

# Nomenclature: Molecular Compounds

Learning goal

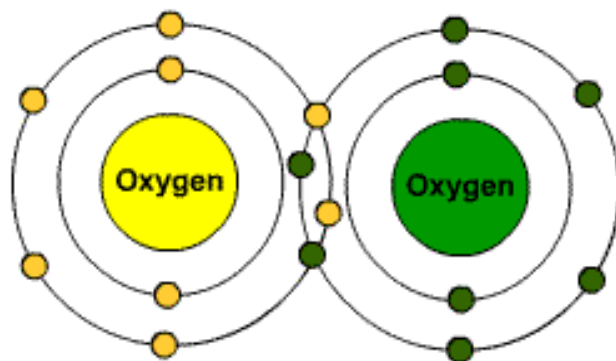
To be able to name and write chemical formulas for molecular compounds

## Covalent Compounds

- Form between TWO NON-METALS.
- Results from a **SHARING** of electrons between atoms.
- There are two types of covalent compounds:

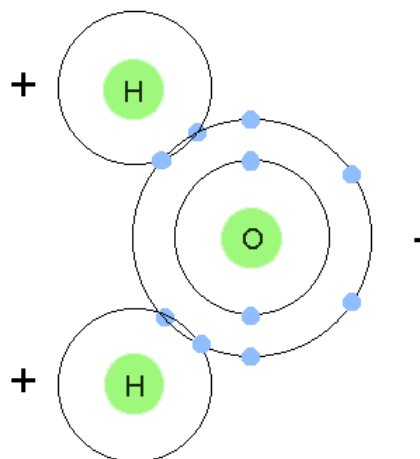
## Pure Covalent

– when the electrons are **shared evenly**.  
Happens when atoms are the same. For  
example O<sub>2</sub>.



## Polar Covalent

– when electrons are **not** shared evenly. One side of the compounds ends up being more negative than another. For example H<sub>2</sub>O.



# 1. Molecules (Covalent Compounds)

■ Non-metal + Non-metal

## ■ Naming:

         non-metal name +          non-metal with "ide" ending  
*prefix*                                  *prefix*

### prefixes

mono = 1,          di = 2,          tri = 3,          tetra = 4,

penta = 5          hexa = 6,          hepta = 7,          octa = 8,

nona = 9,          deca = 10

### \*Notes\*

- do not use "mono" for the first non-metal
- if the non-metal begins with a vowel, drop the "a" on the prefix (e.g. heptoxide)

■ *Writing chemical formula:*

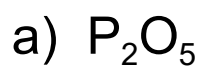
use prefixes to determine subscripts

\*Note\* - **do not** write chemical formula in reduced form

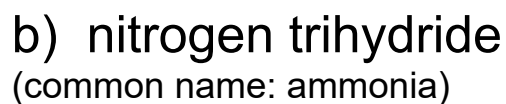
example: diphosphorus tetroxide



## Examples



Diphosphorus pentoxide



### Let's Try a Few

Write the name of the following compounds:



Carbon monoxide



Carbon dioxide



Phosphorus pentaBromide



DiNitrogen Oxide

## Let's Try a Few

Write the formula for the following compounds:



Diphosphorous trioxide



Xenon hexafluoride



Sulfur dioxide



## Diatomic molecules

- Two identical atoms linked together
- The following elements exist in pairs

H, O, Br, F, I, N, Cl

## Homework

- Molecular Compounds worksheet