Fundamental concepts in chemistry

Matter- anything that occupies a space and has a mass.

E_q why don't we consider a sun light as a matter?

Matter can be change from one form to another. These changes classified into

1. **Physical change(no change in identity)**

A. **extensive**(size dependent)

Eg: length, resistance, volume, mass

B. **intensive**(size independent)

Eg: melting point, density, color, conductivity, specific gravity

Major fields in chemistry

1. **Organic chemistry** – chemistry of carbon compounds except inorganic ones.
2. **Inorganic chemistry** – the chemistry of elements and their cpds with the exception of carbon and its compounds.
3. **Physical chemistry** – the study of physical properties of materials.
4. **Analytical chemistry** – concerned with the development of chemical foundations and methods of chemical analysis.
5. **Biochemistry** – studies about molecules and chemical reaction of life**.**

Measurements and units in chemistry

All seven basic units except candela are relevant to chemistry.

1. Mass - analaythical balance
2. Temprature - a property that tells us in what direction heat flows.

°F = 9/5 °C + 32

°C = 5/9 (°F-32)

K = °C + 273.15

3. Mole - amount of subctace

1mol = 6.023 × 10^23

4. Presure - force per unit area

1atm=760mmhg=760torr=101.3kpa

5. Volume- amount of space occupied by an object.

Cylinder, burette, and pipette used to measure volume while volumetric flask used to take measured volume of liquid.

6. Density- mass per unit area.