

Advanced Placement Chemistry Summer Assignment

Due Monday of the 2nd Week of School

Join the Remind Group! Send a text to: [81010](tel:81010), text this message: [@apchemfarm](https://www.remind.com/app/users/@apchemfarm) (Office Hours 10am - 9pm)

Hello! I am excited that you are signed up to take AP Chemistry this coming year! I have created this summer assignment to help you start AP Chem with your best foot forward, prepared for the challenging work we have to start covering immediately when school starts – we have no time to waste!

You will be expected to **know** the information covered in the first year Honors Chemistry course (please know that College Prep Chemistry does not cover the same amount and depth as Honors Chemistry). The topics covered in Honors Chemistry are foundational to the AP Chemistry program. There will be a few topics to learn this summer that are new material. Material will be provided in this packet to help you learn them.

You need to enter AP Chemistry prepared for a review test worth up to 10% of your grade given on the Monday of the 2nd Week of school, covering the Honors Chemistry curriculum and the new material presented here in this summer assignment. It is imperative that you know immediately if you have the foundational knowledge and skills to participate fully in the course before the “add drop window” closes. While I know that sounds stressful to have a test in the second week of school, it would be more stressful to be in a class you don't want to be in for the entire school year!

As you enter into AP Chemistry I want you to reflect upon the quote below.
The most important skill you need to do well in this class is perseverance. Keep calm and persevere!
*“Perseverance is the hard work you do after
you get tired of doing the hard work you already did.”* - Newt Gingrich

Summer Assignment Tasks

REMEMBER	
<input type="checkbox"/> Everything from Honors Chem! (www.mychemistryclass.net → Honors Chem)	
MEMORIZE	
<input type="checkbox"/> Solubility Rules, Common Ions, VSPER (www.mychemistryclass.net → AP Chem → Reference Sheets)	
CHECK	TURNED IN MONDAY OF THE 2nd WEEK OF SCHOOL!
<input type="checkbox"/> Complete Self-Assessment Quiz for the Honors Chem material *ADD LINK LATER* <ul style="list-style-type: none"><input type="checkbox"/> Print and complete. Answers at bottom to check/correct work. Correct your work in a GREEN PEN!<input type="checkbox"/> Show work for math problems.<input type="checkbox"/> Annotate non-math problem <input type="checkbox"/> show/explain your thought process behind your answer choice.	
REVIEW	TURNED IN MONDAY OF THE 2nd WEEK OF SCHOOL!
<input type="checkbox"/> Review any topics you struggled with on the Self-Assessment Quiz <ul style="list-style-type: none"><input type="checkbox"/> Use the Review Task checklist on the Self-Assessment Quiz to decide which review tasks you need to complete for each Honors Chemistry topic you need to review.	
<input type="checkbox"/> Print the Evidence of Self Study Page *ADD LINK LATER* <ul style="list-style-type: none"><input type="checkbox"/> Attach binder paper to the back of the page showing the review you did.<input type="checkbox"/> Clearly label your binder paper with which Honors Chemistry topic you are showing review work for.<input type="checkbox"/> You are welcome to, and encouraged, to review ANY topic. You can do more than just the ones you struggled on! I would absolutely love to see extra review work on your Evidence of Self Study Page(s)!	
<input type="checkbox"/> Look through the Extra Review Materials chart on the back of this paper.	
<input type="checkbox"/> Chapters 1-4 in the Tro online textbook: Instructions on how to access it, must be logged in with your school gmail account before clicking! https://tinyurl.com/4yucsc26	
LEARN	
<input type="checkbox"/> Complete the tasks linked for each of the following topics *ADD LINKS LATER* <ul style="list-style-type: none"><input type="checkbox"/> Half Life<input type="checkbox"/> Combustion Analysis<input type="checkbox"/> Intro to Redox Chemistry	
PRACTICE	TURNED IN ON MONDAY OF THE 2nd WEEK OF SCHOOL!
<input type="checkbox"/> Print the Summer Practice Problems *ADD LINK LATER* <ul style="list-style-type: none"><input type="checkbox"/> Attach binder paper to the back of the page showing the review you did.<input type="checkbox"/> Complete on binder paper, and correct your work in a GREEN PEN (answers linked on the worksheet)<input type="checkbox"/> Show work clearly (with units!) and box final answers!	

