

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Seat #: \_\_\_\_\_

## AP Chemistry Summer Assignment - Due Monday of the 2<sup>nd</sup> Week of School

Hello! I am excited that you signed up to take AP Chemistry this coming year! I have created this summer assignment to help you start AP Chemistry 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 DVHS Honors Chemistry). The topics covered in DVHS Honors Chemistry are foundational to the AP Chem program.

### Overview of the First Four Weeks of AP Chemistry (subject to change)

Week 1 (short week)	Week 2	Week 3	Week 4
<ul style="list-style-type: none"> <li>Welcome!</li> <li>How the class works</li> <li>Set up notebook and 3-ring binder</li> </ul>	<ul style="list-style-type: none"> <li>Two day stoichiometry lab</li> <li>Begin Unit #1 - Thermochem</li> <li>Quiz on all of Honors Chem (Block Day)</li> </ul>	<ul style="list-style-type: none"> <li>Unit #1 Lab</li> <li>Finish Unit #1</li> <li>“Add Drop Window” ends</li> </ul>	<ul style="list-style-type: none"> <li>Unit #1 Quiz</li> <li>Start Unit #2 - Thermodynamics</li> </ul>

You need to enter AP Chem prepared for a quiz given on the Block Day of the 2nd Week of school, covering the Honors Chem curriculum. It is imperative that you know immediately whether or not 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 quiz 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 year!

## Summer Assignment Tasks

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

### #1 - JOIN and GET SUPPLIES

- Join the Remind Group!** Send a text to: 81010, text this message: @apchemfarm (Office Hours 10am - 9pm)
- Please read [HERE](#) regarding supplies for this class!** Any help would be deeply appreciated 😊

### #2 - PRINT THIS PAGE!

- You will be making a packet of your work to turn in, and this page is the cover sheet. *TIP - If your printer can't print double sided, you can tell it to print just page 1 and then put the page back in your printer and tell it to print page 2!* 😊

### #3 - REMEMBER

- Everything from Honors Chem! ([www.mychemistryclass.net](http://www.mychemistryclass.net) → Honors Chem)
- (Re)memorize Ions, VSPER & Solubility ([www.mychemistryclass.net](http://www.mychemistryclass.net) → AP Chem → Reference Sheets)

### #4 - SELF-ASSESSMENT QUIZ

**TURNED IN MONDAY OF THE 2<sup>nd</sup> WEEK OF SCHOOL!**

- Print and complete** “Self-Assessment Quiz” covering Honors Chem material → <https://tinyurl.com/ff35m35f>
  - Show **ALL** work for math problems on **BINDER PAPER** stapled to the back. Number the questions clearly!
  - Answers are at the end to check/correct work. Correct your work in a **GREEN PEN!**

### #5 - REVIEW TASKS

**TURNED IN MONDAY OF THE 2<sup>nd</sup> WEEK OF SCHOOL!**

- Print and complete** the “Evidence of Self Study Page” → <https://tinyurl.com/5vprh4x4>
  - Staple **BINDER PAPER** to the back when you run out of space on the printed paper.
  - Clearly label your paper with which Honors Chemistry topic you are showing review work for.
  - 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)!

### #6 - PERSEVERANCE PRACTICE

**TURNED IN MONDAY OF THE 2<sup>nd</sup> WEEK OF SCHOOL!**

- Print and complete** the “Challenging Stoichiometry Practice Problems” → <https://tinyurl.com/2a8mtax4>
  - Show **ALL** work (with units!) on **BINDER PAPER** stapled to the back. Number the questions clearly!
  - Correct your work in a **GREEN PEN** (answers linked on the worksheet).

### #7 - LAB REPORT EXPECTATIONS

**TURNED IN MONDAY OF THE 2<sup>nd</sup> WEEK OF SCHOOL!**

- Read, watch & take notes** on **BINDER PAPER!** Format doesn’t matter, but should be a good amount of notes!
  - Read: Lab Report Expectations/Guidelines → <https://tinyurl.com/mr4dmave>
  - Watch: Video of Mrs. Farmer discussion expectations/guidelines → <https://tinyurl.com/23rrkf2n>

### #8 - PUT TOGETHER AND STAPLE PACKET TO TURN IN MONDAY OF THE 2<sup>nd</sup> WEEK OF SCHOOL!

- This page on top, then Self-Assessment Quiz\*, Evidence of Self Study Page\*, Perseverance Practice\*, and Lab Report Expectations\* at the bottom of the packet.  
\*All of these should have **binder paper with work shown** included after the printed page!

