

# FLHS/FWHS AP Chemistry Summer Assignment

2015-2016

Welcome to AP Chemistry! To keep chemistry fresh in your mind and prepare you for our class, please complete this summer assignment.

## **Part 1**

Read the first three chapters of Chemistry: The Central Science, Brown and LeMay, et al., 11<sup>th</sup> edition, 2009.

## **Part 2**

Answer the following problems. Show all work for full credit and be sure to include units where appropriate. Bring the completed problem set to our first class.

### Chapter 1

#13, 14, 18, 19, 24, 27, 35, 40, 41, 45, 49, 59, 61, 62, 67, 70, 72, 77, 80

### Chapter 2

#10a, 17, 19, 21, 22, 25, 38, 45, 49, 51, 55, 58, 65, 66, 67, 70, 82a-b, 90, 95, 98

### Chapter 3

#12, 13, 19, 21, 22, 33, 35, 45, 47, 50, 51, 53, 58, 63, 73, 78, 81, 86, 91, 93

## **Part 3**

Memorize the provided list of common polyatomic ions.

All of this material is a review from Chemistry 31. We will have a test on the first three chapters our first week back in school.

Welcome to AP Chemistry!

- Ms. Martel and Ms. Ramchandani

## Common Polyatomic Ions

### Cations (1+)

ammonium ( $\text{NH}_4^{1+}$ )

hydronium ( $\text{H}_3\text{O}^{1+}$ )

### Anions (1-)

acetate ( $\text{C}_2\text{H}_3\text{O}_2^{1-}$ )

bromate ( $\text{BrO}_3^{1-}$ )

cyanide ( $\text{CN}^{1-}$ )

dihydrogen phosphate ( $\text{H}_2\text{PO}_4^{1-}$ )

hydrogen carbonate or bicarbonate ( $\text{HCO}_3^{1-}$ )

hydrogen sulfite ( $\text{HSO}_3^{1-}$ )

hydroxide ( $\text{OH}^{1-}$ )

iodate ( $\text{IO}_3^{1-}$ )

nitrate ( $\text{NO}_3^{1-}$ )

nitrite ( $\text{NO}_2^{1-}$ )

perchlorate ( $\text{ClO}_4^{1-}$ )

chlorate ( $\text{ClO}_3^{1-}$ )

chlorite ( $\text{ClO}_2^{1-}$ )

hypochlorite ( $\text{ClO}^{1-}$ )

permanganate ( $\text{MnO}_4^{1-}$ )

thiocyanate ( $\text{SCN}^{1-}$ )

### Anions (2-)

carbonate ( $\text{CO}_3^{2-}$ )

chromate ( $\text{CrO}_4^{2-}$ )

dichromate ( $\text{Cr}_2\text{O}_7^{2-}$ )

hydrogen phosphate ( $\text{HPO}_4^{2-}$ )

peroxide ( $\text{O}_2^{2-}$ )

oxalate ( $\text{C}_2\text{O}_4^{2-}$ )

sulfate ( $\text{SO}_4^{2-}$ )

sulfite ( $\text{SO}_3^{2-}$ )

thiosulfate ( $\text{S}_2\text{O}_3^{2-}$ )

### Anions (3-)

phosphate ( $\text{PO}_4^{3-}$ )

phosphite ( $\text{PO}_3^{3-}$ )