

AP CHEMISTRY SUMMER ASSIGNMENT AND FORMS REQUIRING SIGNATURES

Handy Checklist:

Read all material included in this packet

Read and sign the AP Chemistry Summer Assignment Agreement

Fill Out Student Information Sheet

Read Lab Safety Contract and fill in appropriate information, including signatures

Pick up your textbook in room 316 by June 13th

Hand in signed material (last page) in the labeled folder when you pick up your textbooks by June 13 in room 316

Complete summer assignment BEFORE the first day of school

Dear Student and Parent/Guardian,

Welcome to AP Chemistry! I am eagerly anticipating a great year of Chemistry. In order to ensure the best start for everyone next fall, I have prepared a Summer Assignment that reviews basic chemistry concepts. Most of the material covered in the summer packet will be familiar to you, but is designed to strengthen your foundation in chemistry and ensure that all students are on a relatively even plane. It will be important for everyone to come prepared to class on the first day. While we will review, extensive remediation is not an option as we work towards the goal of being prepared for the AP Exam in early May. The Summer Assignment is DUE THE FIRST DAY OF SCHOOL!

Our AP Chemistry classroom will be arranged a bit differently than you may be used to. We use the teaching model known as the “Flipped Learning” classroom. This teaching model takes the typical instruction done in class and moves it outside the classroom. Students will be required to watch video lectures created by me found on Edpuzzle and linked to our Google Classroom for homework. In these videos, I will teach the lesson and give examples in the same way they would receive it in class. Each video will be around 7 to 15 minutes in length and will chunk the material into smaller sections where only one topic is focused on at a time. Embedded in each video are questions that are required homework. Since the students are watching the lessons on video at home, they can pause, rewind, or re-watch any segments of the video. While watching the video, students will take notes, summarize and write specific questions they have about the topic.

During class, students will have the opportunity to work at their own pace to apply the knowledge gained through the video lectures, and ask questions of their peers and myself. This will result in them understanding the material at a higher and deeper level. Since students will be working at their own pace, they will have the opportunity to become more responsible for their learning. If there is a topic they do not understand, they will have the opportunity to watch the video again, and ask classmates and myself for help. Also, since students will need to ask these questions, they will become more effective communicators. This class time will also give me a chance to check for enduring understanding of the material and will allow me to correct any misconceptions students may have about the topic. In short, students will receive a more individualized chemistry education.

Please encourage your child to watch the videos and ask questions during class. The student is responsible for learning the material, and I am here to help facilitate the process. If a student is still not grasping the material through the videos and class time, they are welcome to come in after school for additional help. I am available most Tuesdays-Fridays.

If you have any questions or concerns, please don't hesitate to contact me at any time at ssmith@nhvweb.net or (908) 638-2199 ext 2061.

Thank you for your support!

Sincerely,
Sharon Smith

Notes/Preparation:

📖 About 10% of total grade

- Each chapter is separated into sections. Students will be responsible for taking notes from the textbook as well as from the videos found online. These will be checked at the beginning of the period they are due.
- These must be hand written and in an organized AP Chemistry notebook.

Classwork/Participation:

📖 About 10% of total grade

- Students will be given a packet of problems at the beginning of each chapter, along with problems from the book, to complete in class. There will be periodic deadlines for this work and all work will be collected at the end of each chapter.
- Answers to these problems will be offered to the students once they have completed a section. They will have the opportunity to check over all their work and ask questions if problems arise.
- Participation grades will be given at the end of each chapter and will reflect how well the student stays on task during class as well as preparation each day for class.

Edpuzzle Questions:

📖 About 10% of total grade

- There will be do now problems at the beginning of each period made up of problems that were in the previous section. These will be periodically collected and graded for accuracy.

Lab Activities:

📖 About 20% of total grade

- There will be several activities as well as at least one formal AP Chemistry lab per chapter.
- Lab quizzes on the laboratory experiments will be given after the completion of formal labs. This will reinforce the lab material, which is essential for the lab questions on the AP exam.
- If a student is absent on a lab day, it must be made up within the next 3 days. It is often difficult to schedule 80 minutes to make up labs, so good attendance on lab days is encouraged.

Tests and Quizzes:

■ About 50% of grade

- Each chapter will have a test that will take a full 80 minute period. They consist of 15-20 multiple choice questions and 3-6 “essay” problem type questions. All questions are of an AP nature. Tests are usually worth around 100 pts.
- If a student is absent on a test day, the test **MUST** be made up the next day. Students will take the make-up test during class which will result in missing a day of classwork. Because of this, good attendance on test days is strongly encouraged.

Curriculum Plan: We will cover 18 chapters in the textbook at roughly a pace of 2-3 per month.

