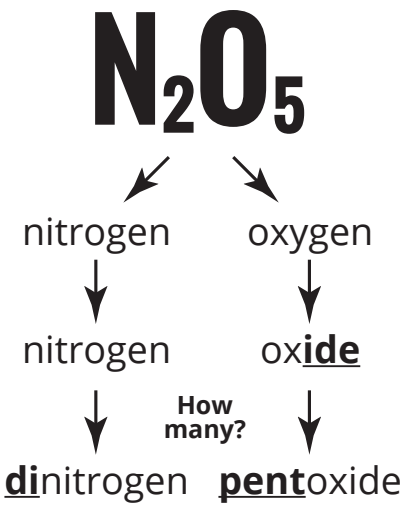
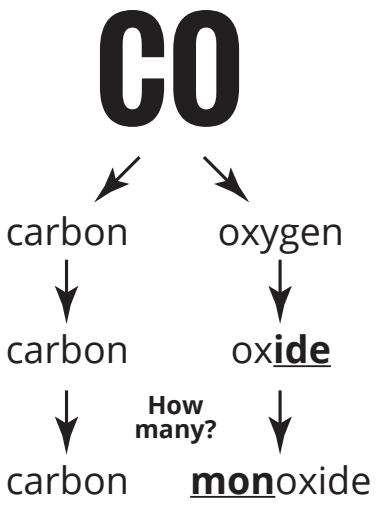
Writing Compound Names

Covalent Bonds
(a bond between two nonmetals)

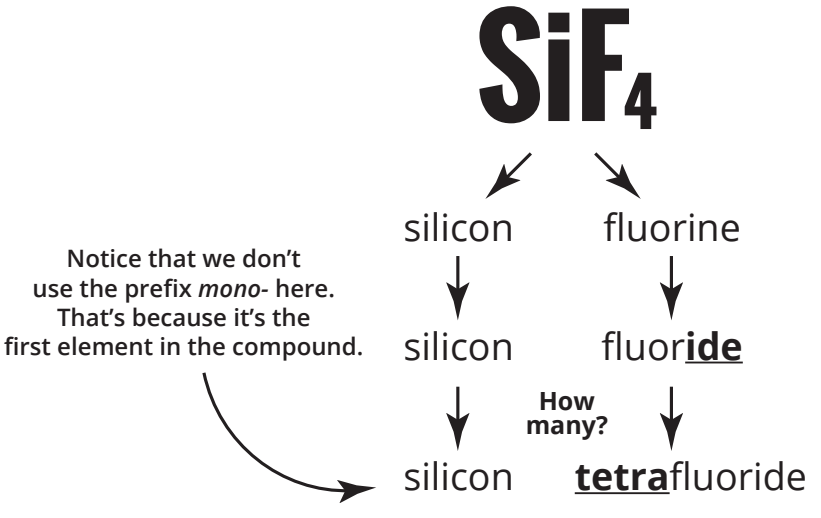




dinitrogen pentoxide

carbon monoxide

prefix	number
mono-	1
di-	2
tri-	3
tetra-	4
penta-	5
hexa-	6
septa-	7
octa-	8
nona-	9
deca-	10



silicon tetrafluoride

If the element starts with a vowel, you may need to drop the *o-* or *a-* at the end of your prefix.

penta- → **pent**oxide
di- → **di**oxide
tetra- → **tetr**oxide
hexa- → **hex**oxide

Writing Compound Names

Ionic Bonds
(a bond between a metal and a nonmetal)

Naming a Binary Ionic Compound
(two elements with no transition metals)

$NaCl$

sodium — chlorine → chlor**ide**

sodium chloride

K_2O

potassium — oxygen → ox**ide**

potassium oxide

Naming a Compound with a Transition Metal

$FeCl_2$

iron → iron **(II)**

chlorine → chlor**ide**

iron (II) chloride

Ag_2S

silver → silver **(I)**

sulfur → sulf**ide**

silver (I) sulfide

you can figure out this number based on the number of atoms of the second element

Naming a Compound with a Polyatomic Ion

$(NH_4)_2S$

ammonium — sulfur → sulf**ide**

ammonium sulfide

$Ca(ClO_3)_2$

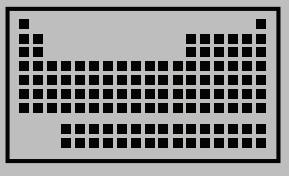
calcium — chlorate

notice that we don't change the ending of polyatomic ions

calcium chlorate

Element or Polyatomic Ion?

Elements are found on the **periodic table**.



Elements look like this:

H K O — one capital letter

OR

Cu Ag — one capital letter and one lowercase letter

Polyatomic ions are groups of two or more elements.

ClO_3 NH_4 OH

They stick together.