Name: _____ Date: _____

Lesson 8 Molecular Compounds (Nelson p.184-186)

Learning Goals:

A. Identify simple molecular compounds, using the periodic table, and write the formulae (C3.8)

- It is a compound that is made up of _____. The bond that forms between them is called a _____. The bonded atoms form a molecule.
- _____**:** A group of **two or more non-metal atoms** joined together with a **covalent bond**.
- The electrons are _____ between the two elements.

Naming Molecular Compounds Using the Prefix Method

- **Greek prefixes** are used to show the _____ of each element. (Some elements have more than 1 combining capacity.)
- The prefix "**mono**" is used **only** for _____ element in the name.
- When a prefix ending with a **vowel ("O" or "a")** is used with **oxygen**, the vowel is _____. Example, use "monoxide" not "monooxide", and "tetroxide" not "tetraoxide"

Common Prefixes Used in Naming

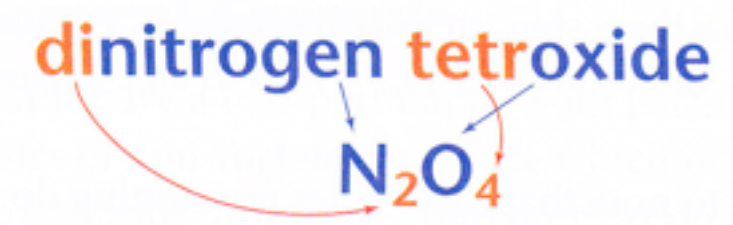
Number	Greek Prefix
1	**mon(o)-**
2	**di-**
3	**tri-**
4	**tetra-**
5	**pent(a)-**
6	**hex(a)**
7	**hepta-**
8	**oct(a)-**
9	**non(a)-**
10	**deca-**

NOTE: When there is **only one atom of the first element** in the molecular compound, the **prefix "mono" is not necessary**.

Step 1: Look at the formula.	Formula: **CO_2**
Step 2: The first element: use the periodic table to name it.	C = carbon
Step 3: Use the correct prefix for the number of atoms in the element.	**carbon** There is only 1 carbon atom, so the correct prefix is "mono". BUT "mono" is not included for the first element.
Step 4: The second element: use the periodic table to name it, BUT change the ending to "ide"	oxygen → **oxide**
Step 5: Choose the correct for the number of atoms of the element.	2 = **di** → **oxide** There are 2 oxygen atoms, so the correct prefix is "di"
Step 6: Combine the two parts of the name.	**Carbon dioxide**

Writing Formulas of Molecular Compounds

Step 1: Look at the name.	Formula: **dinitrogen tetroxide**
Step 2: Use the periodic table to find the symbols for the elements.	nitrogen = **N** oxide = oxygen = **O**
Step 3: Use the prefixes table to determine the number of atoms of each element.	di = **2** tetra = **4**
Step 4: Write in the subscript, and write the chemical formula.	**N_2O_4**



The chemical formula for dinitrogen tetroxide is N_2O_4.

Note: **Do not reduce the subscripts** if you write the chemical formulas from the compound names.