

# Valence Shell Electron Pair Repulsion (VSEPR)

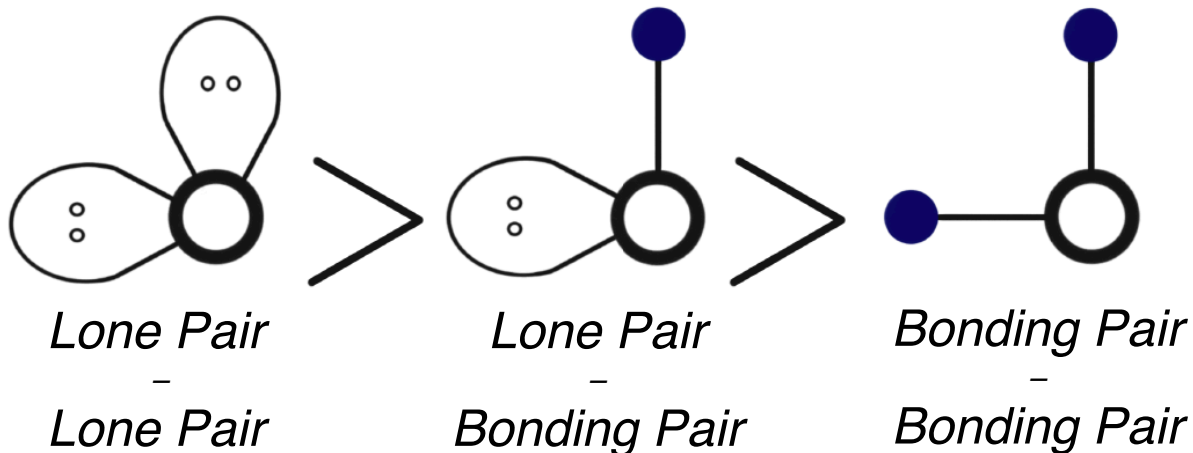
*Flash Review*

CHEM 371

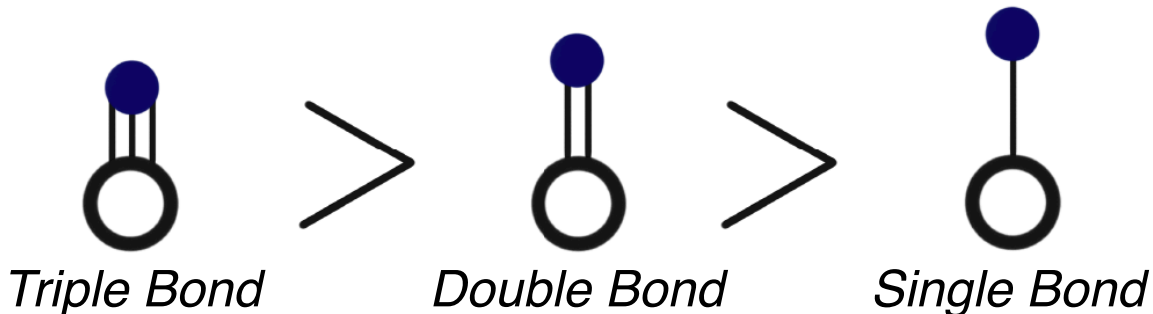
Dr. Christopher B. Durr



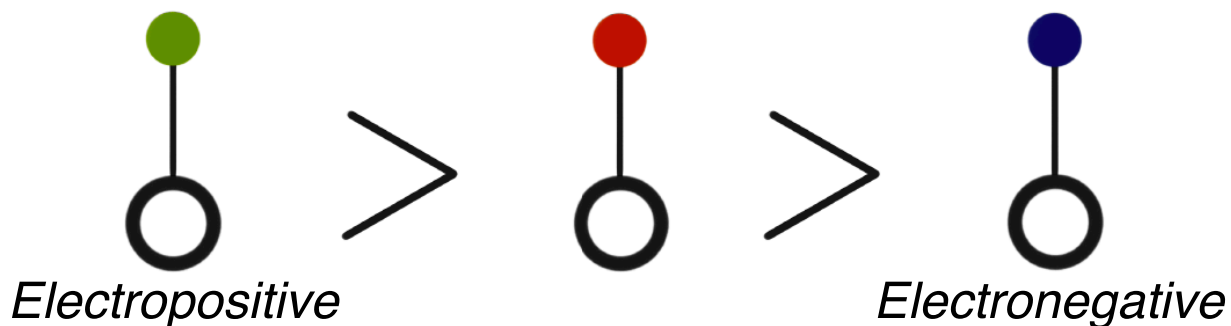
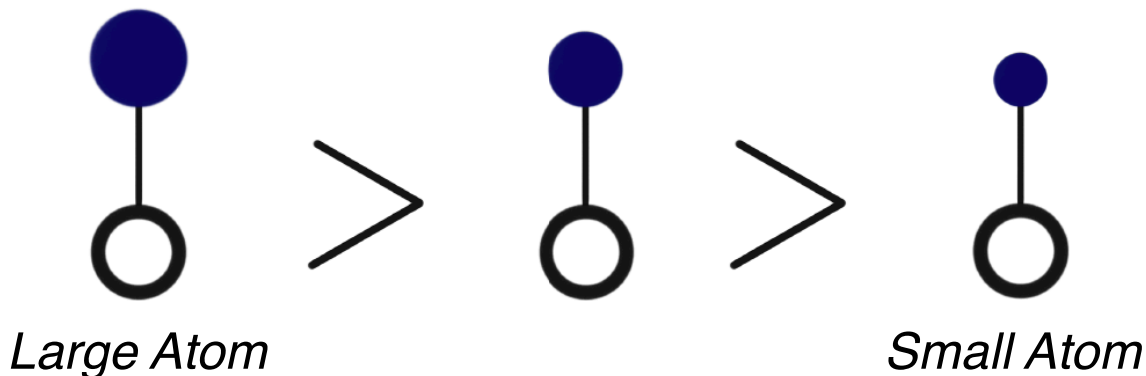
# VSEPR Repulsion Basics



