**Polyatomic Ions Assignment:**

Memorize the following list of polyatomic ions. Be able to identify the name when presented with the ion and be able to write the correct ion formula including all correct atoms, subscripts and charges when given the name of the ion.

Acetate C2H3O2-

Carbonate CO32-

Hydrogen carbonate (bicarbonate) HCO3-

Hydroxide OH-

Nitrate NO3-

Nitrite NO2-

Chromate CrO42-

Dichromate Cr2O72-

Phosphate PO43-

Hydrogen phosphate HPO42-

Ammonium NH4+

Hypochlorite ClO-

Chlorite ClO2-

Chlorate ClO3-

Perchlorate ClO4-

Permanganate MnO4-

Sulfate SO42-

Sulfite SO32-

Hydrogen sulfite (bisulfite) HSO3-

Hydrogen sulfate (bisulfate) HSO4-

Peroxide O22-

Cyanide CN-

Hypofluorite FO-

Fluorite FO2-

Fluorate FO3-

Perfluorate FO4-

Hypobromite BrO-

Bromite BrO2-

Bromate BrO3-

Perbromate BrO4-

Hypoiodite IO-

Iodite IO2-

Iodate IO3-

Periodate IO4-

You will be given a 34 pt quiz one week from now that will ask you to provide the name for a random half of these and the ion formula for the other half.

**THIS IS A VIP ASSIGNMENT! STUDENTS WHO KNOW THESE IONS WELL CAN EXPECT AN “A” OR “B” 2nd SEMESTER. IF YOU DO NOT MEMORIZE THESE, YOU WILL BE VERY LUCKY TO BE ABLE TO GET A “C”. THEY ARE FOUNDATIONAL FOR 3 OF THE NEXT 4 UNITS!!! YOU WILL RUN OUT OF TIME ON TESTS IF YOU DON’T KNOW THESE.**

Try out these **online games** to practice identifying polyatomic ions. Or check out **apps** on your phone to help you with them. I’m particularly fond of a Mahjong Chem app with matching polyatomic ions with their names.

http://www.chemfiles.com/flash/polyions.html

https://www.sporcle.com/games/sproutcm/so\_few\_cations

https://www.sporcle.com/games/RyanWitchey/Chem\_Anions

https://www.quia.com/jg/65617.html

Google “games for polyatomic ions” for even more options. Or create a new Kahoot or Quizlet.

Also consider making good old fashioned **flash cards** for the ions on file cards. Check out the document I have posted on our website for how to use flashcards most effectively. (It is based on cognitive psychology research – and yes, you ***must*** speak.)