

Fluid Dynamics Concepts

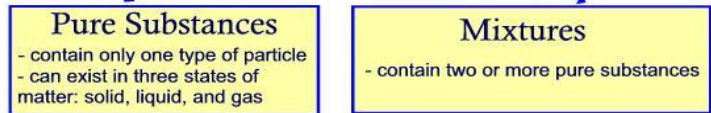
W.H.I.M.I.S.
Safety



Lab Procedures
&
Techniques

Properties and Classification

All Matter



Elements

- examples:
iron, gold
oxygen

Compounds

- examples:
water, salt,
sugar

Homogeneous (solutions)

- appear to be one substance

- particles of different substances are intermingled

- examples:
vinegar,
clear air

Heterogeneous (mechanical mixtures)

- two or more parts can be seen

- different kinds of particles stay together

- examples:
soil, blood,
concrete

APPLICATION

Paper
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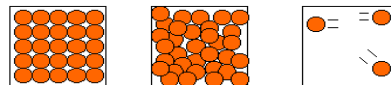


THE PARTICLE MODEL OF MATTER

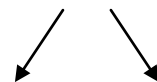
DILUTION

Concentration

SATURATION



Solubility



SOLUTE

SOLVENT

Temperature - Surface Area - Agitation

Density

Buoyancy

Plimsoll Line
Hot Air Balloons

Compression

Pressure – Pascal's Law

$$p = F / A$$

Hydraulics (liquid)

Hydraulic Lift
Pressure Washer

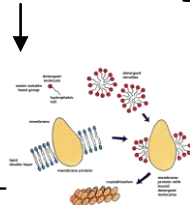
Pneumatics (gas)

Jackhammer
Air Brakes
Dentist Drill

Viscosity

Flow Rate

Solubility-based Technologies



DETERGENT

SUBMARINE



Fluid Devices
SUBMERSIBLE



Transportation of Fluids

PUMPS & VALVES

BATHYSCAPH

