

## Activities

Begin by writing the electron configuration for each type of atom in the molecular formula. Use this configuration to identify the number of valence electrons for each atom. Draw Lewis structures for each molecule. Draw bond dipoles for each bond in the final structure.

- $\text{H}_2\text{S}$
- $\text{COCl}_2$
- $\text{SiI}_4$
- $\text{HCN}$
- $\text{NO}_2^-$
- $\text{H}_3\text{O}^+$
- $\text{CHBr}_3$
- $\text{OF}_2$
- $\text{CS}_2$
- $\text{PBr}_3$
- $\text{NOCl}$

**Draw Lewis Structures for each of the following molecular formulas. Identify the each as either a free radical, hypervalent molecule, or electron-deficient molecule.**

- $\text{XeF}_2$
- $\text{HO}$
- $\text{PCl}_5$
- $\text{BH}_3$
- $\text{CH}_2$
- $\text{SF}_6$
- $\text{CH}_3\text{O}$
- $\text{IF}_7$
- $\text{BeCl}_2$

Draw all of the resonance forms for each of the following molecules.

- $O_3$
- $NO_3^{1-}$
- $NO_2^{1-}$

