

AP/UCONN ECE Chemistry Summer Assignment
Mrs. Tibbetts

Welcome to UCONN ECE/AP Chemistry! You are to be commended for enrolling in such a challenging academic task. To succeed in this course you must be motivated, avoid procrastination, follow directions, work independently, read and re-read the textbook, and put in the university-recommended eight to nine hours of “out-of-class” study time per week. I look forward to a rewarding year together.

Please upload this work to our Google Classroom (class code: **kj5mb**) by the due dates listed below.

- A. Download the online textbook. This is a temporary textbook we will use for the summer assignment. You will receive a different, hardcovered textbook on the first day of school. The textbook for the summer assignment is available free online at <https://openstax.org/details/books/chemistry-2e>. Please email me at tibbetts@madison.k12.ct.us before August 10, 2020 if you are having trouble accessing the online textbook or if you have any questions or concerns about this assignment or the course.
- B. Read, take notes, and study CHAPTER 1. On a separate sheet of paper, complete the exercises for Chapter 1 located below. You must show all your work in a neat, orderly, well-labeled fashion, highlight each answer, and must represent proper use of significant figures and units in your answers. Answers without supporting calculations will not receive credit. Please submit one google doc. It can include photos of handwritten work and/or typed work. If you choose to type your work, you must use proper formatting for subscripts and superscripts. For example, type Cu^{2+} , not Cu^2+ , and 6.022×10^{23} , not 6.022×10^23 .

CHAPTER 1 EXERCISES (due August 14, 2020)

44, 46, 54, 76, 80, 86, 92, 96

- C. Read, take notes, and study CHAPTER 2. On a separate sheet of paper, complete the exercises for Chapter 2 located below. Follow the same expectations as stated above in section B.

CHAPTER 2 EXERCISES (due August 21, 2020)

4, 16, 18, 20, 24, 30, 38, 46, 48, 50, 52, 58, 60

- D. Read, take notes, and study CHAPTER 3. On a separate sheet of paper, complete the exercises for Chapter 3 located below. Follow the same expectations as stated above in section B.

CHAPTER 3 EXERCISES (due August 28, 2020)

18, 22, 26, 34 (a,c), 42 (a,b), 52 (c,d), 56 (c,d), 68, 64, 70, 78, 80

- E. Study & memorize the attached list of Polyatomic Ions (see next page) You will be given a quiz on this chart at the beginning of our first class meeting. Details such as ionic charges, subscripts, and spelling count.

POLYATOMIC IONS

acetate	$C_2H_3O_2^-$	iodide	I^-
aluminum	Al^{+3}	iron(II)	Fe^{+2}
ammonium	NH_4^+	iron(III)	Fe^{+3}
barium	Ba^{+2}	lead(II)	Pb^{+2}
bicarbonate or hydrogen carbonate	HCO_3^-	lead(IV)	Pb^{+4}
bismuth	Bi^{+3}	lithium	Li^+
bisulfate or hydrogen sulfate	HSO_4^-	magnesium	Mg^{+2}
bromate	BrO_3^-	manganese(II)	Mn^{+2}
bromide	Br^-	manganese(III)	Mn^{+3}
cadmium	Cd^{+2}	mercury(I)	Hg_2^{+2}
calcium	Ca^{+2}	mercury(II)	Hg^{+2}
carbide	C^{-4}	monohydrogen phosphate	HPO_4^{-2}
carbonate	CO_3^{-2}	nickel(II)	Ni^{+2}
cesium	Cs^+	nitrate	NO_3^-
chlorate	ClO_3^-	nitride	N^{-3}
chloride	Cl^-	nitrite	NO_2^-
chlorite	ClO_2^-	oxalate	$C_2O_4^{-2}$
chromate	CrO_4^{-2}	oxide	O^{-2}
chromium(II)	Cr^{+2}	perchlorate	ClO_4^-
chromium(III)	Cr^{+3}	permanganate	MnO_4^-
cobalt(II)	Co^{+2}	peroxide	O_2^{-2}
cobalt(III)	Co^{+3}	phosphate	PO_4^{-3}
copper(I)	Cu^+	phosphide	P^{-3}
copper(II)	Cu^{+2}	potassium	K^+
cyanide	CN^-	silicate	SiO_3^{-2}
dichromate	$Cr_2O_7^{-2}$	silver	Ag^+
dihydrogen phosphate	$H_2PO_4^-$	sodium	Na^+
fluoride	F^-	strontium	Sr^{+2}
hydride	H^-	sulfate	SO_4^{-2}
hydrogen	H^+	sulfide	S^{-2}
hydroxide	OH^-	sulfite	SO_3^{-2}
hypochlorite	ClO^-	thiocyanate	SCN^-
iodate	IO_3^-	tin(II)	Sn^{+2}
		tin(IV)	Sn^{+4}
		zinc	Zn^{+2}