Unit 5.4: Chemical Bonding – Molecular Geometry

* The shape that a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonded substance will take is referred to as its Molecular Geometry.
* The shape is determined by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ atom, and the number of shared and unshared electron pairs around the atom.
* Electron pairs around the central atom will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as far as possible to minimize the repulsive forces.
* This gives bond \_\_\_\_\_\_\_­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ depending on the shape.

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| **Total # of electron pairs.** | **# of shared pairs** | **# of unshared pairs** | **Shape** | **Bond Angle** | **Draw shape** |
|  |  |  | **Linear** |  |  |
|  |  |  | **Trigonal**  **Planar** |  |  |
|  |  |  | **Trigonal**  **Pyramidal** |  |  |
|  |  |  | **Bent** |  |  |
|  |  |  | **Bent** |  |  |