Honors Chemistry Topics

This list does not cover every single topic/fact. It is just an overview to help guide your self-studying during the summer. Chapter numbers and titles correlate with Mrs. Farmer's Honors Chemistry class order. All PowerPoints, worksheets, etc. can be found on the green "Honors" tab of the class website. A link to Mrs. Farmer's YouTube Channel can be found on the yellow "Extra Resources" of the class website. Please use them to help your review! www.mychemistryclass.net You may not have Mrs. Farmer next year, but all AP Teachers are using her website for the summer assignment to streamline things. All students have the same summer work regardless of which teacher they end up with.

BIG PICTURE TOPICS						
1 st Semester Chapters						
1	2	3	4	5	6	7
Basics & Atomic Structure	Nuclear Chemistry*	Electrons	Periodic Table	Bonding & Structure	Reactions	Stoichiometry
<i>Metric system Sig figs Dimensional analysis Types of matter Atomic structure</i>	<i>Writing equations Half life calculations*</i>	<i>E- configurations of atoms and ions Noble gas configuration Orbital diagrams</i>	<i>Table structure Ions Trends</i>	<i>Types of bonds Naming/Formulas Lewis struct./VSEPR Polarity IMFs</i>	<i>Balancing eqs Types of rxns Predicting products Net ionic</i>	<i>Molar conversions Regular stoich.</i>
2 nd Semester Chapters						
8	9	10	11	12	13	14
Adv. Chemical Ratios	Gas Laws	Thermochem.	Solutions	Kinetics	Equilibrium.	Acid/Base
<i>Limiting reagent stoichiometry Percent composition Empirical formulas Combustion analysis*</i>	<i>Gas laws Finding density and molar mass Dalton's Law Collecting gas over water vapor Gas stoichiometry</i>	<i>Specific heat Calorimetry Heating curves Molar heats Heat of rxns Hess's Law</i>	<i>Solution concepts Solution calculations</i>	<i>Rate affecting factors Rate expressions Instantaneous rates Rate laws Rate constant - k Method of initial rates</i>	<i>Le Chatelier's K versus Q ICE Tables 5% Rule</i>	<i>Properties and Types Naming pH calculations Strong/Weak Weak ICE tables Salts, pH of salts Titrations</i>
						15
						Redox Chemistry*
						<i>Assigning oxidation # Writing half reactions Balancing half rxns</i>

*Things that are part of the AP Summer Assignment. Just showing you where they would fit topic wise.

Some Extra Review Materials - PLEASE READ AND CONSIDER DOING!

More Detailed Topic List of Honors Chemistry Topics
<ul style="list-style-type: none"> https://tinyurl.com/yddlm4h6 This list is a general guideline to help you study. It is NOT a definitive list. There are potentially things on here that will not show up on the tests, and there are potentially things not on this list that will show up on the tests. Material that appeared anywhere during the Honors Chem course all have the potential to appear on the test. Remember everything is on the Honors tab of the class website! www.mychemistryclass.net
Extra Practice Test on Chapters 1-4 in AP Textbook
<ul style="list-style-type: none"> https://tinyurl.com/y7cx5eec The first four chapters in the AP Textbook are a review of Honors Chemistry. This is an extra practice test I have from years ago. It isn't very detailed, but it is a few extra practice problems if you are interested.
Some Challenging Stoichiometry Problems
<ul style="list-style-type: none"> https://tinyurl.com/ydgxymhr AP Chemistry problems can get challenging fast. They take skills you learned in Honors Chemistry, like dimensional analysis and stoichiometry, and put them together in tough ways. These stoichiometry problems are quite challenging - it is a great exercise in stretching your brain and persevering during frustration, confusion and challenging work! That is SO important in AP Chemistry. I would like to encourage you to try some of these.
Need more? Use the class website!
<ul style="list-style-type: none"> www.mychemistryclass.net <ul style="list-style-type: none"> Honors Tab Extra Resources Tab If you have gaps in your knowledge of the Honors Chemistry topics, it will make success in AP Chemistry more challenging! The key to success in AP Chem is to be an engaged, proactive, self-sufficient learner! Help yourself start off AP Chemistry on a strong foot! Set yourself up for success! Do the work you need to do NOW in the summer so that next year can go better!