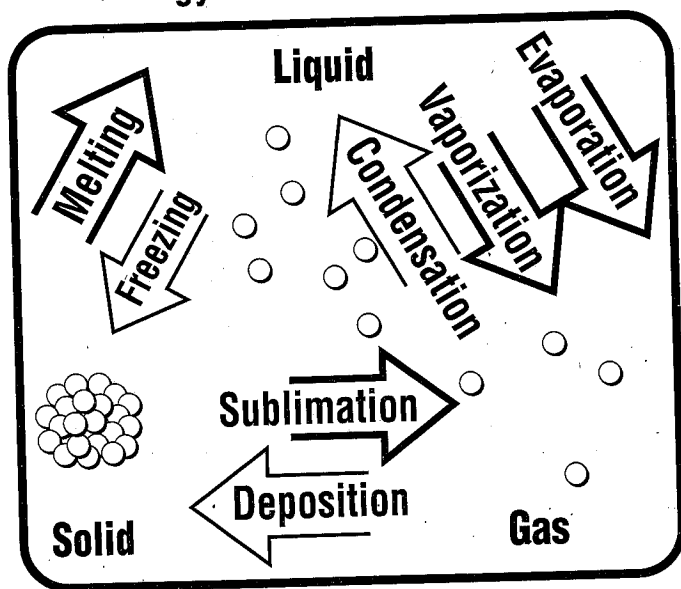


How Does Matter Change State?

Main Idea Matter can change from one state to another when energy is added or removed. Changes of state are always physical changes.

Energy and States of Matter



Use the diagram above to answer the following questions. Write answers to the questions on the lines below.

1. What are the three states of matter?

2. What happens when energy is removed from a liquid?

3. What happens in vaporization and evaporation?

4. What happens in sublimation?

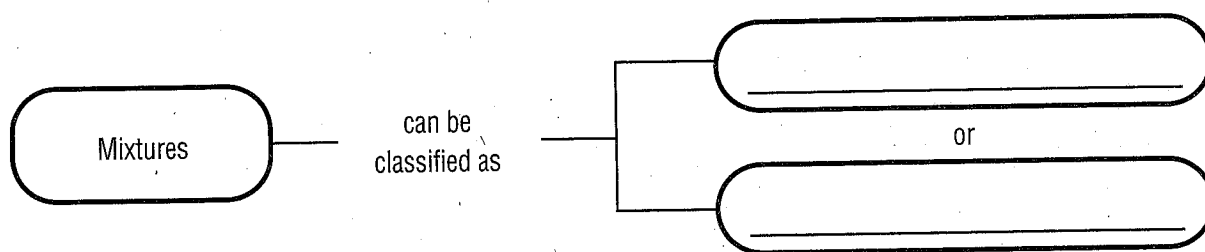
5. What happens in deposition?

What Are Solutions and Mixtures?

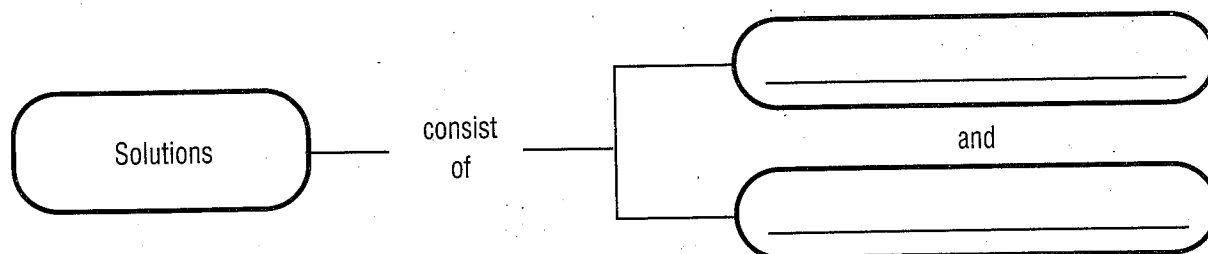
Main Idea Some mixtures are uniform, meaning they are evenly mixed. Other mixtures have different amounts of materials in different places. Mixtures that are evenly mixed at the molecular level are called solutions.

Fill in the blanks with the correct terms.

1. A(n) _____ is a physical combination of two or more substances.
2. Complete the following diagram.



3. Each part of a mixture keeps its original _____.
4. Unlike a compound, the composition of a mixture can _____.
5. Complete the following diagram.



6. Because the substances of a solution are evenly distributed throughout the mixture, a solution is said to be _____.
7. The substance being dissolved in a solution is called the _____.
8. An alloy is a mixture of two or more _____.

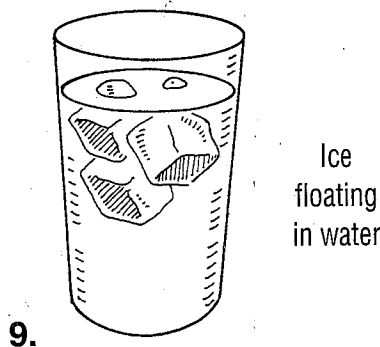
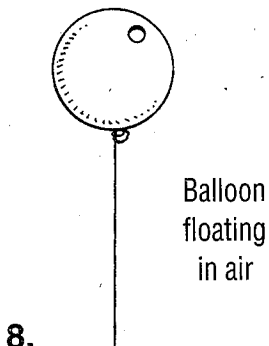
What Are Three States of Matter?

Main Idea Matter can exist in three familiar states: solids, liquids, and gases. These states are determined by the motion and arrangement of particles.

Fill in the blanks.

1. The physical form that matter takes, such as solids, liquids, and gases, is called _____.
2. All matter is made up of atoms and molecules, _____ that are always in motion.
3. For most substances, particles are most _____ packed in the solid state.
4. A(n) _____ is a form of matter that has definite shape and volume.
5. A(n) _____ is a form of matter that has a definite volume, but no definite shape.
6. Solids and liquids are not very _____ because the particles are close together.
7. A(n) _____ is a form of matter that has no definite shape or volume.

Explain why the events pictured below occur.



How Does Matter Change?

Main Idea Changes in matter can be classified as physical changes or chemical changes. A chemical change involves a change in the identity of the matter, whereas a physical change does not.

Match each definition to its term.

Definitions

- _____ 1. a change in size, shape, or state in which no new substances are formed
- _____ 2. a change in which new substances are formed
- _____ 3. a specific example of a chemical change, such as the rusting of iron
- _____ 4. a substance that speeds up a chemical reaction but is not changed by the reaction
- _____ 5. the amount of matter remains the same during a chemical or physical change

Terms

- a. chemical change
- b. catalyst
- c. chemical reaction
- d. conservation of matter
- e. physical change

Use the drawings below to answer the question.

6. What kind of change in matter is shown?

