Advanced Placement Chemistry: 2019 Summer Assignment

Welcome to the 2019/20 AP Chemistry. This class is equivalent to a college general chemistry course. So, it will likely move more quickly and cover the material in greater depth than any science course you’ve taken before. However, the knowledge you’ll gain from AP Chem will be well worth the effort. I’m excited for the opportunity to work with you this year!

How the Summer Assignment Counts Toward Your Grade

Your grade for this assignment will be included in your problem set average for Semester 1. It will be your first graded assignment for the course and will count for about 6-7% of your overall Semester 1 grade. So, doing well on this assignment is the best way to get off to a strong start in AP Chemistry.

Summer Assignment: Description, Directions and Recommendations

AP Chem covers a lot of material in a relatively short time. For this reason, relatively little class time will be spent on the following chapters of the textbook (Chemistry: A Molecular Approach by N. Tro, 4th ed.), which are mostly review:

- Chapter 1: Matter, Measurement, and Problem Solving
- Chapter 2: Atoms and Elements
- Chapter 3: Molecules, Compounds, and Chemical Equations
- Chapter 5: Gases
- Unit Test 1 (on Chapters 1 – 3) will be at the end of the 2nd week of classes.
- Chapter 5 will be covered as part of Unit Test 2, which will be given in week 3 or 4.

The summer assignment (detailed on page 2) is designed to keep the above material fresh in your mind, so that you can hit the ground running in September. A companion PowerPoint presentation will be provided to supplement the assigned reading for each chapter. Also, several practice problems are assigned from the end of each chapter.

You’ll likely need 5–6 hours total to do the readings, review the PowerPoint presentations, and finish the assigned exercises. However, the time required will vary from person to person. Keep this in mind, and budget your time accordingly. Start the assignment 1–2 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. Feel free to contact me at any time with questions.

Dr. John N. Beauregard: jbeauregard@bancroftschool.org

Textbook and Other Materials Needed For the Summer Assignment

- Hard Copy of the Text—Available from in the Book Store. (Don’t forget to sign for it.)
- e-Copy of the Text—Later this summer 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).
- 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)—This is my first year that using the Chemistry: A Molecular Approach textbook, and I need to prepare new PowerPoint presentations to accompany the new text. I’ll start working on these as soon as spring semester ends and will email them to you as soon as they are finished.

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

**Directions**

1. Go to the Bancroft School Bookstore, and pick up a hard copy of the textbook and a composition notebook.

2. Review each of Chapters 1, 2, 3, and 5. Review the PowerPoint presentations once they are available. The tutorial videos embedded in the presentations are 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 composition notebook. Your answers should be well organized and legible. Clearly show all calculations, and give full (but concise) explanations. Credit will not be given for numerical answers that lack sufficient work to back them up. Report the correct number of significant digits for each numerical answer. *The composition notebook will serve as your “homework journal” for the entire year, so don’t lose it!* (Do not substitute another notebook. These soft cover notebooks were chosen because they fit nicely into student mailboxes.)

4. The entire assignment (notebook entries and flash cards) will be collected at the beginning of the first class. You will be expected to hand it in on that day, without exception!

**Chapter 1: Introduction: Matter, Measurement and Problem Solving**

*Assigned Reading:* pages 1–34.

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

*Assigned Problems (End of Chapter):* 42 (Briefly explain your answer for each.), 50 (Briefly explain your answer for each.), 65, 68 (Justify your answer), 87, 134

**Chapter 2: Atoms, Molecules and Ions**

*Assigned Reading:* pages 45–75.

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

*Assigned Problems (End of Chapter):* 38, 42 (Rewrite each false statement in a corrected form.), 52, 76, 104 (copy the completed table into your homework journal), 112, 128

**Chapter 3: Molecules, Compounds, and Chemical Equations**

*Assigned Reading:* pages 87–127.

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

*Assigned Problems (End of Chapter):* 46, 86 (calculate the number of individual Br atoms), 88, 108 (specify the state of each reactant and product), 130, 138, 142

*Also Do the Following:* Memorize the ions (names and symbols/formulas) listed in Tables 3.3 & 3.4. **Make a separate flash card** for each ion (name on one side, formula on the other) and bring the your cards to class on the first day. *This can be done on an iPad/computer app if you prefer.*

**Chapter 5: Gases**

*Assigned Reading:* pages 197–237.

*For Addition Review:* review the Chapter 5 PowerPoint (the embedded YouTube videos are highly recommended)

*Assigned Problems (End of Chapter):* 46, 52, 62, 82 (Briefly explain each answer.), 98, 100, 106