules of water as ice melts?
2. Why does snow melt when you hold it in your hand?
3. What happens when water boils?

**SECTION****1****Teaching Transparency  
Activity****Structure of a Solid,  
Liquid, and Gas****Solid****Liquid****Gas**

**Teaching Transparency Activity (continued)**

1. What are the four states of matter?

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2. How do the positions of the particles in a solid compare with the positions of the particles in an equal volume of liquid?

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3. What do we call the amount of energy required to change from a liquid to a gas?

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4. What do we call the temperature at which a solid begins to liquefy?

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5. How does decreasing the temperature of a liquid change the particles that make up the liquid?

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6. What causes the particles in a solid to vibrate?

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7. What is heat of fusion?

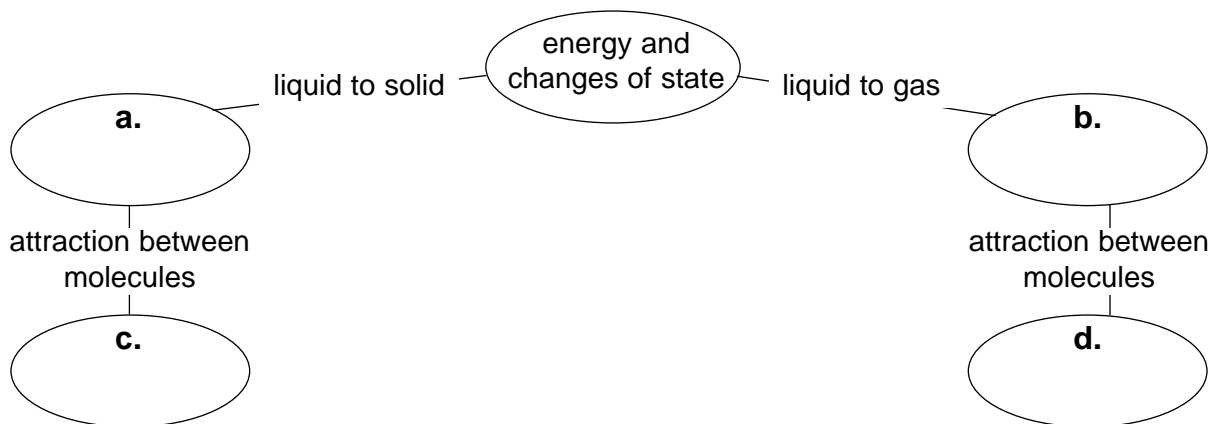
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## Chapter Test (continued)

### Skill: Concept Mapping

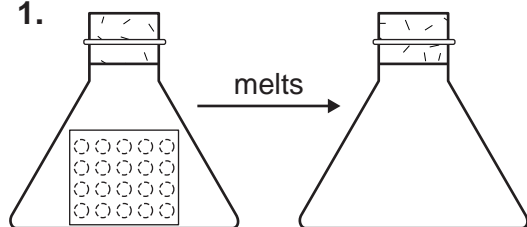
4. Use the labels **heat of vaporization**, **heat of fusion**, **stronger**, and **broken** to complete the concept map about energy and changes of state.



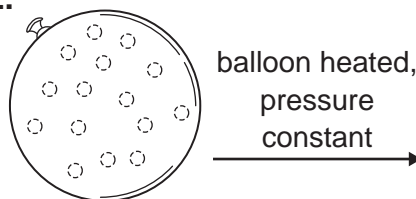
### III. Applying Concepts

**Directions:** Complete each of the following diagrams by showing how the positions of the particles will change under the conditions described.

1.



2.



### IV. Writing Skills

**Directions:** Answer the following questions using complete sentences.

1. Where might you find plasma?

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2. Why are liquid crystals useful?

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3. According to Archimedes' principle, what will happen if the buoyant force of a fluid is less than the weight of an object placed in the fluid?

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