

RULES FOR DRAWING LEWIS STRUCTURES

1. Carbon is always central if it is present.
2. If there is no Carbon, the least electronegative atom is central (*An Electronegativity Chart will be available in order to find the value*).
3. Hydrogen is never central – it forms single bonds.
4. Halogens form single bonds
5. Count the total # of valence electrons for all atoms in the compound – account for these valence electrons in the drawing.
6. Add unshared pairs of electrons to each nonmetal (except hydrogen) so that each is surrounded by 8 valence electrons.
7. If there are too many electrons, subtract one lone pair (unshared pair) at a time until the # of electrons is correct.
8. Move 1 or more lone pairs (unshared pairs) that were subtracted to existing bonds between non-hydrogen atoms until all have eight.

SHAPE IS DETERMINED BY:

- # of lone pairs on the central atom
- # of bonded pairs shared
- Polarity of the molecule

POLARITY IS DETERMINED BY:

- Electronegativity difference in the bond.
- If the charge distribution in the molecule is asymmetrical or symmetrical. Asymmetrical will be “polar”.