More Repulsion



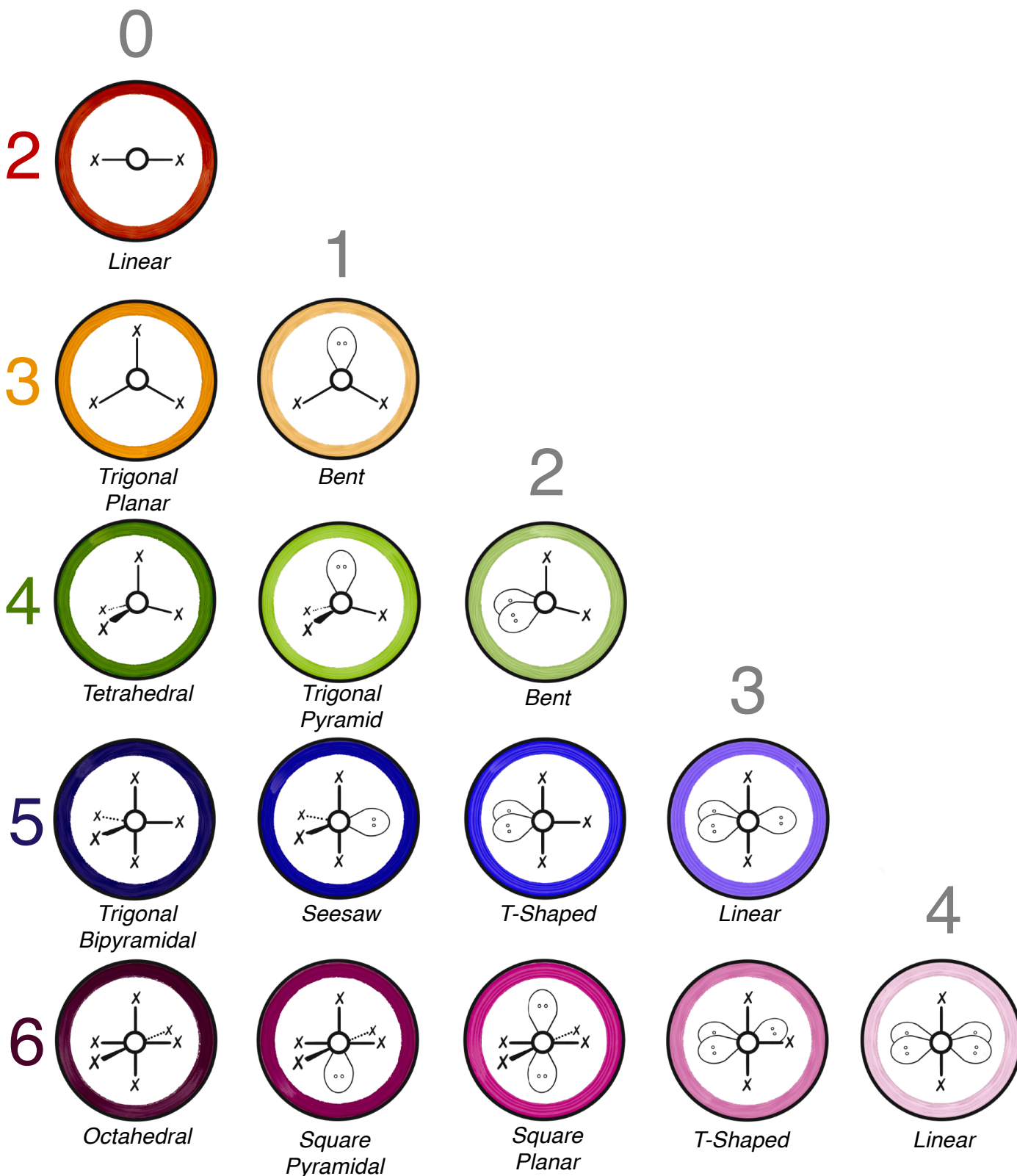
Less Repulsion



# VSEPR Predicted Shapes

*Number of Lone Pairs*

*Steric Number*



# Common VSEPR Mistakes

*Number of Lone Pairs*

0

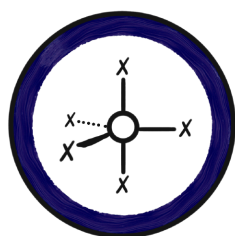
1

2

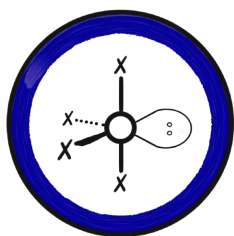
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4

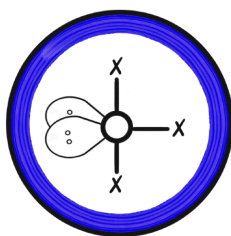
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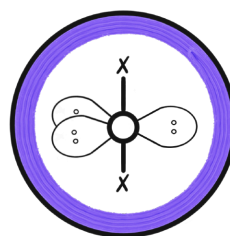
*Trigonal Bipyramidal*



