

# Matter Study Guide

## Vocabulary:

**Atoms:** the smallest particle of matter; cannot be seen by the human eye

**Chemical Change:** matter changes into something new by temperature

**Dissolve:** to break into smaller parts in a solution as though it has disappeared

**Gas:** has NO definite shape or volume; the molecules are spaced far apart and bounce off of each other

**Liquid:** has NO definite shape but has definite volume; the molecules are spaced apart and flow against each other

**Magnification:** to increase the size of matter so you can see its small parts

**Mass:** the amount of matter in an object (measured in grams (g) and kilograms (kg))

**Matter:** anything that takes up space and has mass

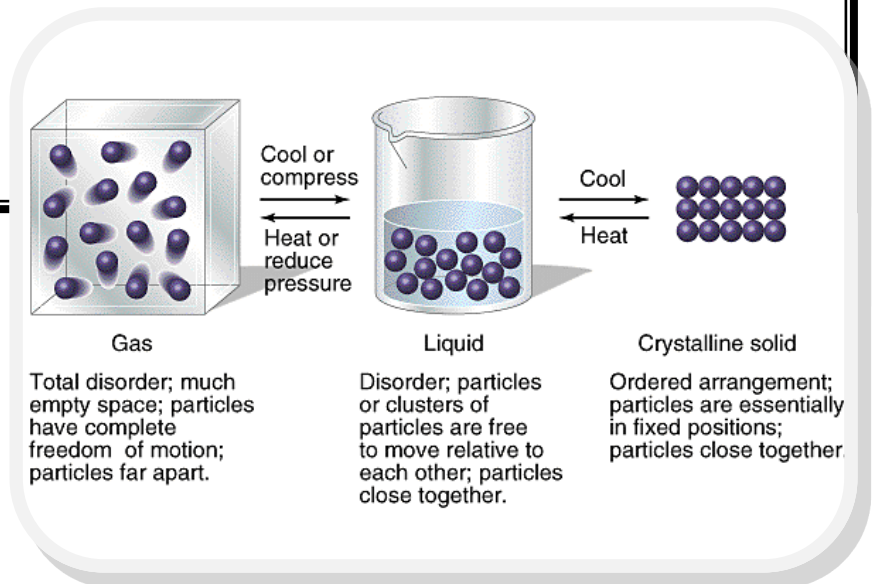
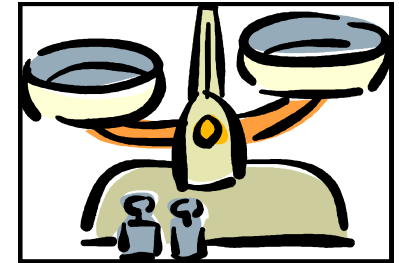
**Mixture:** when you combine two or more types of matter

**Physical Change:** changes size, shape, or phase/state of matter but stays the same matter

**Solid:** has definite shape and volume; the molecules are close together and move very little

**Solution:** a type of mixture when types of matter combine evenly

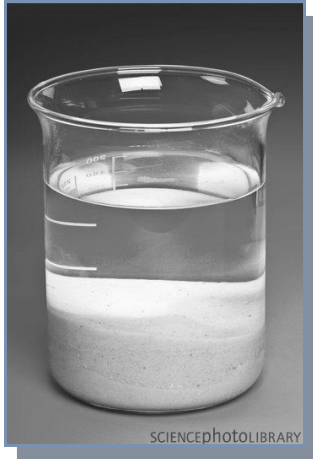
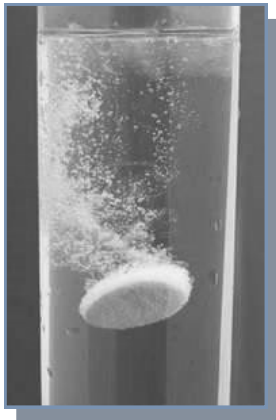
**Volume:** the amount of space an object takes up



## Concepts:

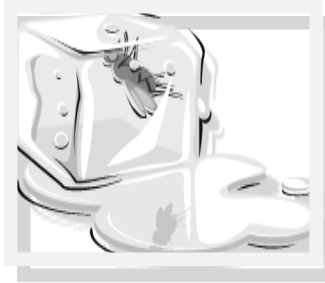
### Dissolving and Mixing

- Some solids dissolve in water (ex. salt, sugar, KoolAid, baking soda)
- Some solids do NOT dissolve in water (ex. sand, clay, mulch)
- Heat helps some solids faster.



### Physical Properties/Changes

- Physical properties describe matter. Physical properties can be color, size, shape, phase of matter, taste, temperature, ability to dissolve, and texture.
- Changing phase/state (ex. melting ice, freezing water)
- Changing size (ex. cutting bread, snapping a pencil)
- Changing shape (ex. rolling play dough, folding paper)



### Chemical Changes

Examples:

- Yeast + Flour + Heat = Bread
- Baking Soda + Vinegar = Carbon Dioxide
- Paper + Fire = Ashes and Gases

