LEARNING AS ONE NATION

Expanded Project

GC1 Q1_11

SHS LEARNING ACTIVITY

Name: _____ **Score/Mark:** _____

Grade and Section: _____ **Date:** _____

Strand: ☑ STEM ☐ ABM ☐ HUMSS ☐ ICT (*TVL Track*)

Subject: *General Chemistry 1*

Type of Activity: ☑ Concept Notes ☐ Skills: Exercise/Drill ☐ Illustration ☐ Performance Task ☐ Essay/Report ☐ Others: _____

Activity Title: **A-09. Names and Chemical Formulas of Binary Molecular Compounds**

Learning Target: To name and write chemical formula of molecular compounds

References: *(Author, Title, Pages)*
Brown et al., Chemistry: The Central Science 12th edition. p. 65.
M.D.A.D. Cadeliña, CVIF-DLP Learning Activities

Binary molecular compounds consist of two non-metal elements forming covalent bonds. These are the following guidelines in naming binary molecular compounds:

1. The element closer to the metals in the PTE is usually named first using its elemental name (the one seen in the PTE). Generally, it is also written first in the formula. However, <u>for compounds containing O and Cl, Br, or I (any halogen except F), halogen is named first before O</u>.
2. If both elements are in the same column in the Periodic Table (referred to as 'group'), the one in the lower period (row) is named first.
3. The second element is named after the first using its elemental name with the ending changed to -ide.
4. The number or count of each element in the compound is indicated by Greek prefixes.

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

Note: Prefix mono- should never be used in the first element. When the prefix ends with an <u>a or o</u> and the name of the second element starts with a vowel, the prefix with an <u>a or o</u> is omitted.

Examples:

Cl_2O	1st element: **chlorine** (2) 2nd element: **oxygen** (1) name: di**chlorine** mon**oxide**
NCl_3	1st element: **nitrogen** (1) 2nd element: **chlorine** (3) name: **nitrogen** tri**chloride**

PN_3	1st element: **phosphorus** (1) 2nd element: **nitrogen** (3) name: **phosphorus** tri**nitride**
P_4O_{10}	1st element: **phosphorus** (4) 2nd element: **oxygen** (10) tetra**phosphorus** dec**oxide**

Exercises: Write the name or the formula as appropriate.

1) disulfur dichloride
2) sulfur hexafluoride
3) carbon monoxide
4) dinitrogen trioxide
5) NH_3
6) H_2O
7) CO_2
8) S_2O_{10}