

The Kinetic Molecular Theory

- All matter is made up of very small particles.
- There is empty space between particles.
- Particles are constantly moving.
- Energy makes particles move.

Statements

1. Solids have a definite shape because _____

2. Liquids and gases flow because _____

3. Ice cubes form in the freezer because _____

4. Ice cream melts quickly on a hot day because _____

5. Gases do not have a definite shape because _____

Use with textbook pages 246–253.

Expand and contract

Vocabulary

condensation
contracts
deposition
evaporation
expands
falls
faster
kinetic molecular theory
mass
matter

melting
move around quickly
rises
slide past each other
slower
solidification
state of matter
sublimation
vibrate
volume

Use the terms in the vocabulary box to fill in the blanks. Use each term only once.
You do not need to use all the terms.

1. _____ is the amount of material that makes up something.
_____ is the amount of space that a material takes up.
Anything that has mass and volume is called _____.
2. When you add energy to matter, its temperature _____.
3. _____ is the process of a solid changing to a liquid.
_____ is the process of a solid changing directly to a gas.
4. _____ is the process of a liquid changing to a gas.
_____ is the process of a liquid changing to a solid.
5. _____ is the process of a gas changing to a liquid.
_____ is the process of a gas changing to a solid.
6. Particles in a solid are packed so close together they can only _____.
Particles in a liquid can _____.
Particles in a gas can _____.
7. When you remove energy from particles they move _____ and the matter _____.
8. The _____ explains how particles act when their spacing and movement change.

Use with textbook pages 246–253.

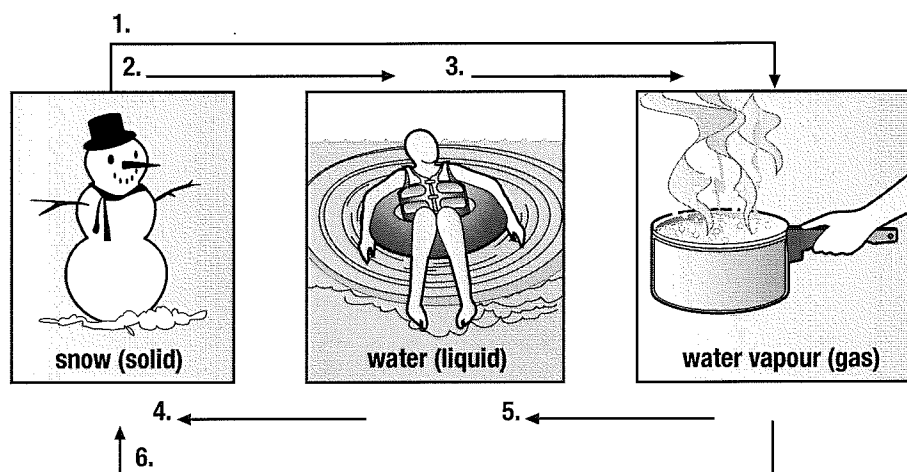
What's the matter?

Vocabulary

condensation
deposition
evaporation

melting
solidification
sublimation

Use the terms in the vocabulary box to label the diagram. Place the terms on the numbered arrows.



Complete the following table by describing the change of state. The table has been partially completed to help you.

	Change of state	Heat added or released
condensation		released
deposition		
evaporation	liquid to gas	
melting		added
solidification		
sublimation		

Identifying Changes of State

Match each description with the correct change of state. Write the letter for the change of state in the space at the end of the descriptions. You may use some changes of state more than once.

Descriptions	Changes of State
1. Ice is left out on the counter. _____	(a) sublimation
2. Frost forms on the window on a cold day. _____	(b) condensation
3. Water is left in a freezer. _____	(c) evaporation
4. Clothes are left out to dry. _____	(d) deposition
5. Dry ice is used to create fog. _____	(e) melting
6. The bathroom mirror gets fogged up after a shower. _____	(f) solidification
7. A pond gets shallower at the end of a long hot summer. _____	
8. Your hair was wet when you left the house, but dries by the time you get to school. _____	
9. The ice cream you are eating drips down your arm. _____	
10. A full pot of soup fills only half of the pot after simmering for 2 h. _____	
11. Liquid glass cools and hardens. _____	
12. A cold drink is wet on the outside of the glass. _____	