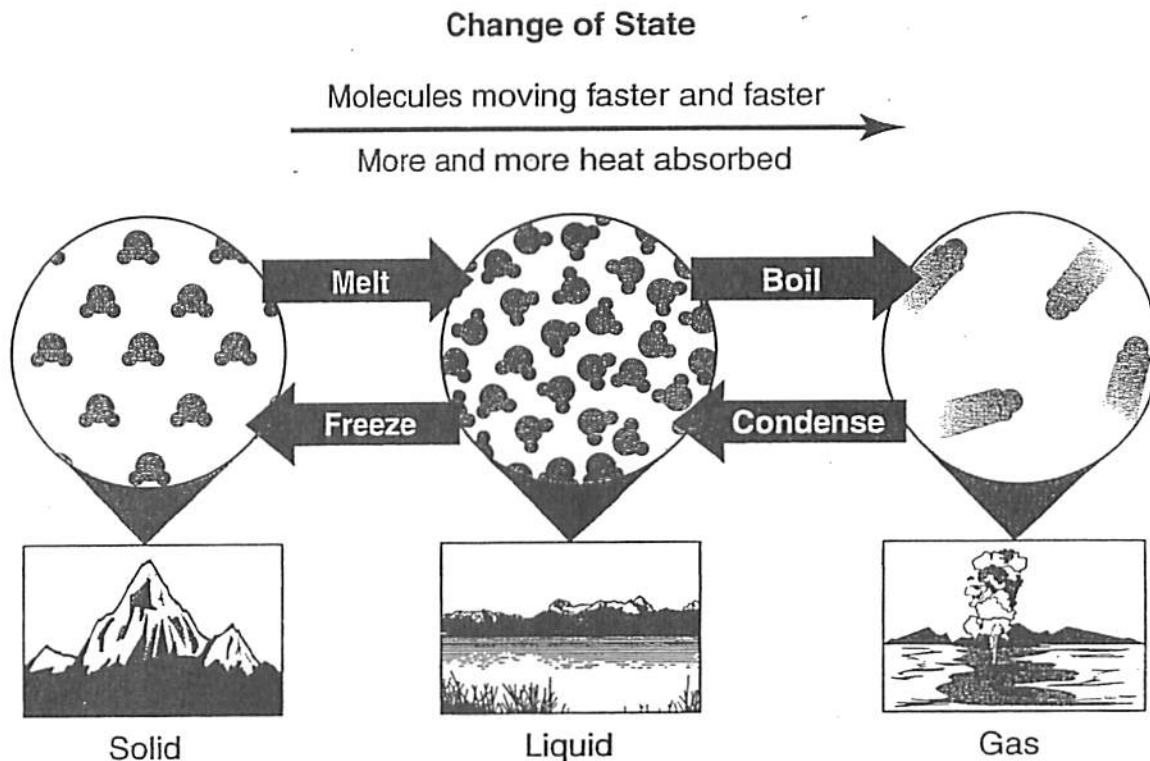


Solids, Liquids, and Gases: Moving Particles

This diagram shows what happens to particles during changes of state. This is not what you would actually see, but the diagram helps you understand what is actually happening. Focus on how much the particles move.



Study the diagram and answer the questions below.

1. What happens to the speed of molecules as they absorb heat?

2. In which state have the particles absorbed the most heat? _____

3. Which particles show the least amount of motion? _____

4. In which state do the particles occupy the greatest amount of space?

Solids, Liquids, and Gases

Match the correct letter with the description.

- | | | |
|-------|--|--------------------|
| _____ | 1. the temperature at which a liquid changes state into a solid | a. state of matter |
| _____ | 2. the temperature at which a solid changes state into a liquid | b. melting point |
| _____ | 3. a liquid slowly changing into a gas | c. boiling point |
| _____ | 4. any of the forms matter can exist in | d. freezing point |
| _____ | 5. a gas turning to a liquid | e. evaporation |
| _____ | 6. the temperature at which a liquid changes state into a gas | f. condensation |
| _____ | 7. the temperature stays constant during this even though heat is being added or removed | g. change of state |
| _____ | 8. cooling causes particles to get closer together and materials do this | h. expand |
| _____ | 9. sidewalks have cracks between pieces because many solids do this when they are heated | i. contract |

10. Explain why the temperature of water stays the same for a while once it starts boiling.

11. Name one way you benefit from each of the following states of matter.

solid _____

liquid _____

gas _____

12. How are boiling and evaporation the same? How are they different?
