

Matter Unit Study Guide

Matter is anything that takes up space and has mass.

Matter is made up of many particles too small to be seen with the naked eye called **atoms**.

Groups of atoms are called **molecules**.

Solids, Liquids, and Gases:

Matter is found in three forms:

Solids – Solids have their own shapes and volumes.

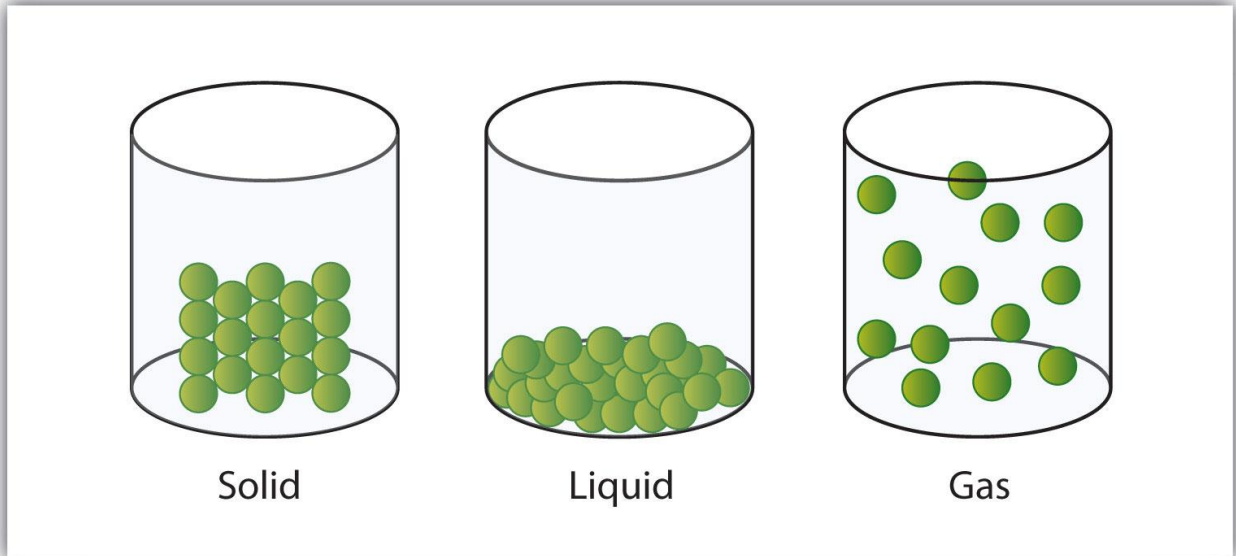
- Examples: ice cube and popsicle

Liquids – Liquids take the shape of their containers but have their own volume.

- Examples: milk, water, oil, vinegar

Gases – Gases have no shape or volume of their own.

- Examples: oxygen, helium, steam



Atoms in a solid are very close together and hardly move.

Atoms in a liquid are more spread out and move a little.

Atoms in a gas are very far apart and move very quickly.

Physical Properties –

A physical property is any characteristic of matter that you can observe,

Examples: color, size, shape, loudness, tone, hardness, temperature, saltiness

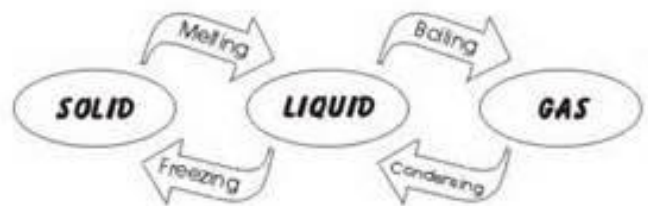
Matter can change between the three states

Melting – solid → liquid

Evaporation – liquid → gas

Freezing – liquid → solid

Condensation – gas → liquid



****Heating and cooling matter can change it from one form to another**

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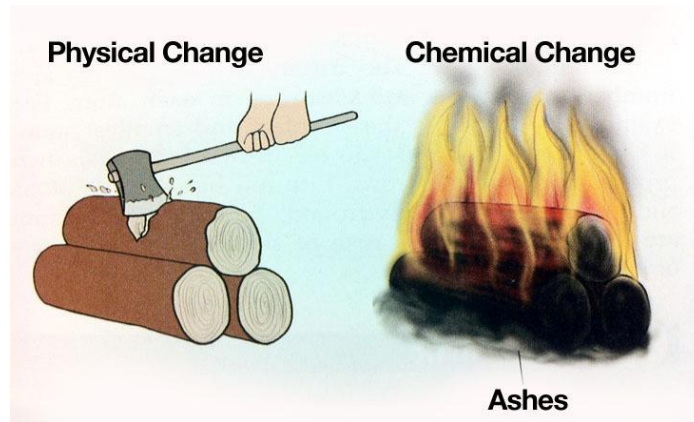
Physical and Chemical Changes -

Physical Change – any change in the size, shape, or form of matter. No new matter is formed.

Examples: tearing paper, cutting an apple, cutting your hair, sawing a piece of wood in half

Chemical Change – any change in matter that produces new kinds of matter.

Examples: burning a candle, spoiled milk, baking



Measuring Matter –

Mass – how much matter is in an object.

An object with large mass feels heavy. An object with a small mass feels light

Example – A bowling ball has more mass than a beach ball.

Volume – how much space an object takes up



Mixtures and Solutions –

Mixture – different types of matter mixed together

A mixture can be separated into its different parts.

Solution – a kind of mixture in which one or more types of matter are evenly mixed in another kind of matter

