acid and a base which results in the formation of a salt and water

acid **base** **salt** **water**

A exchange reaction will occur if (1) a precipitate forms from soluble reactants or (2) a stable molecule forms, such as water or an insoluble gas. Refer to the example on the next page and the sections on ionic equations and exchange reactions in your textbook for information on writing chemical equations for exchange reactions. Familiarity with the solubility rules tabulated on the next page is required to write these equations.

Objectives: Upon completion of this exercise and laboratory experiment, you should be able to:

1. Using the solubility rules, determine the species present in aqueous solutions of compounds.
2. Use conductivity measurements to determine an electrolyte from non-electrolyte.
2. Predict the type of reaction that will occur when two aqueous solutions are mixed.
3. Write the chemical equation, the ionic equation, and the net ionic equation for reactions taking place between aqueous solutions.
4. Experimentally identify the type of reaction occurring when two aqueous solutions are mixed through simple visual and temperature measurements.

Experiment 3: Testing the conductivity of substances: Name: _____

Section: _____

Score: _____ / 30

A. Electrolytes and Conductivity: Watch the video and write your observations.

Substance	Observation	No, few, or many ions?	Species present	Strong, weak or nonelectrolyte
Water				
Distilled water				
Sugar, $C_{12}H_{22}O_{11}$ (s)				
Sugar, $C_{12}H_{22}O_{11}$ (aq)				
NaCl (s)				
NaCl (aq)				
CH_3COOH (l)				
CH_3COOH (aq)				
$CaCO_3$ (s)				
$CaCO_3$ (aq)				
0.1M HCl				
0.1M HNO_3				