**Chapter 2 Density**

**2-1 What is density 2-2 How is density Measured?**

**Density**- the mass per unit volume of a substance

**Formula:** Density = Mass ÷ Volume

# Usually this is written in g/cm3, sometimes g/mL

# (This is because one cm3 is equal to one mL)

# Water has a density of 1 g/cm3 , which means that 1 cm3 has a mass of 1 gram. (Anything less than 1 g/cm3 will float in water, greater than 1 g/cm3 will sink)

* Remember that mass is measured with a balance and volume is measured by L x W x H

Some examples of densities;

Air = .0013 g/cm3

Lead = 11.3 g/cm3

Cork = .2 g/cm3

# Using the chart in your book on page 34, determine which substance is described;

The block of material has a mass of 105 grams,

and has a volume of 10 cm3 .

What is the density and the name of the substance?

D = M / V

D = 105 g. / 10 cm3

D = 10.5 g/cm3  , which is silver !

**2-3 What is specific gravity?**

**Specific gravity**-density of a substance compared with the density

of water.

\*Remember water has a density of 1 g/cm3

**Hydrometer**-device that is used to measure specific gravity

-used in labs to find the specific gravity of blood and urine. Allow lab technicians to test for dehydration, increased glucose (sugar) or protein.

**2-4 What is displacement?** (SEE NOTES ON VOLUME)

**2-5 What is buoyancy?**

Archimedes’ Principle-states that the amount of weight lost by an object in water is equal to the weight of the water the object displaces.

Buoyancy-the tendency of an object to float in a fluid

Fluids- can be liquids or gases