*Seesaw*

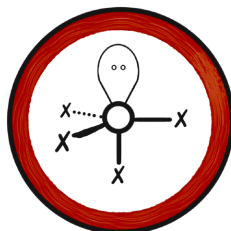


*T-Shaped*

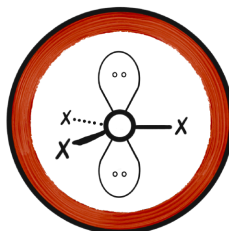


*Linear*

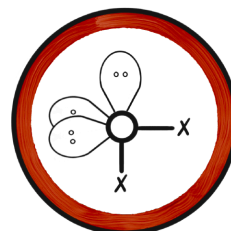
**Mistakes**



*Trigonal Pyramidal*



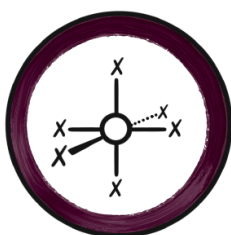
*Trigonal Planar*



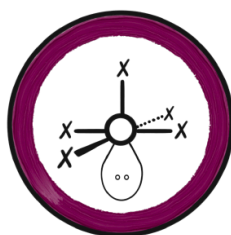
*Bent*

*Steric Number*

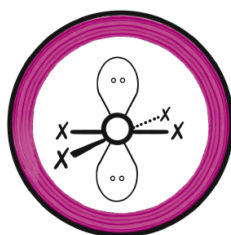
6



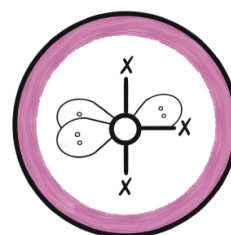
*Octahedral*



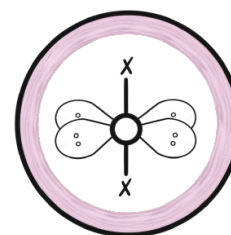
*Square Pyramidal*



*Square Planar*

