

AP Chemistry Summer Work

AP Chemistry is a math-intensive, in-depth study of the nature of chemistry. This course is intended for junior and senior students who have an interest in science and/or a desire to pursue a scientific field of study in college. AP Chemistry is run very similar to a college course, including using a college textbook, detailed lectures, and laboratory investigations. The goal of the course is to have students take the AP Chemistry exam in May. With the AP exam so early compared to the end of the school year, the pace of the course will be extremely fast. Given the scope of this course and the fast pace at which the class moves, a basic introductory knowledge of chemistry is needed from the beginning.

Your summer assignment is as follows:

1) Read the following:

Chapter 1, with an emphasis on sections 3 through 8.

Chapter 2, with an emphasis on sections 5 through 8

Chapter 3, with an emphasis on mathematical calculations

You are not required to take notes, however, you may want to do so, since you will not be given notes on these chapters in class.

2) Answer the chapter questions listed below. Do all parts of a problem unless otherwise indicated. For math problems, you must show all work to receive credit.

3) You are expected to come into the class knowing the elements (names and symbols) and the polyatomic ions (names, formulas, and charges) listed below.

This assignment is due the first day of school. All of this material was covered in General Chemistry and should be familiar to you. There will be a test on this material on the second day of school. I will be glad to answer question in the first class and after school that day. Take this assignment seriously. Be prepared. Both the test and the assignment will be a significant part of your first marking period grade.

Elements to know:

(You should be able to give the name if given the symbol and know the symbol for these without checking a periodic table.)

Hydrogen	Phosphorus	Tin
Helium	Sulfur	Iodine
Lithium	Chlorine	Barium
Carbon	Potassium	Mercury
Nitrogen	Calcium	Lead
Oxygen	Iron	Silver
Fluorine	Copper	Aluminum
Sodium	Zinc	
Magnesium	Bromine	

Polyatomic ions to know: The formulas can be found on page 62 of your textbook in Table 2-5. (You should be able to write the formula for these from the name and give the name if given the formula.)

Ammonium

Nitrate

Sulfate

Hydrogen sulfate (bisulfate)

Hydroxide

Phosphate

Carbonate

Hydrogen carbonate (bicarbonate)

Chlorate

Acetate

All of the remaining ones should be learned by the end of September

Acids to know: The formulas can be found on page 67 of your textbook.

Hydrofluoric

Sulfuric

Phosphoric

Hydrochloric

Sulfurous

Acetic

Hydrobromic

Nitric

Hydrocyanic

Hydroiodic

Nitrous

Hydrosulfuric

Homework Problems - to be turned in the first day of school

(note: The answers to odd numbered problem are in the back of the book, page A41. Use these answers to check your own work. Show your work including problem set-up and equations. Simple copying answers from the back of the book can affect your assignment grade and will certainly impact your test grade.)

Chapter 1 page 32:

Odd numbers 25 to 71 (Note: all calculations in AP Chemistry are to be done in significant figures)

Chapter 2 page 70:

Odd numbers 25 to 67

Chapter 3 page 117:

Odd numbers 27 to 105

Additional information:

Do not wait for the last day to try and accomplish this assignment. Spread it out over the summer and review just before school starts.

If you need help during the summer, you can email me at pzygnerski@spsd.us

You are expected to have your own calculator and know how to use it. It will be needed for tests and for the AP exam. QWERTY keyboards not allowed. All other calculators are acceptable.

All tests will be the style of the AP exam.

All Lab reports will be expected to be full reports and will be due one week after the lab is done.

We will need to cover chapters 4 through 18 and chapter 22 by early April. That means we have to do a chapter about every 7 or 8 days. This is a fast paced course.