Due Date: Name:_____

Preview of Section 7.1 “The Nature of Chemical Reactions”

Define the following vocabulary:

- Reactant
- Product
- Chemical Energy
- Exothermic Reaction
- Endothermic Reaction

Write down 2 things from the following sections:

- Chemical Reactions
    - Chemical reactions rearrange atoms.
- Energy and Reactions
    - Energy must be added to break bonds.
    - Forming bonds releases energy.
    - Energy is conserved in chemical reactions.
    - Reactions that release energy are exothermic.

Due Date: Name:_____

- Reaction that absorb energy endothermic.

- Photosynthesis is an endothermic reaction.

Due Date: Name:_____

Preview of Section 7.2 “Chemical Equations”

Define the following vocabulary:

- Chemical Equation

- Mole Ratio

Write down 2 things from the following sections:

- Describing Reactions

    - Chemical equations show products and reactants.

    - Balanced chemical equations account for the conservation of mass.

- Balanced Equations and Mole Ratios

    - Mole ratios tell you the relative amounts of reactants and products.

    - Mole ratios can be converted to masses.

Due Date: Name:_____

Preview of Section 7.3 “Reaction Types”

Define the following vocabulary:

- Synthesis Reaction
- Decomposition Reaction
- Combustion Reaction
- Single–Displacement Reaction
- Double–Displacement Reaction
- Free Radical
- Oxidation–Reduction Reaction

Write down 2 things from the following sections:

- Classifying Reactions
    - Synthesis reactions combine substances.
    - Decomposition reactions break substances apart.
    - Combustion reactions use oxygen as a reactant.
    - In single–displacement reactions, elements trade places.
    - Alkali metals undergo single–displacement reactions.

Due Date: Name:_____

- In double–displacement reactions, ions appear to be exchanged between compounds.

- Electrons and Chemical Reactions

  - Free radicals have electrons available for bonding.

  - Electrons are transferred in redox reactions.

Due Date: Name:_____

Preview of Section 7.4 “Reaction Rates and Equilibrium”

Define the following vocabulary:

- Catalyst
- Enzyme
- Substrate
- Chemical Equilibrium

Write down 2 things from the following sections:

- Factors Affecting Reaction Rates
    - Most reactions go faster at higher temperatures.
    - A large surface area speeds up reactions.
    - Higher concentrations of reactants react faster.
    - Reactions are faster at higher pressure.
    - Massive, bulky molecules react more slowly.
- Catalysts

Due Date: Name:_____

- Enzymes are biological catalysts.

- Equilibrium Systems

  - Some changes are reversible.

  - Equilibrium results when rates balance.

  - Systems in equilibrium respond to minimize change.

  - Le Châtelier's principle can be used to control reactions.