### #9 - FIRST PRE-LAB ASSIGNMENT

**TURNED IN MONDAY OF THE 2<sup>nd</sup> WEEK OF SCHOOL!**

- Complete** the first pre-lab assignment → <https://tinyurl.com/2c48dybv>
  - Do NOT attempt to do this before you have completed Step #7 of the Summer Assignment!
  - This will NOT be stapled into your packet that you put together in Step #8. It goes in your lab notebook.

# Honors Chemistry Topics to Help Guide Your Summer Review

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

## Some Extra Review Materials - PLEASE READ AND CONSIDER DOING!

<p><b>A More Detailed Topic List of Honors Chemistry Topics</b> → <a href="https://tinyurl.com/yddl4m4h6">https://tinyurl.com/yddl4m4h6</a></p> <p><input type="checkbox"/> 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 quiz, and things not on this list that will show up. Anything from Honors Chemistry has the potential to appear on the quiz. Remember everything is on the class website! <a href="http://www.mychemistryclass.net">www.mychemistryclass.net</a></p>
<p><b>Mental Math Practice</b> → <a href="https://tinyurl.com/ycxm4jmt">https://tinyurl.com/ycxm4jmt</a></p> <p><input type="checkbox"/> You are now allowed to use a calculator on the AP Chem Exam Multiple Choice section. Yay! BUT it is SO important that you practice doing "mental math" and using other tips/tricks in order to speed things up because it is a timed exam! You need to know the chemistry, but ALSO need to be able to finish on time! Another important tip is to eliminate answer choices that make no sense - that can speed things up tremendously! Practice during the summer so you can start the year off able to do quizzes/tests faster!</p>
<p><b>Some Extra Practice Tests</b></p> <p><input type="checkbox"/> An old practice that covers Ch 1-4 in the AP Textbook which are Honors Review topics. It isn't very detailed, but it is available if you are interested. → <a href="https://tinyurl.com/y7cx5eec">https://tinyurl.com/y7cx5eec</a></p> <p><input type="checkbox"/> Science Geek Practice Tests - Chemistry → <a href="https://www.sciencegeek.net/Chemistry/Review/">https://www.sciencegeek.net/Chemistry/Review/</a></p> <p><input type="checkbox"/> Many of our Honors topics are on the AP section. Just pick the ones that were covered in Honors! → <a href="https://www.sciencegeek.net/APchemistry/APtaters/directory.shtml">https://www.sciencegeek.net/APchemistry/APtaters/directory.shtml</a></p>
<p><b>Free Online Textbooks</b> → OpenStax <a href="https://tinyurl.com/5a8krxc4">https://tinyurl.com/5a8krxc4</a> CK-12 <a href="https://tinyurl.com/5n8x4t6y">https://tinyurl.com/5n8x4t6y</a></p> <p><input type="checkbox"/> OpenStax and CK-12 are free online textbooks that anyone can access! If you find yourself struggling with a topic it may be a good idea to search the online book for that topic and read about it.</p>
<p><b>Need more? Use the class website!</b> → <a href="http://www.mychemistryclass.net">www.mychemistryclass.net</a></p> <p><input type="checkbox"/> If you have gaps in your Honors Chem topics, it will make success in AP Chem more challenging! The key to success in AP Chem is to be an engaged, proactive, self-sufficient learner! Start off AP Chem 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!</p>
<p><b>Suggestion about trying to "work ahead" and start some of the AP Chemistry chapters</b></p> <p>I suggest you don't. I know it is tempting! However, there is a lot of stuff in the textbook we won't cover in as much depth, or even at all. I don't think it will be an <u>efficient</u> use of your summer time. I think it would be <u>MUCH</u> better for you to work on being proficient and confident doing really challenging Honors Chemistry problems, getting faster at Honors Chemistry problems, trying some more of those "Challenging Stoichiometry Problems" from the "Perseverance Practice" document, memorizing your common ions, AND having some fun and rest to recharge before school starts :-)</p>