

Chapter 3 – Stoichiometry (Syllabus)

Chemistry: The Central Science

1. Read entire chapter (pgs. 82-109) & take notes on Sections 3.1-3.3 (pgs. 83-92). (We'll supplement your notes with some in-class discussions on Sections 3.4-3.7 as time permits)
2. **Section 3.1:** Equations- coefficients, reactants, products, BALANCING, subscripts, and symbols used (g, l, s, aq, Δ)
3. **Section 3.2:** Patterns of Chemical Reactivity- combination, decomposition, and combustion reactions; AP Test (net ionic equations & descriptive chemistry)
4. **Sections 3.3-3.7:**
 - Formula and Molecular Weights, and Percent Composition
 - The mole (Avogadro's number), molar mass & molar conversions
 - Calculating Empirical & Molecular Formulas: % Composition
 - ❖ **Note:** Combustion analysis problems (pgs. 101-102) are good AP Test problems. THESE WERE NOT COVERED IN LAST YEAR! YOU MUST GET THIS TO GET AN "A" ON THE TEST!
 - Stoichiometry: Using balanced equations to calculate amounts of reactants and products. [mole-mole, mass-mass, mass-volume, etc.... (at STP)]
 - ❖ **Extra Tough:** Limiting reactant problems
 - Theoretical & % Yields
5. You are responsible for ALL of the "Visualizing Concepts" & "Exercises" at the end of Ch. 3. Remember to start with the Focus Problems (given below) and then progress from there, ending with the "Additional Exercises".

Chapter 3 Focus Problems:

- ✓ Sections 3.1-3.3: #'s 11, 15, 21, 23, 25
 - ✓ Sections 3.4-3.7: #'s 35, 39, 45, 51, 55, 61, 63, 70, 7, 77, 79, 83
 - ✓ Additional Exercises: #'s 87, 95
 - ✓ Integrative Exercises: # 115
6. **Lab:** Experiment 5: Chemical Formulas
 7. **Test:** The Ch. 1-3 combined test will be in about a week (TBA)