WS 3.3: *Ion formation* *Name:*_____*p.*____

1a. Fill out this chart:

Element	***Metal or nonmetal?***	***Change in electrons when ion is formed***	***ion symbol***	***ion name***
Mg			Mg^{+2}	
Cl			Cl^{-1}	
Na		loses 1 electron		
N		gains 3 electrons		
Zn			Zn^{+2}	
S			S^{-2}	
P			P^{-3}	
K			K^{+1}	
Al		loses 3 electrons		
O		gains 2 electrons		
Ca			Ca^{+2}	
F			F^{-1}	

1b. Circle the correct ***words***: (Hint: **Cats** are good, therefore **cat**ions are positive!)

Metals tend to ***lose/gain*** electrons to become ***positive/negative*** ions called ***cations/anions***.

Nonmetals tend to ***lose/gain*** electrons to become ***positive/negative*** ions called ***cations/anions***.

2. Fill out the missing numbers or symbols for the atoms or ions in this chart.
(Don't assume that the protons and electrons are equal or that these are the most common isotopes)

Symbol	***# electrons***	***# neutrons***	***Mass #***	***# protons***	***Charge***
$^{208}Pb^{+4}$					
$^{31}P^{-3}$					
	10	14			+3
	54		131		-1
$^{235}U^{+6}$					
Si^{-4}		14			
		30		26	0
	36		90	38	

3. Notes and Demo: Formation of ionic compounds!

④ Combine the ions to form neutral compounds.

	Cl^{-1}	SO_4^{-2}	N^{-3}	OH^{-1}	PO_4^{-3}	CO_3^{-2}	$C_2H_3O_2^{-1}$
Na^{+1}							
Ca^{+2}							
Fe^{+3}							
Mg^{+2}							
NH_4^{+1}							
Al^{+3}							