

CHAPTER 4
REINFORCEMENT
BLM 4-1

Fluids and Non-Fluids Identification

Goal • Use this page for practice in identifying fluids and non-fluids.

What to Do

- Draw a circle around all the pictures of fluids you can identify. (12)

- Answer the question at the bottom of the page.

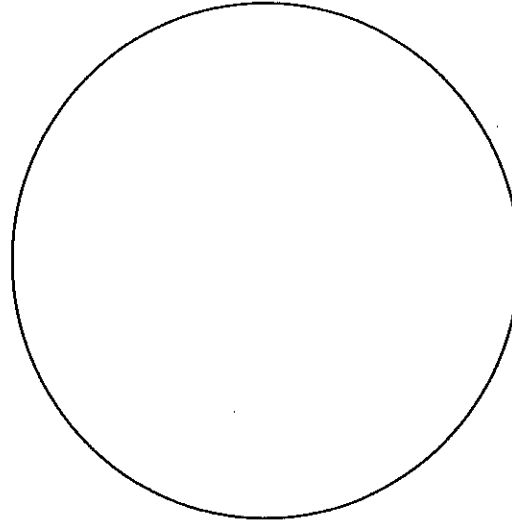
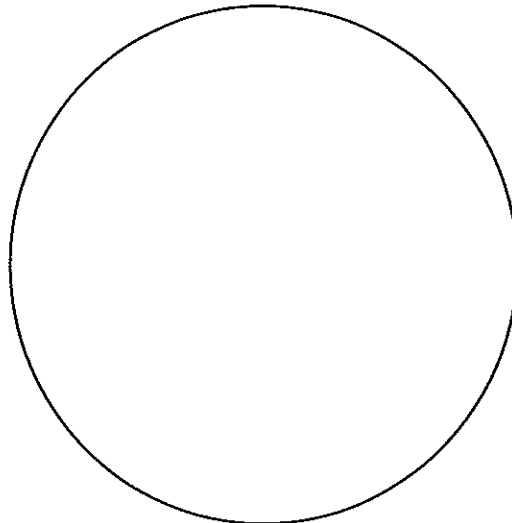
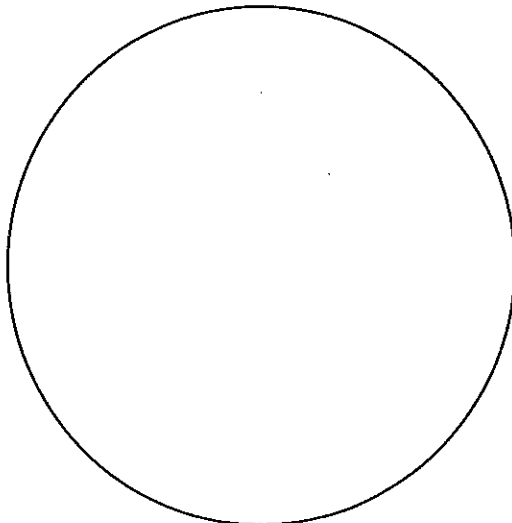

Question

- What other fluids can you identify in your own environment? List at least three more. (3)

Goal • Demonstrate your understanding of the particle theory.

What to Do

1. There are three circles below, labelled solid, liquid, and gas. Use Xs to represent particles of matter. Draw Xs inside each circle to illustrate the distance (3) between particles in each state of matter.
2. Use your knowledge of the particle theory of matter to fill in the blanks in the following sentences. (7)
 - (a) Solids, liquids and gases are made up of _____.
 - (b) A _____ is made up of particles that are closely packed together.
 - (c) A gas is made up of particles that are _____.
 - (d) Particles in a liquid are _____ than those in a solid.
 - (e) The _____ explains the differences in states of matter.

**Solid****Liquid****Gas**

Can Solids Flow, Too?

Recording Sheet

Goal • Use this page to record your findings in the At Home Activity:
Can Solids Flow, Too?

Think About It

- Sand and sugar are both solids. They can be poured, but can they flow like a fluid such as water? Pour one of them to find out.

What to Do

- Record your findings in the chart below. (6)

Substance	Diagram of Findings	Description of Findings
Sugar or Sand		
Water		

- Use the space on this page or a separate page to write your answers to the Activity questions on page 110 in your textbook. Then answer the Going Further question below.

Going Further

- Name three more substances that would behave like sand or sugar. (3)

1. _____ 2. _____

3. _____

Identifying Changes of State

Goal • Build your skill in recognizing and defining the changes of state.

