

Plan of the day
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NAMING COMPOUNDS

Grade Homework

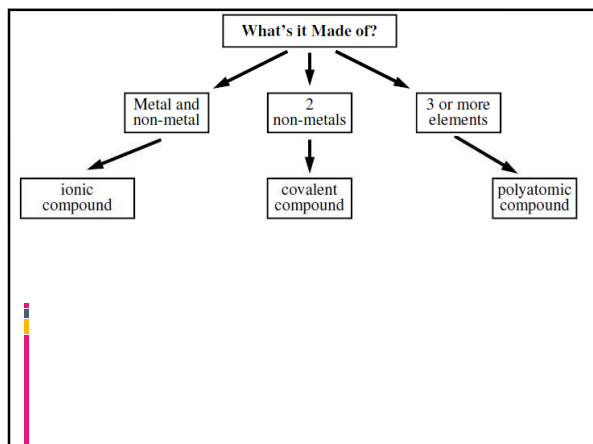
- Covalent Compounds

Quiz 9

- This quiz is not taken with your clickers
- You will need a pen or pencil and a piece of paper
- You will be given a Periodic Table to use
- Do not write on the class copy of the quiz

Naming Compounds

How to use this chart—
 Determine what the compound is made of and follow the arrows. The chart will tell you how to name the compound.



Ionic Compounds

USE "- IDE" ENDING
 (NO PREFIXES!)

Name the metal and non-metal
 and change the ending to "ide".



Metal and non-metal— ionic

Lithium Sulfide

(not dilithium sulfide—
no prefixes for ionic compounds)

Why are ionic compounds so easy to name? Because most ionic compounds can only form one way, using the oxidation numbers. In covalent compounds, though, non-metals can sometimes combine in multiple ways (carbon monoxide; carbon dioxide). So, covalent compounds use prefixes.

Covalent Compounds

USE GREEK PREFIXES

Put prefixes in front of element names to tell how many atoms are there.

Don't use "mono" for first name, but always for second name.



2 non-metals—covalent

(di =2 and tetra =4)

"Dinitrogen tetroxide"

Greek Prefixes

Mono - 1	Hexa - 6
Di - 2	Hepta - 7
Tri - 3	Octa - 8
Tetra - 4	Nona - 9
Penta - 5	Deca - 10

Hints to remember prefixes:

Monorail – one rail train
Monocle – glasses for one eye with only a single lens.

Dilemma – struggle between 2 choices.

Tricycle – 3 wheels

Pentagon – 5 five sided military building in Washington, D.C.

Octopus – 8 legs

Decade – 10 years

What does it mean to be Polyatomic?

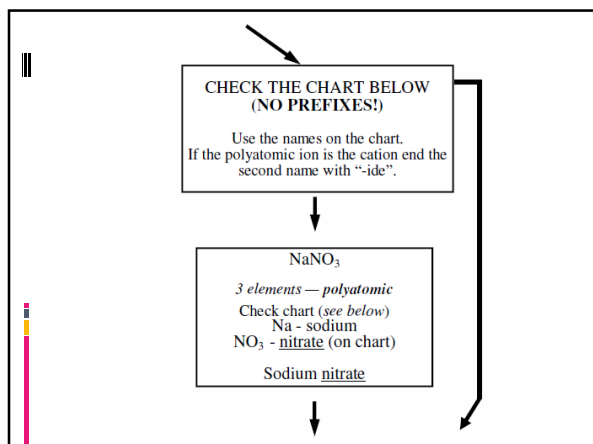
- What does the prefix Poly mean?
- More than two elements in the compound
 - $\text{Be}(\text{CO}_4)$
 - $\text{Mg}(\text{NO}_3)$

Exception—

O_2 is "peroxide" and can make polyatomic compounds with only 2 elements! O_2 with a non-metal is dioxide. O_2 with a metal OR Hydrogen (acting as a metal) is peroxide.

3 or more elements

polyatomic compound



Polyatomic Ions		
Oxidation #	Name	Formula
1+	ammonium	NH_4^+
1-	acetate	$\text{C}_2\text{H}_3\text{O}_2^-$
2-	carbonate	CO_3^{2-}
2-	chromate	CrO_4^{2-}
1-	hydrogen carbonate	HCO_3^-
1+	hydronium	H_3O^+
1-	hydroxide	OH^-
1-	nitrate	NO_3^-
2-	peroxide	O_2^{2-}
3-	phosphate	PO_4^{3-}
2-	sulfate	SO_4^{2-}
2-	sulfite	SO_3^{2-}

Homework

- Take the next 15 minutes to complete your homework
- This is not visit time nor walk around the room time
- We will play Jeopardy after your time is up