Summer Study Guide for AP Chemistry 2020-2021

Welcome to AP Chemistry! Due to the pandemic, our Honor Chemistry did not have time go over some content that used be covered in the face-to-face class. Therefore, there are some changes in this year summer assignments. First You should join my Summer AP Chemistry course on Schoology. The access code is **CKHR-6VXG-F8T6B**. Materials will be posted on this course throughout the summer. As we are still in distance learning, you should check this site regularly.

You will need to read through the first four chapters of Zumdahl textbook and work through the assigned problems (listed below). These four chapters are the reviews what you learned from honor chemistry. I encourage you to create an index card summary for each chapter. That means you should put the most important information of that chapter in one 3" by 5" index card. Reading a science textbook is very different than reading novels or other classic literature. Most text presents scientific laws or theories that used to explain or model the evidence gathered from experimentation or investigation. Practice to summarize in one index card will help you learn more efficiently.

Pay more close attention to the following sections. These sections were not covered completely in this year.

Section 1.5: You learned significant figures this year. We covered the addition/subtraction of sig figs but not multiplication/division. Read the rules for sig. fig. mathematical operations.

Section 2.8: Naming binary ionic or covalent compounds and acids. Although AP exam will not test naming but the general knowledge of compound's name helps you solve problems more easily. I did not cover naming acids and will post some videos about the naming acids on Schoology.

Sections 3.7 and 3.11: Finding empirical formula of a compound and limiting reactants are frequently tested in AP exam. I assigned limiting reactants on Khan academy this past March and will post more videos on Schoology if you need fresh reviews. There are many problems assigned in this chapter.

Section 4.3: Dilution problems are not covered this year. I did cover the molarity but not dilution in distance learning. More videos will be posted on Schoology.

Sections 4.4-4.10: Types of chemical reactions. The textbook classifies reactions in three types instead of the basic five in most high school chemistry. But don't be confused, many reactions used to be called one type now is called another. Oxidation number is the new concept to you. Read Section 4.9 carefully. The method for balancing redox reactions in 4.10 is oversimplified. I will provide videos on Schoology how to solve those types of problems.

AP chemistry is an equivalent course to Introductory Chemistry in college. Taking a college level course in high school is challenging, requires **dedication** and **time investment**. I recommend that you spread out your time to do the reading and assignments. Please do not try to complete it all in the final week of the summer. Chemistry takes time to **process** and **grasp** at a level necessary for success in AP Chemistry. The summer assignments are due in the first week of school and you should also prepare for a quiz within the first two weeks of the school. Below are the assigned questions for each chapter.

- Chapter 1 - Page 38: problems 63, 99 and 101
- Chapter 2 - Pages 76-78: problems 67, 71, 77, 79, 83, 85, 87 and 95
- Chapter 3 - Pages 128 - 133; problems 37, 39, 41, 45, 49, 51, 53, 55, 57, 59, 61, 77, 81, 83, 87, 93, 95, 101, 107, 111, 117, 123 and 125.
- Chapter 4 - Pages 181-184; problems 23, 27, 35, 49, 55, 65, 69, 71, 77, 79 and 81

You could contact me by email: yusung.wu@redclay.k12.de.us during this summer. I will do my best to answer your questions. Have a **great summer** and **enjoy** the learning journey of AP chemistry. Remember **T**ogether **E**veryone **A**chieve **M**ore!