

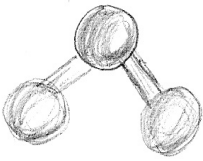
Molecular Geometry and Shape

Materials

For each pair of students

One Model Kit

Complete the following chart by building a model of each molecule

Formula	Name	Lewis Dot Structure	Drawing of Molecule Model	Arrangement of Electron Pairs	Molecular Shape	Draw Resonance Structures (if any)	Polar (P), Non-polar (N), or Ion (I)
0. H ₂ O	Water	$\text{H}-\overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{O}}}-\text{H}$		tetrahedral	bent		
1. NI ₃							
2. CO ₂							
3. SF ₆							

Formula	Name	Lewis Dot Structure	Drawing of Molecule Model	Arrangement of Electron Pairs	Molecular Shape	Draw Resonance Structures (if any)	Polar (P), Non-polar (N), or Ion (I)
4. SO ₂							
5. NO ₃ ¹⁻							
6. N ₂ H ₄ Hint: Two centers							
7. C ₂ H ₂							
8. SCN ¹⁻ (Use formal charge)							

Formula	Name	Lewis Dot Structure	Drawing of Molecule Model	Arrangement of Electron Pairs	Molecular Shape	Draw Resonance Structures (if any)	Polar (P), Non-polar (N), or Ion (I)
9. C ₂ H ₄ Br ₂							
10. O ₃							
11. CHCl ₃							
12. PCl ₅							
13. BH ₃							
14. BeCl ₂							

Formula	Name	Lewis Dot Structure	Drawing of Molecule Model	Arrangement of Electron Pairs	Molecular Shape	Draw Resonance Structures (if any)	Polar (P), Non-polar (N), or Ion (I)
15. CH ₂ O							
16. C ₂ H ₄							
17. H ₃ O ⁺							
18. XeF ₄							
19. SF ₄							
20. HC ₂ H ₃ O ₂							

Usual Colors (there will be some exceptions):

Black = Carbon Red = Oxygen Blue = Nitrogen Yellow = Hydrogen Green, Orange = Halogen

For other atoms pieces of any color that have the proper holes in the model may be used. Use springs for double and triple bonds.