Welcome to AP Chemistry! This class builds on the knowledge and skills you learned in Honors Chemistry and is equivalent to a full year-long college chemistry course. To help you get off on the right foot, this summer assignment focuses primarily on the first unit titled "Atomic Structure and Properties."

If you want to see what awaits you next year, here is a link to the AP Chemistry "At a Glance." A quick look at it reveals that you've already covered many of these topics in Honors chemistry, but we go into each of them a little deeper to help you better understand what is really happening and why. Also, there are a few new topics that will provide you a challenge to master.

For those of you who are new to me, I use a flipped classroom strategy. That means I don't conduct the normal lecture on a topic like you expect to see in something like a history class. Instead, you watch videos and/or complete readings as homework, we conduct a quick review the next day, then you work to complete the daily problem set (DPS).

I developed this summer assignment using these same general guidelines.

As stated earlier, I want you to complete unit 1 (Atomic Structure and Properties) of the AP Chemistry course. If you read through the topics below, you'll notice that most of it is (okay, should or may be) familiar and the only real new topic is photoelectron spectroscopy (PES). Don't worry, PES sounds complex but it's a fairly straightforward concept.

As you watch the videos, I recommend that you take notes like you would during a lecture. I have attached a template for the Cornell notetaking system that you might want to use. By the way, you're not limited to the Khan Academy videos since there are many good selections out there to choose from.

After watching the video, read and complete the corresponding "student work" module for that section – specifically, the practice problems and FRQs. Yes, I understand this is 68 pages long but a lot of it is reference material plus some other filler.

Let me know if you encounter any problems accessing either the videos or the work packet.

Videos.  
https://www.khanacademy.org/science/ap-chemistry-beta

Student Work.  Save the file to Notability  
https://chemistry-teaching-resources.com/Resources/APNotes/Unit1/Unit_1_AtomicStructure&Properties-Student.pdf
I’ll post an answer key later this summer. The student work packet is due NLT 16 August 2022 and will count as an Alternative Assessment.

The Unit 1 exam is tentatively scheduled for 18 August. We will conduct a review of the material and also complete one or two alternative assessments/virtual labs before the exam. Time permitting, we will conduct a hands-on lab just before or after the unit exam.

I recommend that you not wait until just before school starts to begin this assignment. For those of you with nothing better to do this summer but study chemistry (if you’re that type of student, please go take a good look at yourself in a mirror), you might want to look at some of the other videos, especially anything you feel you did not adequately understand from your Honors class.

If needed, you can get hold of me during the summer by sending a Schoology message.

Last thing. Remember that summer is a time to relax and have some fun. Stay safe, nothing stupid!

Mr. Wynne
How to take Cornell Notes

Cornell notes are a very specific notetaking method. Research has shown that taking Cornell notes helps students learn, study, and retain information much more effectively than other note-taking methods. Taking Cornell notes ensures review of notes each day, reinforces learning, encourages reflection, and provides a quick review of the material learned. In biology this year, all of your notes will be taken in the Cornell note format. Your notes will be neatly organized in a binder, which will make them easier to study. Your notes will be checked each day for completeness and accuracy.

There are four different parts to a page of Cornell notes: the format, notes, study questions, and summary. We will take a look at each part individually to build a set of Cornell notes together.

Format

Every time you take notes you should use some type of organized system. I happen to like the one developed by Cornell University. Below are some of the guidelines and tips to use this system.

Print the Title of the notes across the top of the page

Below the title there will be a section labeled Today's Goals. The goals for the day are questions that you should be able to answer in detail by the time we are finished with our notes. They will normally be written on the front board and you will need to copy them onto your paper.

The right-hand side of the paper is labeled Notes, the left hand side of the paper is labeled Questions, and the bottom of the paper is labeled Summary. The requirements for each of these sections are discussed below.

Notes: The Notes section is reserved for the actual notes that you will be writing down about the topic being covered. Notes can be taken from a lecture, video, or textbook reading. Your notes should be written according to the following guidelines:

Written on the right-hand side of the page under the Notes label
Written in outline format
Ok to use abbreviations and/or shorthand

Questions: The Questions section is reserved for study questions that are written about the notes that have been taken. Questions should be completed for homework every time notes are taken. Writing questions helps you reinforce what you learned because it forces you to re-read and think about your notes. Questions can also be used as a study tool to help you quiz yourself before an exam.

Your questions should be written according to the following guidelines:

Written on the left-hand side of the page under your Questions label
Written directly next to the notes they are referring to
Abbreviations should not be used
Questions should address all of the topics covered in the hard notes
Questions should be good quality study questions and possible test questions

Should be “thinker” questions. Typically includes a variety of questions – use your “question words” list to help you write more difficult, higher-level questions that make you think

DO NOT use yes or no questions, multiple choice, fill in the blank, or true/false questions
Summary: The bottom of your notes page is reserved for a summary. In the summary section, you should write a paragraph or two that summarizes all of the notes you took. Your summary should briefly address all major topics covered in the notes section without restating them word for word. Summaries should be formal but concise paragraphs written in clear and complete sentences. Writing a summary of your notes is beneficial because it forces you to re-read and process your notes a third time. This reinforces your understanding and retention of the material. Summaries should be completed for homework whenever notes are taken.

EVERY time notes are taken in class, questions and summaries automatically become homework for the night.

LIST OF “QUESTION WORDS”

Remember that the questions you write on the left hand side of a note page should be high quality study questions that really help you review each topic addressed in the notes. There are several different types of questions that can be written about a given topic. Some questions ask you to simply recall facts that you have learned. Although memorizing facts is often important, it does not require you to use higher-level critical thinking skills. Therefore, in order to function as an effective study tool, your questions should include a variety of question types to help you think about each topic on several different levels. Use the “question words” below to help you write a variety of questions.

Lower-Level Question Words

Who  What  Where  When  How

Higher-Level Question Words

Apply
Analyze
Compare
Contrast
Explain
Diagram
Know
Define
List
Memorize
Summarize
Organize
Why
How
Should
Could

NOTE: These are not the ONLY words that you may use to write questions. This is just a list to help you get started and to ensure that you are using a nice variety of questions!

Remember that you should NOT use yes or no questions, fill in the blanks, true/false, or multiple choice questions.