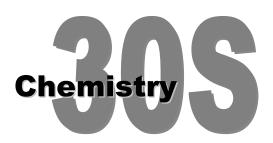
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# **Final Exam Organizer**

The following organizer will assist you with your final exam preparation. The notes, *Study Guide*, *Science Notebooks* and text questions you have completed over the past semester will be helpful tools for you to use with your text as you review. I encourage you to refer to the multiple choice quizzes and tests linked to <a href="http://vcichemistry.weebly.com/">http://vcichemistry.weebly.com/</a> often during your review. See Mr. Bertram to arrange access to your Test Folder for review.

## **Chemistry Skills**

- 1. Laboratory Safety
- 2. Laboratory Equipment and Its Use

## **Organic Chemistry**

- 1. Vocabulary
- 2. The Importance of Organic Chemistry
- 3. Saturated Hydrocarbons Continuous Chain Alkanes
  - Names
  - Chemical Formulas
  - Structural and Condensed Structural Formulas
- 4. Saturated Hydrocarbons Branched-Chain Alkanes
  - Names
  - Chemical Formulas
  - Structural and Condensed Structural Formulas
  - Structural Isomers
- 5. Saturated Hydrocarbons Rings
  - Names
  - Chemical Formulas
  - Structural and Condensed Structural Formulas
- 6. Unsaturated Hydrocarbons Alkenes
  - Names
  - Chemical Formulas
  - Structural and Condensed Structural Formulas
  - Isomerism
  - Hydrogenation

- 7. Unsaturated Hydrocarbons Alkynes
  - Names
  - Chemical Formulas
  - Structural and Condensed Structural Formulas
- 8. Unsaturated Hydrocarbons Aromatic Hydrocarbons
  - Names
  - Chemical Formulas
  - Structural and Condensed Structural Formulas
- 9. Natural Gas and Petroleum
- 10. Aromatic Hydrocarbons
- Substituted Hydrocarbons and Derivatives
  - Alcohols, Esters, Amines, Carbonyl Compounds
  - Polymers

## **Physical Properties and Changes**

- 1. Vocabulary
- 2. Elements and Compounds
  - Properties of Matter
  - Changes in Matter
  - Mixtures
- 3. Physical States
  - Solids
  - Liquids
  - Gases
- 4. Physical and Chemical Changes
- 5. Changes of State
  - Particle Motion
  - Freezing/Melting
  - Vaporization/Condensation
  - Sublimation/Solidification
- 6. The Kinetic Molecular Theory
- 7. Dalton's Law of Partial Pressure
- 8. Graham's Law of Effusion

#### **Chemical Reactions**

- 1. Chemical Reactions and Equations
  - Vocabulary
  - Physical/Chemical Properties/Reactions
  - The Periodic Table
  - Atoms and lons
  - Compounds

- Polyatomic lons
- Writing Formulas and Names for Binary and Tertiary Compounds
- The Law of Conservation of Mass
- Translating and Balancing Chemical Equations
- Classifying Chemical Reactions

#### 2. Mole Calculations

- Vocabulary
- Mass of Atoms and Molecules
- The Mole
- Atomic Number, Atomic Mass, Molecular Mass, Molar Mass.
- Avagadro's Number
- Mole-Mole Conversions
- Mole-Mass Conversions
- Solving Problems With Moles
- Molar Mass/Gram Formula Mass
- Gas Density

### 3. Stoichiometry

- Vocabulary
- Finding Information From Balanced Equations
- Mole-Mole Problems with Given Reactants and Products
- Mass-Mass Problems with Given Reactants and Products
- Representative Particle Problems with Given Reactants and Products
- Volume Problems with Given Reactants and Products
- Identifying Limiting Reagents and Excess Reagents
- Percent Yield

#### **Solutions**

- 1. Vocabulary
- 2. What are Solutions?
  - Characteristics of Solutions
  - Solvation in Aqueous Solutions
  - Solubility
  - Factors That Affect Solubility

#### 3. Solution Concentration

- Expressing Concentration
- Using Percent to Describe Concentration
- Solution Preparation
- 4. Colligative Properties of Solutions
  - Vapour Pressure Lowering
  - Boiling Point Elevation
  - Freezing Point Depression