

**Note-taking  
Worksheet**

# Properties and Changes of Matter

## Section 1 Physical Properties and Changes

A. **Physical** \_\_\_\_\_—any characteristic of **matter** that can be observed or measured without changing the identity of the matter; a **physical** \_\_\_\_\_ makes physical properties change, but identity remains the same.

1. Length and \_\_\_\_\_ (amount of material in an object) are properties that can be measured.
2. \_\_\_\_\_ is a measure of how much space an object takes up;  
\_\_\_\_\_ is the amount of mass a material has for a given volume.
3. Density changes as pressure or temperature change.

B. Solid, liquid, gas, and plasma are four \_\_\_\_\_; state of matter depends on its temperature and pressure.

1. Matter is made up of \_\_\_\_\_; solid particles have less energy than liquid particles, which have less energy than gas particles.
2. \_\_\_\_\_ **point**—temperature at which a solid becomes a liquid; example: ice melting
3. \_\_\_\_\_ **point**—temperature at which a liquid becomes a gas; example: water becoming steam

C. \_\_\_\_\_ properties can include luster, malleability, ductility, and magnetism.

D. Physical properties can be used to identify, classify, and separate \_\_\_\_\_.

## Section 2 Chemical Properties and Changes

A. **Chemical** \_\_\_\_\_—characteristic that gives a substance the ability to undergo a change that results in a new substance

1. Flammability
2. Reacts with oxygen, \_\_\_\_\_, water, or other substances

**Note-taking Worksheet** (continued)

**B. Chemical \_\_\_\_\_**—change in the identity of a substance due to its chemical properties

1. \_\_\_\_\_ of a chemical change can include production of bubbles, heat, light, smoke, sounds, or color change.
2. Chemical changes are not reversible using physical means.

**C. Law of \_\_\_\_\_**—mass is never lost or gained in a chemical reaction.

1. When material is burned, residue is less massive than original material.
2. Ash, smoke, and gases escaped into the air.
3. Their mass was not lost, only relocated.