

# Advanced Placement Chemistry Summer Assignment

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## **DUE ON THE FIRST DAY OF SCHOOL! (Thursday Sept. 5, 2019)**

A.P. Chemistry is a highly rigorous course that covers most of the material that would be covered in a first year college chemistry course. It is intended for students who are highly motivated to accept the challenge of a college course at the high school level and have demonstrated a willingness to commit considerable time to studying and completing assignments outside of class.

The chapters to be covered extensively over the summer include Chapter 1 (Matter and Measurement), Chapter 2 (Atoms, Molecules, and Ions), and Chapter 3 (Stoichiometry). Each chapter should be read/outlined and the guided examples within each chapter should be analyzed to understand how the concepts are applied. Do not overlook the smaller sections labeled "Chemistry at Work" or "A Closer Look." Outlining these chapters is for your benefit and will not be collected. **There are 2 sets of multiple choice questions you must complete on the scantron.** The first set of 34 questions assesses your knowledge on material from Ch.1-3. You must be proficient with the material covered in this first set of problems. There will only be a brief review of Ch.1-3 during the first few days of school followed by a test. You should record your work as well as your answers in the packet as a study guide for the test.

The following are problems at the end of each chapter in which you can complete as extra practice. This is not part of the summer assignment but it will fully prepare you for your first test of the year. It's also a way to assess whether you can do the problems yourself. The answers to these suggested problems are in the back of the book.

- ✓ Ch.1 p.31 #5,15,17,29,41,51
- ✓ Ch.2 p.72 #31,33,47,55,57,59,60,63,65,69
- ✓ Ch.3 p. 111 #15,17,29,43,51,71,73,75,77,79

Set#2 contains 50 multiple choice and is a cumulative assessment of your first year chemistry course. Record your answers on the scantron #51-100. You should be familiar with these topics from your previous chemistry class. If you are not, I suggest you obtain a tutor or spend the summer familiarizing yourself with these topics. You can do this by using previous chemistry notes, watching videos on the following website (<http://www.bozemanscience.com/ap-chemistry/>) or any other dependable source and by completing additional problems in the back of each chapter. It is to your benefit to review the topics addressed in this second set of problems. On the back of this sheet there is a list of chapters and corresponding problems in the second set if you need to review the material. We will cover these topics throughout the year but we do so in a fairly quick manner.

Set #3 is meant to give you a general understanding of physics that is state required. Some of these concepts will also be utilized in AP Chemistry so use reputable resources to answer the questions.

**This summer assignment is due on the first day of school (Thursday, Sept. 5) and will consist of 3 grades: set #1 (#1-34 multiple choice filled out on the scantron), set #2 (51-100 multiple choice filled out on the same scantron), and set #3 (packet of 34 physics questions). I will collect the scantron and the 3 packets (set #1, set # 2, physics) but you do not need to bring your book to class.**

AP Chemistry is designed to expand on previously covered material from Honors Chemistry. Due to the fast paced nature of the course you will have to get accustomed to reading and comprehending the material in the text book, using other resources, completing additional/suggested problems outside of class, and forming study groups. If you get help with your summer assignment make sure you understand how to get the answers yourself as you will be the one taking the tests. **Email me with any questions or concerns.**

The following topics will be covered this year:  
(the #'s correspond to the problems in the 50 MC in set #2)

- Ch. 4 Aqueous Reactions and Solution Stoichiometry (#51-60)
- Ch. 5 Thermochemistry
- Ch. 6 Electronic Structure of Atoms (#61-69)
- Ch. 7 Periodic Properties of the Elements (#61-69)
- Ch. 8 & 9 Chemical Bonding and Molecular Geometry (#70-74)
- Ch. 10 Gases (This entire chapter will be assigned during winter break) (#75-80)
- Ch. 11 Intermolecular Forces, Liquids, and Solids (#81-82)
- Ch. 13 Properties of Solutions (#83-85)
- Ch. 14 Chemical Kinetics
- Ch. 15 Chemical Equilibrium (#86-91)
- Ch. 16 & 17 Acid-Base Equilibria and Additional Aspects of Aqueous Equilibria(#92-100)
- Ch. 19 Chemical Thermodynamics
- Ch. 20 Electrochemistry