

Unit 1: Chemistry (4.2)

SNC2DP



**Chapter 4: Developing
Chemical Equations**

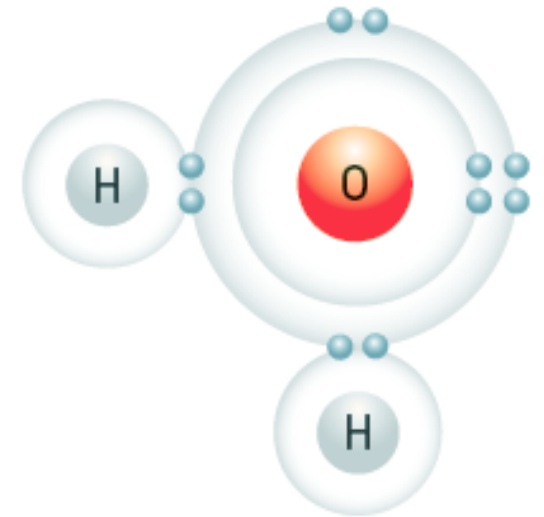
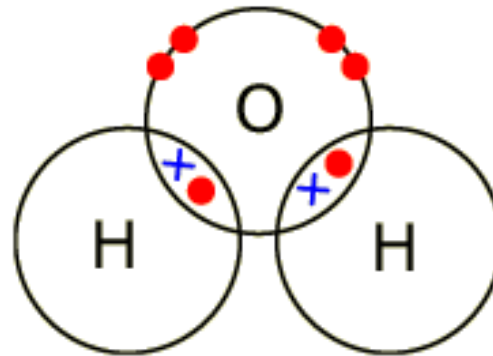
**Chapter 5: Classifying
Chemical Reactions**

**Chapter 6: Acids and
Bases**

Molecular Compounds

Molecular compounds are usually composed of two or more different

*Molecular compounds feature **covalent bonds** between **molecules** and are often referred to as **covalent compounds**.*



Each atom _____ its electrons to help satisfy the octet rule.

Naming Molecular Compounds

Rules for naming molecular compounds:

1. Count the number of atoms of the first and second element (subscript)
2. Replace the prefix of both elements as shown in the table above. (do not use prefix mono- for the first element).
3. Replace the suffix of the SECOND element with -ide.

Name the following molecular compounds:

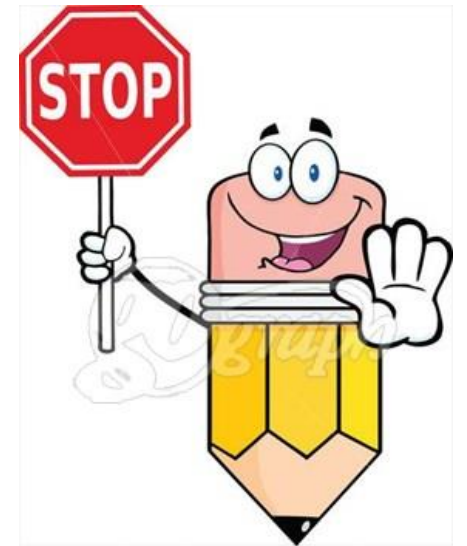
a) BrCl:

b) N₂O₄:

Prefix	Number
mono-	1
di-	2
tri-	3
tetra-	4
penta-	5
hexa-	6
hepta-	7
octa-	8

LET'S PRACTICE!

Name the following molecular compounds:



Molecular Compounds



Molecular compounds such as *nitrogen dioxide* (NO_2) contribute to the air pollution (smog) in major Canadian cities.



Molecular compounds such as *phosphorus trichloride* (PCl_3), used in herbicides, and *octane* (C_8H_{18}), used in gasoline, are part of our everyday lives.

Chemical Formula for Molecular Compounds

Rules for determining the chemical formula of molecular compounds:

1. Write the chemical symbol for the first element and determine its subscript by referring to its prefix.
2. Write the chemical symbol of the second element and determine its subscript by referring to its prefix.

Determine the chemical formula for the following molecular compounds:

- a) Phosphorus trichloride:
- b) Disulfur dinitride:

LET'S PRACTICE!

Write the chemical formula for the following molecular compounds:

A) nitrogen trifluoride

B) phosphorus tribromide

C) nitrogen trihydride

D) sulfur difluoride



HOMEWORK

- Complete the worksheets given in class