Module 4; Lewis Structures of Covalent Compounds

Pre-Laboratory Exercise

Before you watch the video for this exercise, draw the Lewis structures of the following molecules. You should have learned how to draw Lewis Structures in Lecture video on Ionic compounds and covalent compounds (Module 4). Draw them on scratch paper. You will check your work when you watch the video: Note: Be and B are exceptions to the octet rule.

$BeCl_2$, CO_2, HCN, BF_3, CH_2O, SO_2, CH_4, NH_3, H_2O

Laboratory Exercise

Print the following page. Complete the table as you watch the following YouTube video. Submit your completed table for grading. **Note: you will not be required to predict bond angles as the speaker does; you will be predicting shape only.**

https://www.youtube.com/watch?v=nxebQZUVvTg

Molecule	Identify the **Central** Atom	Number of **atoms bonded to central** atom	Number of *non-bonding electron **pairs** around the **central** atom	Number of VSEPR Groups**	**Draw the Lewis structure showing the correct shape.** Use element symbols, dots for non-bonding electron pairs and dashes for bonded electrons.	Name the shape.
$BeCl_2$						
CO_2						
HCN						
BF_3						
CH_2O						
SO_2						
CH_4						
NH_3						
H_2O						

* The speaker uses the term “lone electron pair” instead of non-bonding electron pair. It is the same thing.
**Number VSEPR Groups is equal to the number of atoms bonded to the central atom plus the number of non-bonding pairs.