

LO: Students will be able to name ionic compounds, covalent compounds, and acids.

DOL: Students will be able to correctly name 4/5 compounds.

### Polyatomic Ions

- Poly = more than one
- atomic = atom
- ion = +/- charge

Hence: polyatomic ion is a charged chemical species (ion) composed of two or more atoms covalently bonded

Make sure you write these in your notes:

Common Polyatomic Ions			
$C_2H_3O_2^-$	acetate	$OH^-$	hydroxide
$NH_4^+$	ammonium	$ClO^-$	hypochlorite
$CO_3^{2-}$	carbonate	$NO_3^-$	nitrate
$ClO_3^-$	chlorate	$NO_2^-$	nitrite
$ClO_2^-$	chlorite	$C_2O_4^{2-}$	oxalate
$CrO_4^{2-}$	chromate	$ClO_4^-$	perchlorate
$CN^-$	cyanide	$MnO_4^-$	permanganate
$Cr_2O_7^{2-}$	dichromate	$PO_4^{3-}$	phosphate
$HCO_3^-$	bicarbonate	$SO_4^{2-}$	sulfate
$HSO_4^-$	bisulfate	$SO_3^{2-}$	sulfite
$HSO_3^-$	bisulfite		

## Naming ionic Compounds

-Always state the cation first

-The anion name changes so as to end in "ide"

## Examples of naming ionic compounds



Oct 19-8:52 AM

Try these.....



Oct 19-9:07 AM

## Ionic Compounds with Polyatomic Ions

If the compound has more than 2 elements,  
look for the polyatomic ion.

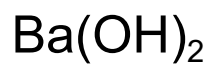
sodium acetate =  $\text{NaC}_2\text{H}_3\text{O}_2$

calcium phosphate =  $\text{Ca}_3(\text{PO}_4)_2$

ammonium oxide =  $(\text{NH}_4)_2\text{O}$

Oct 19-8:53 AM

Name these ionic compounds



Oct 19-9:04 AM

## Ionic Compounds with Transition Metals

-multiple oxidation states

-options for the charge

iron (II) oxide

Roman Numerals tell you the charge of the transition metal

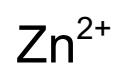
FeO

Oct 19-9:12 AM

What is the name for  $\text{Fe}_2\text{O}_3$

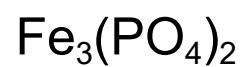
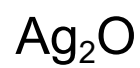
Oct 20-10:25 AM

Exception to transition elements:



Oct 20-10:29 AM

Write the names of these formulas:



Ions in group 4A need to have their charges displayed in ( ) because, like most transition elements, they too have options for their charge.

DO NOT use ( ) for ions we know the charges of: 1A = 1+, 2A = 2+, 3A = 3+

5A = 3- , 6A = 2-, 7A = 1-

Zn = 2+, Ag = 1+