**AP CHEMISTRY 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. 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 notecards as detailed and informative for you as possible.

**The note sheet for each unit will count as a homework grade.** In addition, **you will have a small review quiz each day the notes are due. You may use your note sheet on the quiz. There are no corrections for these quizzes.**

\*\*Review quizzes will be short. We will do practice questions/you will have some time to work on the notes in class.

**Unit 7: Due Fri 4/13** (you may use your notes on your quest tomorrow).

* Assigning oxidation numbers
* Oxidation and reduction half reactions
* Electrochemical (voltaic) cell: Anode, cathode, salt bridge, flow of electrons, etc.
* Reduction potentials (E, Voltage).
* Spontaneity

**Unit 0: Due Tues 4/17**

* 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 1: Due Th 4/19**

* 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 2: Due Fri 4/20**

* 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 3: Due Tue 4/24**

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

**Unit 4: Due Th 4/26**

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

**Unit 5: Due Fri 4/27**

* Equilibrium expressions (K) and calculations
* Le’chatlier’s Principle
* ICE Tables
* Solubility Equilibrium (Ksp)

**Unit 6: Due Tu 5/1**

* Acid and base definitions
* pH, pOH, H+, OH- calculations
* strong vs. weak acids/bases
* Ka, Kb, Kw
* Titration Curves and Calculations

**Mock Exam Due Tu 5/1**

* This will be a take home exam that you will time yourself on.
* We will go over the questions this week in class.