

Solutions Notes (Gen)

Name: _____

Solubility, Acids, Bases, Neutralization

Solution – homogeneous mixture of two or more substances in the same physical state

Two Parts of a Solution:

- 1) **Solute** – substance being dissolved
ex) salt, sugar
- 2) **Solvent** – material in which solute is dissolved
ex) water is the universal solvent

There is more solvent than solute in a solution.

ex) salt water = more water than salt

Solubility

Soluble – able to be dissolved (ex) salt in water

Insoluble – does not dissolve (ex) oil in water

Will it dissolve?? “**Like dissolves like**”

Polar solutes will dissolve in polar solvents.

Nonpolar solutes will dissolve in nonpolar solvents.

Factors Affecting Solubility:

	<u>Temperature</u>	<u>Pressure</u>	<u>Stirring</u>	<u>Surface Area</u>
Solids in liquids	Increases solubility	No effect	Dissolves faster b/c increase kinetic E	Smaller pieces dissolve faster
Gases in liquids	Decreases solubility	Increases solubility	Bubbles leave solution	---

Aqueous (aq) – When a material is dissolved in water

Electrolyte – “dissociation” of ionic compounds (salts) into ions to conduct electricity when dissolved in water

Dissolving takes place at the surface of the solute

Non-electrolyte – substance does NOT conduct electricity when dissolved in water

Includes all covalent compounds (ex) sugar water

concentrated vs. dilute – lots of material dissolved vs. very little dissolved

saturated solution – solution contains maximum amount of solute

unsaturated – less than maximum

supersaturated – more than maximum; must be heated

Colligative Properties – dependent on the presence of dissolved particles and their concentration

Boiling point elevation – solute particles increase boiling point

Freezing point depression – solute particles decrease freezing point

