

AP Chemistry

Summer Assignment

1. Memorize the [polyatomic ions](#) (see attached list). Make flash cards and use them regularly.
2. Go to the American Chemical Society website and download a copy of [Safety in Academic Chemistry Laboratories, Vol. 1](#) (7th edition)
3. *Purchase and set up your [lab notebook](#) as outlined on the course website.
4. Join the Bromfield AP chemistry group on Facebook.
5. Read chapters 1-3 in your textbook. Particularly emphasize the following sections: 1.4-1.6, 2.6, 2.9, 3.1, and 3.3-3.7. Be sure to include the "A Closer Look," "Chemistry at Work" and "Strategies in Chemistry" sections. Use the *Give it some thought* questions and *Visualizing Concepts* exercises to check yourself as you read.
6. Complete the following problem sets. This material should be largely review; refer to your textbook as needed. Answers to certain problems can be found in the back of the textbook. Some problems are more challenging, but they are all solvable. Additional on-line practice multiple choice questions for each chapter are available at www.drvanderveen.com

Success in chemistry is directly related to problem solving. The more problems you do, the more you will learn! *You are encouraged to set up a study group.*

a. * **Chapter 1 problems** (pp. 31-37)

Required text problems 1.1-1.10, 1.17, 1.24, 1.30, 1.33, 1.35, 1.39, 1.45, 1.56, 1.60, 1.71 (hand in first day of school)

b. * **Chapter 2 problems** (pp. 69-77)

- i. Carefully read "The Mass Spectrometer" on p. 49 (important in the current AP curriculum)
- ii. Required text problems: 2.1-2.8, 2.22, 2.33, 2.34, 2.35, 2.43, 2.47, 2.55, 2.60, 2.65, 2.69-2.73, 2.75, 2.76, 2.77, 2.79, 2.92 (hand in first day of school)

c. **Chapter 3 problems** (pp. 105-113)

- i. Required text problems: 3.1, 3.3, 3.5, 3.7, 3.13, 3.25, 3.37, 3.50, 3.51, 3.53, 3.57, 3.78, 3.83, 3.92, 3.102 (bring first day of school)

d. **CALM Problem Set**

Your user name: contact Dr V

Your password: contact Dr V

Log in at <http://calm.indiana.edu/> and complete the assignments there. Log into your account today and make sure it is working properly. (On the MacBooks, Safari is the recommended browser.) Please be sure that you have entered the password and username correctly...contact Dr V if you misplace your login information. You **must** complete this before 8 pm on Monday, August 26th. Don't wait until the last minute to get started! This assignment will be checked on line and will be considered your **first quiz** of the course.

**The lab notebook and the problem sets from chapters 1 and 2 will be collected on the first day of school. We will go over the chapter 3 problems in class and do our first lab of the year before the test on chapters 3 & 4, which will be scheduled early in September.*

Extra credit opportunity: Read [Uncle Tungsten](#) by Oliver Sacks and write a summary (250 - 500 words), describing young Oliver's scientific investigations that you found most interesting and what you enjoyed about the book. You will receive an extra 5% on your first test grade if this is handed in on the first day of school.