Unit 05: Chemical Reactions

Content Area: **Science**
Course(s): **Chemistry Accelerated**
Time Period: **Marking Period 3**
Length: **4 weeks**
Status: **Published**

Textbook Resources

Glencoe Science Chemistry Concepts and Applications

Chapter 6: Chemical Equations and Reactions

Standards

SCI.9-12.HS-PS3-2.	Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative position of particles (objects).
SCI.9-12.HS-PS1-4	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.
SCI.9-12.HS-PS1-7	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.
SCI.9-12.HS-PS1-6	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.
SCI.9-12.HS-PS1-5	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

Goals/Objectives

- How are the changes that we see every day described and represented by chemists?

Content

- Balancing (Conservation of Mass
- Changes in energy
- Chemical Equations
- Equilibrium
- Limiting Reactants
- Reaction Rates
- Recognizing chemical reactions
- Types of Reactions

Skills

- Balancing chemical equations
- Classifying chemical reactions
- Contrasting exothermic and endothermic reactions
- Describe chemical equilibrium and how it responds to stress
- Describe how limiting reactants impact a chemical reaction
- Identifying a chemical change
- Predict how factors affect reaction rates
- Relate particle interaction and activation energy
- Writing chemical equations
- Writing word equations