UNIT % Objectives

Chapter 8 Chemical Reactions

Objectives

- Given a skeleton equation, students will be able to determine the coefficients needed to balance the chemical equation.
- Given the formula of a compound, students will be able to describe (in writing) the number of atoms for each element in the compound.
- Given a skeleton equation, students will be able to identify the chemical reaction as synthesis, decomposition, single replacement, double replacement, or combustion
- Give reactants students will be able to predict the products of the reaction for synthesis, decomposition, single replacement, double replacement, or combustion.

Chapter 9 Stoichiometry

Objectives

- Given a balanced equation, students will be able to determine the mole ratio for each element or compound in the balanced equation.
- Given a balanced equation, students will be able to convert mole, mass, atoms or molecules of reactant/product to mole, mass, atoms or molecules of any reactant/product.
- Given a balanced equation and the amount of all reactants (mole, mass, atoms or molecules), students will be able to determine the limiting reactant for the chemical reaction.
- Given the actual and calculating the experimental mass produced from a chemical reaction, students will be able to calculate the percent yield.

Chapter 3/7 Moles

Objectives

- Students will be able to recall Avogadro's number (6.02×10^{23}).
- Students will be able to define the mole.
- Students will be able to define molar mass.
- Given a Periodic Table of Elements and a compound, students will be able to calculate the molar mass of a compound.
- Given a Periodic Table of Elements and the mass, moles, atoms or molecules of a substance, students will be able to calculate the amount of mass, moles, atoms or molecules in the substance.
- Given a Periodic Table of Elements and a chemical compound, students will be able to calculate the percentage composition of each element in the compound.
- Given the percent composition of a compound students will be able to determine the empirical formula of a compound, then determine the molecular formula for molecules if given the molar mass of the molecule.