

- Study every test given from the beginning of the year
- Use the previous 2 review sheets given
- Study chapter 11 completely; understand phase diagrams, triple point, critical point and enthalpy changes during phase changes; know the intermolecular forces and their effects on melting, freezing, sublimation, condensation, etc.
- Study chapter 12 and use the problem handout that I gave you before
- Understand differences between real and ideal gasses; know Boyle's law and Charles's law and Gay-Lussac's law as well as the ideal general gas law and problems associated with each of the mentioned topics
- Know Avogadro's law and Graham's law of diffusion and Dalton's law of partial pressure; know gas stoichiometry. Know the definition and uses of STP and understand kinetic molecular theory. Understand the effects of concentration on boiling and melting points etc.
- Understand molarity and molality and remember the solubility laws, equilibrium and Henry's law. Understand colligative properties and electrolytes
- Study chemical equilibrium, equilibrium constant K_{eq} and K_{sp} . Understand the Le Chatelier's Principle and its applications. Know the common ion effect concept.
- Know everything on Acids and Bases and memorize Strong Acids and Strong Bases on pages 532 and 533 (everything else would be weak!)
- Know the 3 definitions for Acids (Arrhenius, B&L, and Lewis)
- Know how to label conjugated acids and bases
- Know the principle of water ionization and K_w and know how to use logarithms to calculate pH and pOH and the relationship between the two of them.
- Study Neutralizations and Titrations and the equivalence point; know acid ionization constant K_a and be able to calculate the pH and pOH of weak acids and bases.
- Study reaction rates and factors affecting them; study the rate laws and know the energy diagrams, activation complex and be able to label the graphs. Also, understand the effects of enzymes/catalysts on such diagrams; study the collision theory
- Study oxidation reduction chapter completely and know how to balance equations in acidic solutions.
- Know everything on galvanic and electrolytic cells and be able to find potential differences of such cells and their uses
- Know everything in the nuclear chemistry chapter; know mass defect, the strong force, radioactivity and the several types of radioactive decay we talked about in class; know about fission, fusion and chain reactions as well as critical mass etc.
- Know everything in the organic chemistry chapter; hydrocarbons, alkanes, alkenes, alkynes, aromatic rings, cyclic compounds, structural isomers, enantiomers, saturation of hydrocarbons and naming of all. Know all the functional groups and their naming and memorize that for alcohols, carboxylic acids, amines, halides and alkyls. Know all types of organic reactions that I went over in class.

