Welcome to AP Chemistry!

Thanks for choosing to be part of the 2016/17 AP Chemistry class at Bancroft School. AP Chem is equivalent to the general chemistry course taken by science majors in their first year of college. It moves quickly and approaches the material at a high level and in great depth. So it is likely to be more challenging than any science course you’ve taken before. However, the knowledge and skills you’ll take away from AP Chem make it well worth the effort. I’m very excited for the opportunity to help you in this endeavor.

The Importance of a Good Start: Summer Assignment

There is much to cover in AP Chem in a relatively short time. Therefore, relatively little class time will be spent on the following chapters of the textbook *(Chemistry: The Central Science* by Brown, et al, 13th ed), which are mostly review:

- **Chapter 1: Matter and Measurement**
- **Chapter 2: Atoms, Molecules, and Ions**
- **Chapter 3: Chemical Reactions and Stoichiometry**
- **Chapter 10: Gases**

The summer assignment detailed on page 2 is designed to help you keep up with this material, so that you can hit the ground running this fall. It includes assigned readings and a companion PowerPoint presentation for each of the above chapters. In addition, several practice exercises are assigned from the end of each chapter.

You’ll likely need 5–6 hours total to do the readings, review the PowerPoint presentations (available on the library website), and complete the assigned exercises. However, the time required will vary from person to person. So keep this in mind, and budget your time accordingly. Start the assignment no later than 1 or 2 weeks before school begins. This will allow you to tackle it in manageable chunks. *(Do not wait until just before school begins!)* Your written solutions to the assigned problems will be collected on the first day of class, with no exceptions. This will be your first graded assignment for the course. The first unit test (Chapters 1 through 3) will take place in the second week of classes. At the end of the third week of classes, there will be a “quest” (½ test grade) on Chapter 10.

Textbook and Other Required Materials

- **Hard Copy of the Text**—Available from in the Book Store. *(Don’t forget to sign for it.)*
- **e-Copy of the Text**—Before classes start, I’ll send you a code and directions for joining our *Mastering Chemistry* class website. You can access the text through that website (laptop) or through the eText app (iPad).
- **Black Composition Style Notebook**—Available for pickup from the Bancroft Bookstore. *(Don’t forget to sign for it.)* This is where you will write the answers for *all* homework problems this year.
- **Power Point Presentations (pdf format)**—Can downloaded from the Library website or the class portal.

* If stopping by after classes end, please call in advance to make sure the Book Store is open.
Directions

1. From the Bancroft School Bookstore, pick up a hard copy of the textbook and a black composition notebook.
2. Read each of Chapters 1, 2, 3, and 10. Also download the pdf files with PowerPoint presentations for Chapters 1, 2, 3, and 10. (If you have trouble downloading, please email me as soon as possible so that I can help you.) Review the PowerPoint presentations. The tutorial videos embedded in the presentations are also highly recommended, as they go over lots of sample problems.
3. Answer the assigned exercises from the end of each chapter. Write the answers in your black composition notebook. Your answers should be well organized and legible. Clearly show all calculations, and give full (but concise) explanations. No credit will be given for numerical answers with no work to back them up. Report the correct number of significant digits for each numerical answer. The black composition notebook will serve as your “homework journal” for the entire year, so do not lose it! (Do not substitute another notebook. These soft cover black notebooks were chosen because they fit nicely into student mailboxes.)
4. The entire assignment (black notebook entries and flash cards) will be collected at the beginning of the first class. You are expected to hand it in on that day, without exception!

Chapter 1—Introduction: Matter and Measurement

Assigned Reading: pages 2–33.

For Addition Review: review the Chapter 1 PowerPoint (the embedded YouTube videos are highly recommended)

Assigned Problems (End of Chapter): 2, 6, 32, 42, 54, 75, and 84.

Chapter 2—Atoms, Molecules and Ions

Assigned Reading: pages 40–73.

For Addition Review: review the Chapter 2 PowerPoint (the embedded YouTube videos are highly recommended)

Assigned Problems (End of Chapter): 2, 5, 30 (copy the table into your homework journal), 54, 66 (name each compound), 80, 95, and 105 (copy the table into your homework journal).

Do the Following: Memorize the ions (and their charges) listed in Tables 2.4 & 2.5, as well as the prefixes in Table 2.6. Make separate flash cards for each ion (name on one side, formula on the other), and for each prefix (name on one side, number value on the other) and bring them to class on the first day. This can be done on an iPad app if you prefer.

Chapter 3—Chemical Reactions and Reaction Stoichiometry

Assigned Reading: 80–111.

For Addition Review: review the Chapter 3 PowerPoint (the embedded YouTube videos are highly recommended)

Assigned Problems (End of Chapter): 4 (give your reasoning), 16, 38, 50, 70, 82, and 104.

Chapter 10—Gases

Assigned Reading: 398–430.

For Addition Review: review the Chapter 10 PowerPoint (the embedded YouTube videos are highly recommended)

Assigned Problems (End of Chapter): 10 (give the reasoning behind each choice), 26, 28, 40, 56, 64, 82 (give your reasoning for each), and 106 (give your reasoning.)

* If you or your parents have questions, do not hesitate to email me at: jbeauregard@bancroftschool.org