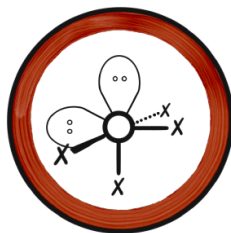


*T-Shaped*

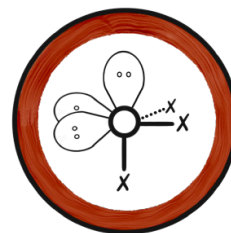


*Linear*

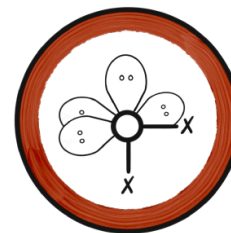
**Mistakes**



*Seesaw*

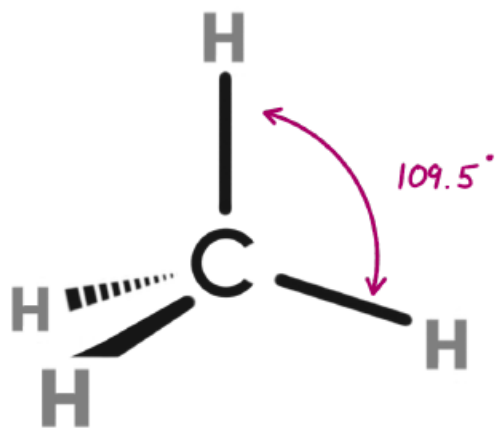


*Trigonal Pyramidal*

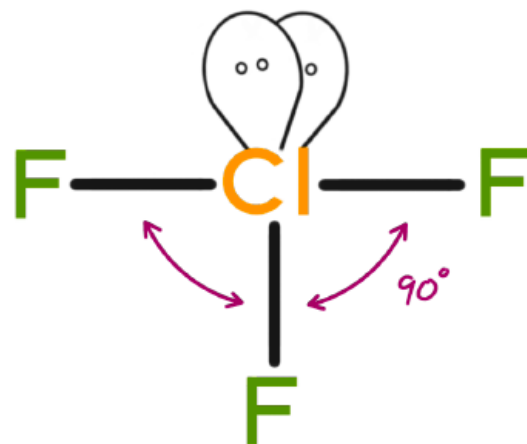


*Bent*

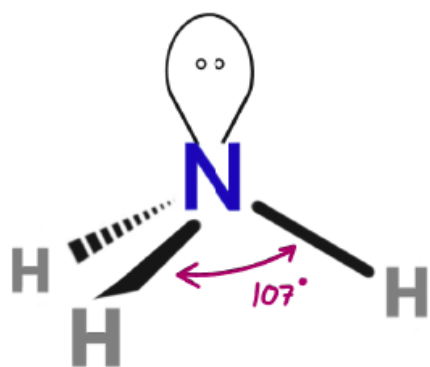
# VSEPR Bond Angles



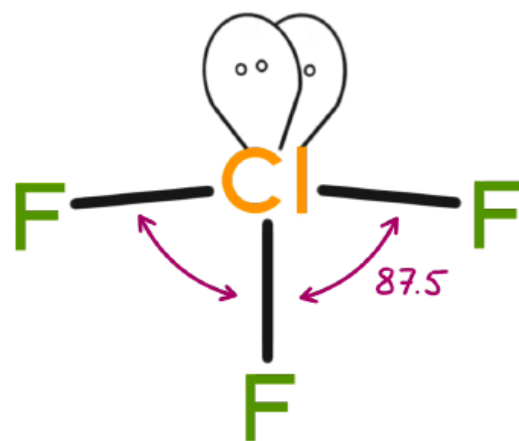
**Methane**



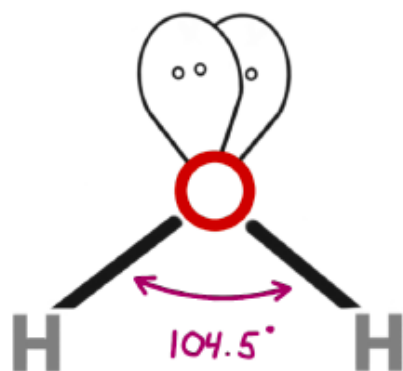
**ClF<sub>3</sub> : *Ideal***



**Ammonia**



**ClF<sub>3</sub> : *Reality***



**Water**