**ACP Unit 3 Learning Objectives – Part 2**

**Unit 3 – Types of Chemical Reactions**

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| **Whole Year: Essential Questions**   * How do we understand nature in terms of tiny particles? * How do we use our knowledge of these tiny particles to improve our lives? |

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| **Unit 3 Essential Questions**   * How do the tiny particles get along? Or not? * How do we predict what kind of stuff the tiny particles will make? |

**Ch. 15 section 2B – Solution Composition: Molarity**

* Use molarity to describe the concentration of a solution.
* Perform calculations involving molarity.

**Ch. 16 section 1C – Water as an Acid and a Base**

* Describe the self-ionization of water.
* Describe the relationship between the concentration of H+ and OH − in acidic, basic, and neutral solutions.

**Ch. 16 section 2 – Determining the Acidity of a Solution**

* Explain how the pH scale is used to describe acidity.
* Describe how indicators are used to describe acidity.
* Perform calculations involving pH.

**Ch. 16 section 3A – Acid-Base Titrations**

* Perform an acid-base titration.
* Determine an unknown concentration using data from a titration experiment.

**Ch. 18 section 3A&B – Electrochemistry and Its Applications**

* Describe the components of an electrochemical cell.
* Describe how energy is produced in a galvanic cell.
* Give examples of practical applications of electrochemical cells.