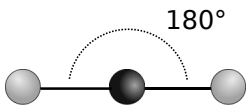
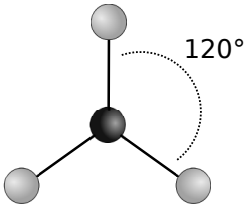
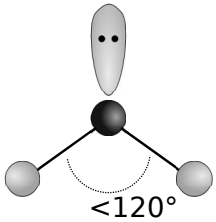
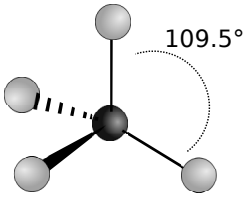
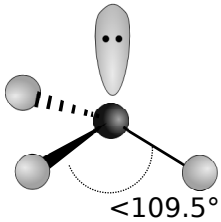
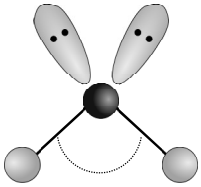
Drawing Simple Lewis Structures

1. Count valence electrons contributed from all atoms.
    a. For anions, add one electron for each negative charge.
    b. For cations, subtract one electron for each charge. Use this number of electrons exactly for bonding and non-bonding in the structure.

    These electrons must be distributed to all atoms such that each has an octet except hydrogen (“duet”).
2. Place atoms around a central atom (lone atom, or the atom with the lowest Electronegativity).
3. Place one bond (2 electrons) between each outer atom and the central atom. Subtract from the original electron count.
4. Place lone pairs (2 unshared electrons—non-bonding electron pairs) on the outer atoms (***except H***), until each has satisfied the octet or until there are no more remaining. Subtract from the count as you use them.
5. If there are remaining electrons, place them on the central atom, in pairs. Subtract electrons used.
6. If the central atom does not meet the octet, then share previously assigned nonbonding electrons from outer atoms to form double and triple bonds.

Valence Shell Electron Pair Repulsion Theory

Groups	0 Lone Pairs	1 Lone Pair	2 Lone Pairs
2	 Linear		
3	 Trigonal Planar	 <120° Bent	
4	 Tetrahedral	 <109.5° Trigonal Pyramid	 <109.5° Bent

Note: any structure with just two atoms bonded is linear