What to Do

- 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. (12)

Descriptions

1. ice is left out on the counter ___
2. frost forms on the window on a cold day ___
3. water is left in a freezer ___
4. clothes are left out to dry ___
5. dry ice is used to create fog ___
6. the bathroom mirror gets fogged up after a shower ___
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. sap is turned into maple syrup ___
12. a cold drink is wet on the outside of the glass ___

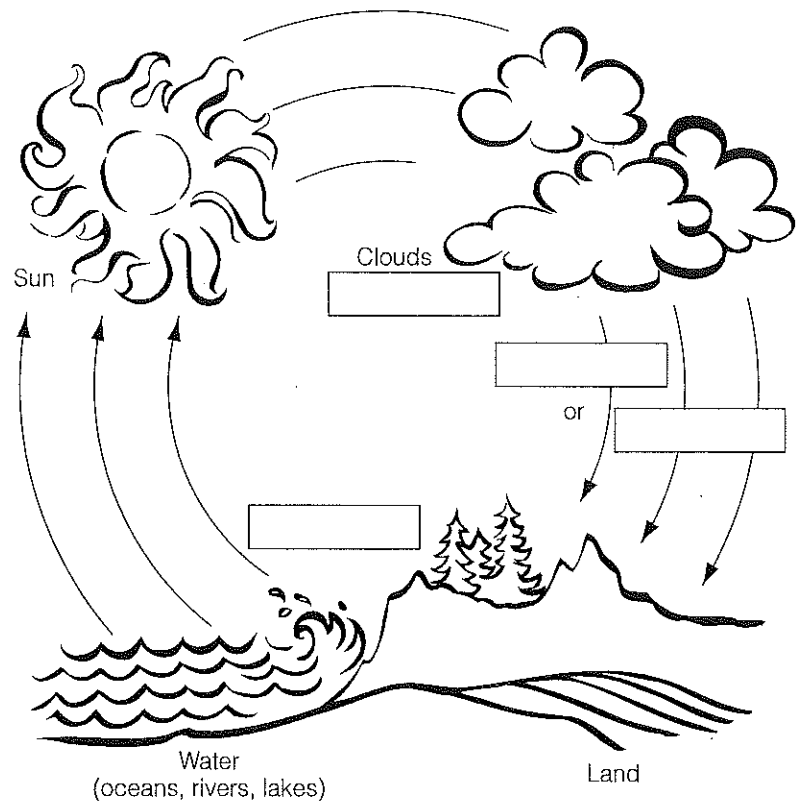
Changes of State

- (a) sublimation (solid to gas)
- (b) condensation
- (c) vaporization
- (d) sublimation (gas to solid)
- (e) melting (fusion)
- (f) freezing (solidification)

Goal • Use this page to demonstrate your knowledge of the states of matter as they occur in a natural cycle that you have studied in previous grades.

What to Do

- The three states of matter are represented in the water cycle. Label the diagram of the water cycle to explain what is occurring at each stage of the cycle. Then answer the questions under the diagram. (4)


Questions

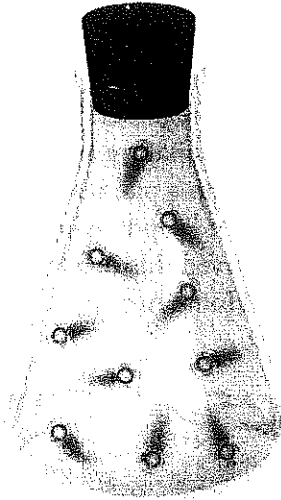
- What stage of the cycle involves the liquid state? Where is the liquid found? (2)

- At how many points during the cycle does water take its solid form? What stages of the cycle are involved? (2)

- Which stage of the cycle has water in its gaseous state? (2)

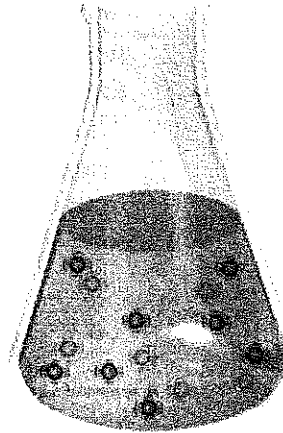
- Are all three states of matter always present? What do you think causes this to occur? (2)

Particles in Solids, Liquids, and Gases



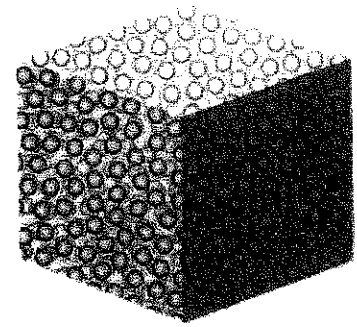
Gas

According to the particle theory, the particles of a gas will completely fill a container. If you removed the stopper in this flask, what would happen to the gas?



Liquid

This liquid is held in a container. You have probably noticed that liquids take the shape of the container in which they are placed.



Solid

This solid cube of sugar does not need a container to keep its shape.