

1) For each of the following molecules, draw the Lewis structure

a) carbon tetrafluoride	b) BF_3
c) NF_3	d) H_2CS
e) O_2	f) CH_2F_2
g) PF_3	h) H_2S
i) CF_2S	j) SHF
k) KI	l) OCS

- 2) Writing Lewis structures for ions and compounds with multiple central atoms.
 - a) Write the central atom.
 - b) Write all the other atoms around it (terminal atoms)
 - c) Bond them all with at least one bond.
 - d) Follow the rule given in the power point to determine how many bonds are needed for each atom (e.g. H and halogens, 1 bond; O is 2 bonds)
 - e) Assign all the valence electrons to all the atoms as needed.
 - f) Assign any remaining electrons to oxygen or the more electronegative atom.

As a failsafe, do these steps: 1) Add ALL the valence electrons of ALL the atoms. 2) If there is ONE negative charge, add one electron; if there is a ONE positive charge, subtract one electron. 3) After your final structure is drawn, add ALL the electrons in the compound. They should be the same as in step 1.

a) Carbonate Ion	b) Nitrate Ion
c) $\text{CH}_3\text{CH}_2\text{NH}_3^+$	d) ICl_4^-

- 3) Challenge compounds – do these once you are feeling comfortable with the compounds above.

CH_3COOH	HClO_3
There are 3 central atoms: C, C and O All atoms are connected as listed except the first oxygen – it is bonded only to the central C.	Cl is the central atom. Place all other atoms around it. Make sure all oxygens are bonded to Cl and the H is bonded to one of the oxygens. Remember: Cl is capable of having an expanded shell.