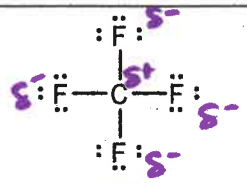
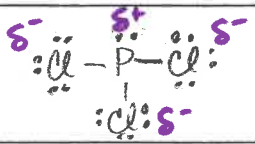
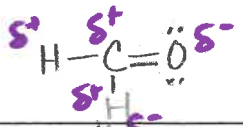
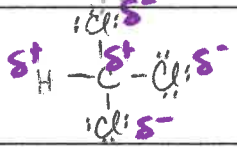
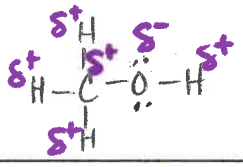
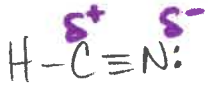
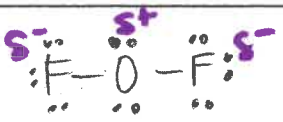
Exercises:

1. Complete the table below. The first one has been done as an example.

Formula	*Total valence electrons*	*Lewis structure*	*Shape around most central atom (molecular geom)*	*Approximate bond angles around most central atom*	*Ion, polar molecule, or nonpolar molecule*
CF_4	32		tetrahedral	109.5°	nonpolar molecule
PCl_3	5 +21 26 e⁻		trigonal pyramidal or pyramidal	109.5°	polar molecule
CH_2O (C is central)	4 2 + 6 12 e⁻		trigonal planar or triangular	120°	polar molecule
$CHCl_3$ (C is central)	4 1 + 21 26 e⁻		tetrahedral	109.5°	polar molecule
CH_3OH (C is central, bond the last H to the O)	4 3 6 + 1 14 e⁻		tetrahedral around C bent around O	109.5° 109.5°	polar molecule
HCN	1 4 + 5 10 e⁻		linear	180°	polar molecule
OF_2	6 + 14 20 e⁻		bent	109.5°	polar molecule

2. Go back to your Lewis structures in Exercise 1 and indicate the bond polarities by placing δ– or δ+ near all the atoms. Exception: The polarity of a C-H bond is so slight that it is normally ignored.

3. Read the assigned pages in your textbook and work the assigned problems.