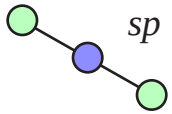
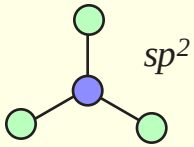
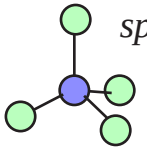
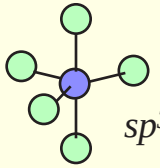
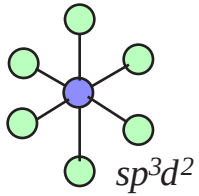
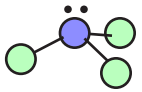
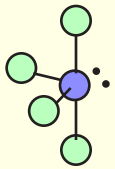
There are only **FIVE** possible electronic geometries which you establish by counting the number of electron regions surrounding the central atom

2 electron regions	**3** electron regions	**4** electron regions	**5** electron regions	**6** electron regions
				
linear	trigonal planar	tetrahedral	trigonal bipyramid	octahedral

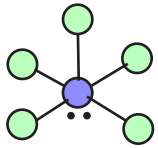
1 position occupied by a lone pair


bent

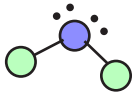

trigonal pyramid

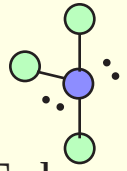

see-saw

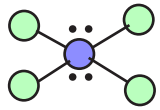
note that the lone pairs all go in the equitorial positions


square pyramid

2 positions occupied by a lone pair

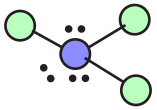

bent


T-shaped

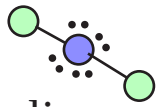

square planar

3 positions occupied by a lone pair


linear


T-shaped

4 positions occupied by a lone pair


linear

Molecular Geometries
can be any of the shapes on the whole page. The electronic geometries are only those in the box. The molecular geometry will be different from the electronic when there is at least one or more lone pairs on the central atom. Look at the top of the table and go DOWN a column. As you change from bonding electrons to lone pair electrons, the molecular shape is now different from the electronic because some of the positions are missing atoms. The new shape is then renamed based on the shape of the atoms.

Remember, once you have estabilished the correct electronic geometry, the molecular geometry MUST be either the same as the electronic or one of the shapes listed directly under the electronic geometry. In other words, each shape in a given column here has the same electronic geometry given at the top of the column.

Polarity
If all the positions on the electronic geometry are the same (have the same atoms surrounding the central atom), the molecule is NOT polar because of the symmetry. Any of the other molecular geometries (except square planar and linear) under the box will be polar.

McCord 4/2001