

## AP Chemistry Summer Assignment – Summer 2019

Welcome to AP Chem! In order to maximize our time together this year, please complete the five items listed below during the summer. **All five of these items must be completed by the first day of school.**

Think of this assignment as a “test” of whether or not you are prepared to handle the rigor of AP Chemistry. *Students who are successful in this course take all assignments seriously, and do not wait until the last minute to complete them.*



I am more than happy to answer questions about your summer assignment before school starts – please feel free to contact me at [kczamiara@lncharter.org](mailto:kczamiara@lncharter.org).

### **Task 1:** Complete the “AP Chemistry Intro Survey” online (5 min).

- Can be found at the following link: <https://www.surveymonkey.com/r/TGFLFHZ>
- **Please complete this survey ASAP.** By completing this survey, I can verify that you have received the summer assignment.

### **Task 2:** Learn the following polyatomic ions. (1 hour)

- We will refer to these ions frequently and they are *not* provided for you on the AP Chemistry exam. Make some flash cards, and use your nomenclature rules as a guide (-ate vs -ite, when to use hypo- or per-, etc.)
- Oh look, here is even a Quizlet to practice! You can now download the Quizlet app on your phone and practice *any time*... ☺ <https://quizlet.com/24715099/flashcards>

<u>Ion</u>	<u>Name</u>	<u>Ion</u>	<u>Name</u>
$\text{NH}_4^+$	Ammonium	$\text{CO}_3^{2-}$	Carbonate
$\text{NO}_2^-$	Nitrite	$\text{HCO}_3^-$	Hydrogen Carbonate/ Bicarbonate
$\text{NO}_3^-$	Nitrate	$\text{H}_3\text{O}^+$	Hydronium
$\text{SO}_3^{2-}$	Sulfite	$\text{ClO}^-$	Hypochlorite
$\text{SO}_4^{2-}$	Sulfate	$\text{ClO}_2^-$	Chlorite
$\text{S}_2\text{O}_3^{2-}$	ThioSulfate	$\text{ClO}_3^-$	Chlorate
$\text{OH}^-$	Hydroxide	$\text{ClO}_4^-$	Perchlorate
$\text{CN}^-$	Cyanide	$\text{C}_2\text{H}_3\text{O}_2^-$	Acetate
$\text{PO}_4^{3-}$	Phosphate	$\text{MnO}_4^-$	Permanganate
$\text{HPO}_4^{2-}$	Hydrogen Phosphate	$\text{C}_2\text{O}_4^{2-}$	Oxalate
$\text{H}_2\text{PO}_4^-$	Dihydrogen Phosphate	$\text{O}_2^{2-}$	Peroxide
$\text{CrO}_4^{2-}$	Chromate	$\text{BrO}_2^-$	Bromite
$\text{Cr}_2\text{O}_7^{2-}$	Dichromate	$\text{BrO}_3^-$	Bromate

**Task 3: Unit 1 Review: Fundamentals of Chemistry (5 hours)**

- You will be responsible for learning/reviewing the material for Unit 1 on your own, before the start of school. You are welcome to form study groups to review this material and work through practice problems together. It is expected that you have mastered this content before school starts; **students who do not have a solid mastery of fundamental material from junior year will struggle in AP Chem.**
- All Unit 1 study materials are located in Google Drive:  
<https://drive.google.com/drive/folders/1jFqSOfNFAOHMRLZv1MmCLI759lYFx73S?usp=sharing>. If you are having trouble accessing these materials, please contact Mrs. Z.
- Upon returning to school, we will spend a limited amount of time addressing the questions that you have regarding Unit 1, and we will NOT be covering this material extensively during class. You will be tested on this material, and the above list of polyatomic ions, shortly after school begins.
- In addition to the Unit 1 material, it is expected that you practice sharpening your “mental math” skills, as the multiple choice section of the AP Chemistry exam (and Mrs. Z’s exams) are *calculator inactive*. Resources will be provided online with your summer assignment to aid you in this process.

**Task 4: Purchase a laboratory notebook for the first day of class.**

- We will perform laboratory work on a daily basis in AP Chemistry, and your work must be kept in a laboratory notebook. Often times, colleges will request that you submit your lab notebook if you want to place out of an introductory chemistry course.
- Your lab notebook must have **binding** (like a spiral bound notebook), and contain **graph paper**. Below are some *examples* of acceptable lab notebooks:
  - <http://www.flinnsci.com/store/Scripts/prodView.asp?idproduct=15993>
  - [http://www.staples.com/Staples-Graph-Ruled-4-x-4-Spiral-Notebook-Assorted-Colors-8-x-10-1-2-Each-11625M-/product\\_716522](http://www.staples.com/Staples-Graph-Ruled-4-x-4-Spiral-Notebook-Assorted-Colors-8-x-10-1-2-Each-11625M-/product_716522)
- Laboratory work that is not completed in a lab notebook will *not* be accepted, and will result in a grade of “zero”. We will begin our first lab on the first day of class.

**Task 5: Sign the Lab Safety Contract for the first day of class.**

- Can be found on the school website with the other Summer Assignment materials. Please print this form and have it signed for the first day of class. You may not participate in lab until this is turned in. An inability to participate in lab will result in an automatic “zero” on that assignment.