

SKILLS

1. NAMES TO FORMULAS

2. FORMULAS TO NAMES

Vocabulary:

Due: Quiz Day

Word	Definition
Ionic Bond	
Covalent Bond	
Cation	
Anion	
Polyatomic Ion	
Binary Compound	
Ternary Compound	

SKILL #1: Translating Compound NAMES TO FORMULAS

Binary Compounds: Made up of _____ different elements.

Step 1: Identify the atoms involved.

Step 2: Draw the appropriate Lewis structure to make all atoms "Happy!"

Step 3: Number of each atom becomes the subscript

Step 4: Note the oxidation state of each atom.

Check: Overall charge on atom should be _____

Ex: Sodium Chloride

Na Charge _____

Cl charge _____

Ex: Calcium Oxide:

Ca charge _____

O charge _____

Complete the table for the following **IONIC** substances.

Name	Charge	Lewis Structure	Formula
potassium fluoride			
lithium bromide			
strontium chloride			

Ternary Compounds: Compounds involving polyatomic ions (_____ or more elements).

Name	Lewis Structure + Formula	Name	Lewis Structure + Formula
sodium sulfate		barium phosphate	

MULTIPLE OXIDATION STATES:

- GENERALLY METALS LOCATED IN THE _____ OF THE PERIODIC TABLE
- THEY HAVE _____ OXIDATION STATES, SO IT IS NECESSARY TO SPECIFY....
- ROMAN NUMERAL INDICATES THE CHARGED USED IN THE BOND.

Name	Charges	Lewis Structure	Formula
lead(II) iodide			PbI₂
copper(I) nitrate			
Sulfur (IV) Oxide			
chromium(V) chloride			
platinum(II) oxide			
Sulfur (II) Oxide			

SKILL #2: Translate Compound Formula to Name**Steps to Write Compound Name:**

1. Leave the first element
2. Add an "ide" ending to second
3. If more oxidation number listed, specify with roman numeral
4. If polyatomic, copy from Table E

Formula	How MANY oxidation states listed?		Name
	One	Two or more*	
LiBr			
Ag ₂ O			
Cu ₃ P			
Mg(NO ₃) ₂			
Co ₂ O ₃			
NaNO ₃			
KI			
NaClO			
Fe(OH) ₃			
PbSO ₄			
NaHCO ₃			
Ni ₂ (SO ₄) ₃			
N ₂ O ₃			

Practice:

Formula	Lewis Structure	Charges/What makes the atom happy!	Name
Mn ₂ O ₃			
Cu(NO ₃) ₂			
Au ₂ O ₃			
P ₂ O ₅			
Fe(OH) ₂			
SiO ₄			
NO			

