

## AP Chemistry Summer Assignment Description

These are the major topics in Chapters 1-4 that you will work on this summer.

Chapter 1: Chemical Foundations – scientific method, classification of matter, measurement, accuracy and precision, English and SI units, significant figures, factor label method

Chapter 2: Atoms, Molecules, and Ions – early atomic theory; introduction to the periodic table; atomic mass, atomic number, mass number, and isotopes; naming compounds and writing chemical formulas

Chapter 3: Chemical Quantities and Stoichiometry – conversions among mass/moles/particles; empirical and molecular formulas; percent composition; chemical reactions; symbols in chemical equations and balancing chemical equations; molarity; calculating quantities based on equation stoichiometry; identifying limiting and excess reactants and calculating quantities based on presence of limiting reactant

Chapter 4: Types of Chemical Reactions and Solution Stoichiometry – aqueous solutions, preparing solutions of known concentration, electrolytes and nonelectrolytes; classifying chemical reactions; identifying and writing molecular, ionic, and net ionic equations; applying solubility rules to precipitation reactions; (introduction to acid-base reactions and titration; introduction to redox reactions)

Your assignment is to read and take notes on Chapters 1-4.8 and complete questions from those chapters. (We will work on sections 4.9-10 together.) The questions from each chapter are listed in the table. Questions must be completed in the required format and handed in the first day of class. Your first test will be two weeks after you return from summer vacation. Enjoy your summer.

<b>Chapter</b>	<b>Questions</b>
1	21-23, 25-26, 41, 43, 47, 49, 53, 60, 62
2	11, 15, 21, 25, 27, 30, 32, 34, 40, 42-43, 48, 52-54, 55, 57-70, 72, 75
3	13, 16, 18-19, 24, 30, 32, 34, 36, 38, 40, 57, 59, 60, 62, 64, 66, 74, 76-78, 85, 91a,d,g, 92a,d,f, 93-94, 96b, 98, 107
4	7, 12-15, 17-19a,b, 21, 29-31, 33, 35, 38, 40

## AP Chemistry Summer Assignment Required Format

1. Write legibly. Use a pencil and an eraser or cross out with a single line. Do not overwrite.
2. Write a heading on each sheet of looseleaf and your number in the upper right hand corner.  

Name:	Date:	#
Chapter Number	AP Chemistry	
3. Number each page as *page number / total pages* in the bottom right hand corner.  
For example, 1/10, 2/10, ...
4. Skip two lines between each numbered question. Do not squeeze multiple questions across a line.
5. Begin a new page for each new chapter. List the questions required for the chapter on that page.
6. Number each question *chapter # - chapter question*.  
For example, 4-7, 4-12a, ...
7. Write the question concept clearly showing information given. It is not necessary to rewrite the entire question.  
For example,  
4-12a. Calc molarity of 16.45g NaCl in 1.000L soln.
8. Show all of your work with sufficient detail and clarity. This means writing formulas, showing substitution, and showing units.
9. Box the answer.
10. Write the question concept and leave a few empty lines for questions that you cannot answer correctly. Circle the number of the question for future reference.