**AP Chemistry Timeline**

**January**

**January 8,10,12**

1. Molecular Compounds: 8.3-8.7, 9.1-9.3, 11.2

 A) Properties of:

 B) Lewis Dot structures

 C) Bond Polarity

 D) VSEPR Theory

 E) Hybrid Orbitals

 F) Molecule polarity

 G) Intermolecular Forces

**January 12th Quest Periodic Trends**

**January 17, 19 Gas Laws**

2. Gases: 10.3-10.9

 A) Ideal Gas Law

 B) Boyle’s, Charles and Gay Lussac’s Laws

 C) Gas Mixtures and partial pressures

 D) Graham’s Law of Effusion

 E) Stoichiometry of gases

**January 23rd Test VSEPR, IMF, Ionic Compounds and Trends**

**January 25,29,31 Kinetics Chapter 14**

3. Kinetics

 14.1 Factors affecting Reaction Rates

 14.2 Reaction Rate Equations

 14.3 Effects of concentration on rates

 14.4 Rates of concentration vs time- 0,1,2 order

 14.5 Temperature and Rates

 14.6 Reaction Mechanisms

14.7 Catalysts

**February 2nd Quest on Gas Laws**

**February 6th , 8th, 12th Kc, Kp and LeChatelier**

 15.1-15.4 Equilbrium equations

15.5 Calculating Kc and Kp

 15.6 Applications of Equilibrium constants

 15.7 Le Chatelier’s Principle

**February 14th Kinetics, Kc Quest**

**February 16, 21,23, 27 Ka, Kb and Ksp**

16.1-16.4 Acids-Bases, pH Scale

 16.5 Strong Acids

 16.6 Weak Acids Ka

 16.7 Weak Bases Kb

 16.8 Relationship between Ka and Kb

 16.9 Acid-Base Properties of Salts

17.1-17.2 Common Ion Effect and Buffered Solutions

17.3 Acid-Base Titrations

17.4 Solubility Equilibria, Ksp

17.5 Factors affecting solubility

17.6 Precipitation of Ions

**March 1st Ka, Ksp Quest**

**March 5, 7, 9, 13 Thermodynamics**

5.1-5.3 Introduction to Thermodynamics

 5.4 Enthalpies of Reactions

 5.5 Calorimetry

 5.6 Hess Law

 5.7 Enthalpies of Formation

 8.8 Bond Enthalpies

 19.1-19.4 Spontaneity and Entropy

 19.5 Gibbs Free Energy

 19.6-19.7 Free Energy and Temperature

**March 19 Quest Thermodynamics**

**March 15,21, April 2 Electrochemistry**

20.1-20.2 Red-Ox

 20.3 Voltaic Cells

 20.4 Cell EMF

 20.5 Free Energy and Redox

 20.9 Electrolysis

**April 6 Electrochemistry Quest**

**April 4,10 Multiple Choice Review**

**April 12,16 Free Response Review**

**April 18 Mock MC**

**April 20 Mock Free Response**

**April 24 Review MC**

**April 26 Review Free Response**

**April 30, May 2, 4 Review**

**May 7 AP Chemistry Exam**

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