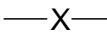
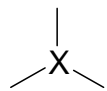
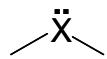

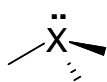



Valence Shell Electron Pair Repulsion (VSEPR) Theory

Geometry is determined around each central atom.

Electron Groups	Atoms Connected	Lone Pairs	Electronic Geometry	Molecular Geometry	Structure
2	2	0	linear	linear	
3	3	0	trigonal planar	trigonal planar	
3	2	1	trigonal planar	bent	
4	4	0	tetrahedral	tetrahedral	
4	3	1	tetrahedral	trigonal pyramidal	
4	2	2	tetrahedral	bent	

Electronegativity

Measures the pull an atom exerts on the electron; based on a 4.0 scale.

Electronegativity Difference	Bond Type	Example
Small (0.0-0.4)	pure covalent	O ₂
Intermediate (0.5-2.0)	polar covalent	HF
Large (2.1+)	ionic	KBr

