



## **MOUNT NOTRE DAME**

*Empowering Young Women*

### **Chemistry Summer Assignment**

Welcome to Chemistry at MND!

Chemistry has its own language in symbols and formulas. Your success in the course is dependent on your knowledge of the symbols of the elements and ions that will be used throughout the school year. It is important that you memorize these symbols and ions. You will encounter quizzes early in the year based on this study sheet.

You might make flashcards to help you memorize the proper spelling of the elements and ions and their correct formulas with proper charges. Study with a friend or family member. Learning is easier when you say it out loud and write it down often. Make a list of the ions or elements and see if you can get all the symbols correct. Then make a list of the symbols and see if you can spell their names correctly. The more often you work the list, the easier it will be to memorize them all.

To help you memorize the charges of the various ions, refer to periodic table provided that illustrates how elements within a given group in the periodic table all have the same charge. Trends exist in the relationship between the location of an element within the periodic table (specifically its group number) and the charge of an ion formed from that element. These trends are based on the principles of valence electrons and the octet rule, both of which you will learn more about in Chemistry class. Exceptions to this trend include the transition metals, elements in Group 14, as well as hydrogen.

Your Chemistry teacher will expect you to be able to give the correct spelling given the symbol or the correct symbol given the name. Here is your first chance to earn an "A" in Chemistry.

If you have any questions concerning this assignment email any of the Chemistry teachers below.

Have a good summer. We look forward to having you in class.

Mrs. Higgins  
[ahiggins@mndhs.org](mailto:ahiggins@mndhs.org)

Mrs. Grinsted  
[mgrinsted@mndhs.org](mailto:mgrinsted@mndhs.org)

Mrs. Rutschilling  
[grutschilling@mndhs.org](mailto:grutschilling@mndhs.org)

## Common Elements

Aluminum	Al	Lead	Pb
Argon	Ar	Lithium	Li
Barium	Ba	Magnesium	Mg
Beryllium	Be	Manganese	Mn
Boron	B	Mercury	Hg
Bromine	Br	Neon	Ne
Cadmium	Cd	Nickel	Ni
Calcium	Ca	Nitrogen	N
Carbon	C	Oxygen	O
Chlorine	Cl	Phosphorus	P
Chromium	Cr	Potassium	K
Cobalt	Co	Silicon	Si
Copper	Cu	Silver	Ag
Fluorine	F	Sodium	Na
Helium	He	Strontium	Sr
Hydrogen	H	Sulfur	S
Iodine	I	in	Sn
Iron	Fe	Zinc	Zn

## Common Monoatomic Ions

1+	2+	
hydrogen, H <sup>+</sup> lithium, Li <sup>+</sup> potassium, K <sup>+</sup> silver, Ag <sup>+</sup> sodium, Na <sup>+</sup>	barium, Ba <sup>2+</sup> magnesium, Mg <sup>2+</sup> cadmium, Cd <sup>2+</sup> manganese(II), Mn <sup>2+</sup> calcium, Ca <sup>2+</sup> cobalt (II), Co <sup>2+</sup> nickel (II), Ni <sup>2+</sup>	copper (II), Cu <sup>2+</sup> strontium, Sr <sup>2+</sup> iron (II), Fe <sup>2+</sup> tin(II), Sn <sup>2+</sup> lead (II), Pb <sup>2+</sup> zinc, Zn <sup>2+</sup>
3+	4+	
aluminum, Al <sup>3+</sup> chromium (III), Cr <sup>3+</sup> iron (III), Fe <sup>3+</sup>	lead (IV), Pb <sup>4+</sup> tin (IV), Sn <sup>4+</sup>	
1-	2-	3-
bromide, Br <sup>-</sup> chloride, Cl <sup>-</sup> fluoride, F <sup>-</sup> hydride, H <sup>-</sup> iodide, I <sup>-</sup>	oxide, O <sup>2-</sup> sulfide, S <sup>2-</sup>	phosphide, P <sup>3-</sup> nitride, N <sup>3-</sup>

