

AP Chemistry 2019-2020 Summer Assignment

AP Chemistry is an accelerated course which requires students to spend time over the summer reviewing information before the course begins. In order to meet the rigorous requirements of the course, you will need to complete the following assignments over the summer:

- Learn and know names and symbols of elements and polyatomic ions .
- Learn and know solubility rules.
- Memorize the six strong acids.
- Your textbook is Chemistry, The Central Science, AP Edition, 14 ed. by Brown, LeMay, et. al. You can access the full electronic version of the text by registering at the following website: www.pearsonschool.com/access
 - Enter SSPREN in the field provided.
 - Click "Covered Titles."
 - Click "science."
 - Click "Brown/Lemay, Chemistry: The Central Science 14e Mastering Chemistry."
 - Click "student registration."
 - Click "I Accept."
 - Create an account with Pearson using the following access code:
SSPREN-PLUNK-SERRY-GIGUE-INGOT-GLEES
Remember to write down your User name and password in a safe place.
We will be using the website throughout the year.
Here is the site to use to log in after you have registered:
www.masteringchemistry.com
 - Register for our class' course. The course code is: MCKULA7696233
- Read the first three chapters of the e-book text.
- Complete the Introductory Assignment and Homework for chapters 1-3 on the Mastering Chemistry website.
- Complete the following assignments at in the Study Area (click Question Sets, then click Practice Quiz):
 - Chapter 1 Practice Quiz
 - Chapter 2 Practice Quiz
 - Chapter 3 Practice Quiz
 - The quizzes can be found in the "Study Area" section of the Mastering Chemistry website.
- E-mail your quiz results to kkula@jefftwp.org
- Sign up for Google Classroom using code: uasdw9.

We will be reviewing chapters 1-3 during the first week of school, and a test will be given during the second week of school.

If you feel that you require additional review, there are additional assignments and review topics available at the Mastering Chemistry site.

You may also want to consider purchasing a test prep book. I recommend 5 Steps To A 5: AP Chemistry by Dr. John T. Moore and Dr. Richard Langley. This is available at Amazon.com for about \$12. Purchasing additional books is not a requirement of the course.

If you have any questions, please see me before the end of the school year or e-mail me at kkula@jefftwp.org.

If you would prefer an electronic version of this assignment, so you can click on the links, please e-mail me, and I will send it back to you. This letter will also be available on Google Classroom.

Sincerely,

Mrs. Kula

Ion Chart

Metallic			Non-metallic	
+1 Ions			-1 Ions	
NH ₄	Ammonium		F	Fluoride
Cu	Copper I	Cuprous	IO ₃	Iodate
H	Hydrogen		Cl	Chloride
Li	Lithium		Br	Bromide
Na	Sodium		I	Iodide
K	Potassium		OH	Hydroxide
Rb	Rubidium		NO ₃	Nitrate
Cs	Cesium		NO ₂	Nitrite
Ag	Silver		C ₂ H ₃ O ₂	Acetate
Hg ₂	Mercury (I)	Mercurous <small>(diatomic, each Hg is +1)</small>	MnO ₄	Permanganate
+2 Ions			-2 Ions	
Mg	Magnesium		HSO ₄	Bisulfate
Ca	Calcium		HCO ₃	Bicarbonate
Sr	Strontium		CN	Cyanide
Ba	Barium		OCN	Cyanate
Ra	Radium		SCN	Thiocyanate
Cr	Chromium II	Chromous	ClO ₄	Perchlorate
Cu	Copper II	Cupric	ClO ₃	Chlorate
Hg	Mercury II	Mercuric	ClO ₂	Chlorite
Fe	Iron II	Ferrous	ClO	Hypochlorite
Sn	Tin II	Stannous	ReO ₄	Perrhenate
Zn	Zinc		HSO ₃	Bisulfite
Cd	Cadmium		BrO ₃	Bromate
Co	Cobalt II	Cobaltous	SO ₄	Sulfate
Pb	Lead II	Plumbous	SO ₃	Sulfite
Mn	Manganese II	Manganous	CO ₃	Carbonate
+3 Ions			CrO ₄	Chromate
Al	Aluminum		Cr ₂ O ₇	Dichromate
Cr	Chromium III	Chromic	S	Sulfide
Fe	Iron III	Ferric	O	Oxide
Bi	Bismuth III	Bismuthous	S ₂ O ₃	Thiosulfate
Co	Cobalt III	Cobaltic	S ₂ O ₂	Thiosulfite
+4 Ions			SeO ₄	Selenate
Pb	Lead IV	Plumbic	SeO ₃	Selenite
Mn	Manganese IV	Manganic	C ₂ O ₄	Oxalate
Sn	Tin IV	Stannous	HPO ₄	Monhydrogen Phosphate <small>(each oxygen is -1)</small>
+5 Ions			O ₂	Peroxide
Bi	Bismuth V	Bismuthic	-3 Ions	
			PO ₄	Phosphate
			PO ₃	Phosphite
			AsO ₃	Arsenite
			AsO ₄	Arsenate

Note: All non-metallic, monatomic ions end in "ide".

Solubility Rules

- 1.** Alkali metal and ammonium compounds are soluble in water.
- 2.** Nitrates, acetates, and chlorates are soluble.
- 3.** Most halides are soluble, except those of silver, mercury(I), and lead. Lead(II) chloride is soluble in hot water.
- 4.** Most sulfates are soluble, except those of barium, calcium, mercury, strontium, and lead.
- 5.** Most carbonates, phosphates, and silicates are insoluble, except those of sodium, potassium, and ammonium.
- 6.** Most sulfides are insoluble, except those of calcium, strontium, sodium, potassium, and ammonium.

Six Strong Acids

HCl – hydrochloric acid

HBr – hydrobromic acid

HI – hydroiodic acid

HNO₃ – nitric acid

HClO₄ – perchloric acid

H₂SO₄ – sulfuric acid