

What's the MATTER with Chemistry Study Guide

Examples of physical properties

p. 8 physical state (solid, liquid, gas)
texture, color, flexibility

Examples of chemical properties

p. 9 flammability new substance
tarnish rust

Density

- How to calculate

$$\text{Density} = \frac{\text{mass}}{\text{volume}} \quad \text{or} \quad D = m \div v$$

- Unit of measure

$$\text{g/cm}^3$$

- Ways to affect

1. change mass + keep volume same
2. change volume + keep mass same

Forms of Energy

1. kinetic
2. potential
3. chemical
4. electrical
5. electromagnetic
6. Thermal

★ both require change in energy (added or removed)

Physical Change versus Chemical Change, plus examples of each

Physical change - substance changes form but stays the same
ex. water to ice, melted butter

Chemical change - new substance produced ex. rust, ash from burning wood

Weight versus mass

p. 17 Weight changes based on gravity. We use mass in science. Mass stays same, not affected by gravity

Characteristics of solids, liquids, gases

Solid: particles close together
definite shape + volume

Liquid: particles move freely
no definite shape
has definite volume

Interpret and construct graphs

★ see graphing gas behavior

use TAILS

Gas: particles spread apart
as move + fill available space
• no definite shape
• no definite volume