**AP CHEMISTRY MIDTERM REVIEW ASSIGNMENT**

As part of our review process, you will make a note sheet (**1 SHEET per UNIT**) in preparation for each day’s review quiz. You may use whatever resources you like, but **don’t simply copy definitions you don’t understand and don’t simply copy an old test question word for word.** Help each other. Ask questions. Be proactive. Make the notes as detailed and informative for you as possible.

**You will have a small review quiz each day the notes are due. You may use your note sheet on the quiz. You might also be assigned a partner for each review quiz.**

**The notes + quizzes for each unit will count as part of your midterm grade.**

General topics for each unit as well as the due date for the notes (and therefore when each review quiz is) are listed below.

\*\*Review quizzes will be short and are every other class period. We will do practice questions and you will have some time to work on the notes in class.

**Unit 5: Kinetics Fri 12/7**

* Collision theory, potential energy diagrams
* Reaction order and rate laws
* Reaction mechanisms

**Unit 1: Chem Fundamentals Mon 12/10**

* Significant Figures and Measurement
* Classification of Matter, Separation Techniques
* Mole Concept
* Empirical and Molecular Formula
* Types of Reactions, Balancing Equations
* Stoichiometry, Limiting vs. Excess Reactant, Combustion Analysis and Empirical Formula

**Unit 2: Atoms, Periodic Table, Bonding, Shapes Wed 12/12**

* Atomic Structure, Isotopes, Ions
* Average Atomic Mass
* Energy, Wavelength, Frequency calculations, Ground and Excited States
* Orbital Diagrams, Electron Configuration
* Periodic Trends (ionization energy, electronegativity, radius) and PES (photoelectron spectroscopy)
* Naming Compounds and writing chemical formulas (ionic, covalent, acid, organic)
* Molecular Shapes, VSEPR, Hybridization, sigma and pi bonds
* Expanded Octets, Resonance Structures, Formal Charge
* Polarity, intermolecular forces

**Unit 3: Physical Behavior of Matter Fri 12/14**

* Kinetic Molecular Theory
* Gas Laws and Formulas
* Phase Diagrams
* Intermolecular Forces and properties of liquids, colligative properties
* Molarity
* Beer’s Law
* Solubility Rules
* Net Ionic Equations

**Unit 4: Thermochemistry Mon 12/17**

* Heating curve, heat calculations
* calorimetry
* Enthalpy, Entropy, Gibbs Free Energy
* Spontaneity
* Hess’ Law