WORKSHEET #6

Name: **Date:**   **Period:**   **Seat #:**

Procedure:

1. For each of the following molecules of ions, determine the number of lone pairs and bond pairs around the central atom. What is the steric number from this?

2. Describe the structure according to number of regions of *electron density* as linear (2), triangular planar (3), tetrahedral (4), trigonal bipyramidal (5), or octahedral (6). Record this information in the data table in the column headed Electronic Geometry with lone pairs.

4. Rename the shape you see. This name tells you the molecular geometry of the molecule. Record this in the column headed Molecular Geometry Shape of the molecule column.

5. Estimate and note that angle between the atoms attached to the central atom. Record this in the data table.

Molecule or Ion	# of Lone Pairs	# of Bond Pairs	Steric #	Electronic Geometry w/ lone pairs	Molecular Geometry (shape of molecule)	Angle between bonds
$HgCl_2$						
CH_4						
NH_3						
H_2O						
PCl_5						
BF_3						
PBr_3						
SI_2						
SF_6						
HCN						