September

Chapter 1- Chemical Foundations
Chapter 2- Atoms, Molecules, and Ions
Chapter 3- Stoichiometry

October

Chapter 4 - Chemical Reactions
Chapter 5 - Gases

November

Chapter 6- Thermochemistry
Chapter 7- Atomic Structure

December

Chapter 8- Bonding
Chapter 9- Covalent Bonding

January

Chapter 10 - Liquids and Solids
Chapter 11- Solutions February
Chapter 12 - Chemical Kinetics
Chapter 13- Equilibrium
Chapter 14- Acids and Bases

March

Chapter 15 - Aqueous Equilibrium
Chapter 16- Spontaneity, Entropy, and Free Energy
Chapter 17- Electrochemistry
Chapter 22- Organic

April

Final Topics and REVIEW

May

AP EXAM is during the first two weeks of May, Date to be determined
Projects, labs, and presentations done in class

Summer Assignment

Enjoy your summer! Your AP examination will be scheduled during the first two weeks of May. We have lots to do before then, so let's get started!!! This year we will be using **Chemistry** by Zumdahl, 10th edition and will be distributed by Friday, June 13, 2023.

- Get a three ringed binder with dividers for each chapter (see curriculum plan on the previous page). I will be checking notebooks on the first day.
- Join google classroom (**d6dljyn**) before June 15, 2023
- Join Edpuzzle (**<https://edpuzzle.com/join/egdomom>**) before June 15, 2023

This course is a second year chemistry course. It is expected that students will enter this course with a strong understanding of introductory chemistry concepts and scientific math skills. Your summer assignment will review of the following concepts:

Chapter 1: Chemical Foundations
Chapter 2: Atoms Molecules and Ions
Chapter 3: Section 3.8-3.9 Chemical Equations

Things to do:

- Watch the edpuzzle videos posted on classroom, take notes (titled each section) and answer embedded questions assigned before the start of school for 2022=3-24
- Below is the reading. Please supplement your video notes with additional information from the book (examples are good additions to notes). Clearly label each part in your notebook. There will be a test on all of this material within the first few days of class, depending on the schedule.
- Learn the names and symbols for elements 1-38, 47-51, 53-56, and 78-82.
- Commit to memory the contents of tables 2.3, 2.4, 2.5, 2.6, 2.7 and 2.8. There will be an ion quiz the first day that class meets.

Chapter	Topic	Reading	Example Problems
Chapter 1	Part 1 Introduction	p. 2-10	
	Part 2 Significant Digits	p. 11-17	p. 34 #33-39 odd
	Part 3 Dimensional Analysis and Density	p. 18-22 and 26	p. 34b # 49, 55, 69
	Part 4 Classification and Separation of Matter	p. 27-30	p. 34d #83, 87, 107, 119
Chapter 2	Part 1 Early History	p. 36-39	p. 66 # 19
	Part 2 Development of Basic Atomic Structure	p. 40-46	
	Part 3 Modern Atomic Structure	p. 46-51	p. 67 #38, 43, 45
	Part 4 Binary Ionic Compounds (Type I)	p. 51-55	p. 67c #75
	Part 5 Binary Ionic Compounds (Type II)	p. 55-57	p. 67c #76

Chapter	Topic	Reading	Examples Problems
	Part 7 Binary Covalent Compounds (Type III)	p. 59-61	p. 67c #81-82
	Part 8 Acids	p. 62-63	P. 67c #86
Chapter 3	Part 1 Chemical Equations	p. 90-95	p. 115 #33, 97, 101, 103

Safety and Summer Assignment Agreement

1. I agree to wear approved eye protection (goggles and/or full face shield) when involved in a laboratory activity in which corrosive liquids, hot liquids or hot solids are used, or in any activity, exposure to which might have a tendency to cause irritation or damage to the eyes.
2. I agree to wear chemical resistant laboratory aprons when corrosive chemicals are used.
3. I agree to wear proper shoes during a laboratory activity. It is strongly recommended that no sandals or any type of open shoes be worn in the laboratory on days experiments are to be performed. Use caution if you are wearing open footwear.
4. I agree that if my hair exceeds shoulder length or if the instructor deems it necessary I will tie it back.
5. I agree to remove my contact lens during activities involving exposure to chemical fumes, vapors and/or splashes.
6. I agree to maintain a quiet behavior during laboratory activities. I understand this is necessary to allow quick accurate instruction should an emergency occur.
7. I have read and will follow the general "Instructions for Safety", and any additional instructions given by the instructor or in the text.
8. I agree I am fully responsible for my actions and will behave appropriately during all laboratory activities.
9. I agree to use all laboratory equipment ONLY in the manner for which it is intended.
10. I agree to carefully follow the laboratory directions indicated in the laboratory and given by the instructor.
 - I have read the above and agree to abide by all of the rules.
 - I understand that if I do not abide by these safety rules and those set by my instructor I will not be permitted to work in the laboratory. This would result in a zero grade for any laboratory missed without the option to make up the laboratory or the grade.
 - I have read the AP Chemistry Summer assignment packet and understand the requirements for this class.
 - Additionally, there will be an honor code in effect for all assignments in AP Chemistry. Students are allowed and encouraged to work together on homework, assignments, and labs because this is one of the best ways to learn material. However, identical assignments, homework, test corrections and labs will be regarded as cheating and will receive no credit and disciplinary action.

Student name: _____ (please print)

Student Signature

Date

Parent Signature

Date

BOOK NUMBER _____