

## Building Molecules Lab

- Purpose:
1. To construct Lewis Dot Structures of several molecules.
  2. To visualize the molecular geometries and predict shapes of several molecules.
  3. To predict resonance and polarity of molecular structures.

Background: Refer to notes and book and write 2 extended paragraphs about VSEPR. Include characteristics of molecules compared to ionic compounds, covalent bonding, Lewis Structures, molecular geometries, resonance of molecules, and polarity of molecules.

Hypothesis:

Materials: Molecular model kit  
Pencil  
Notebook information of diagramming molecules

### PROCEDURE:

1. Obtain a lab sheet and a molecular model kit.
2. Follow the instructions in your notes for diagramming Lewis Dot Structures, resonance, VSEPR, polyatomic ions, and polarity.
3. For each molecule listed on the lab sheet, you will construct a Lewis Dot Structure.
4. List the number of unshared pairs (lone pairs) on the central atom, and develop the correct VSEPR formula using AB and E (refer to chart of molecular geometries).
5. Draw and label a ball and stick VSEPR molecular geometry. (Refer to chart of molecular geometries).
6. Draw all variations of resonance if resonance is present. If there is no resonance, x-out the box.
7. Determine polarity of molecule and write polar or nonpolar in the box.
8. You must construct 3 molecules with your molecular geometry kit. The 3 molecules that must be that must be signed by the instructor for points are: **H<sub>2</sub>S**, **CH<sub>3</sub>Cl**, and **NH<sub>3</sub>**. THIS MUST HAVE THE TEACHERS SIGNATURE TO GET THE POINTS.
9. Return all borrowed materials and complete the lab.

Color Codes for Model Kits:	Single bonds:	light green tubes
	Hydrogen:	white
	Chlorine:	green
	Carbon:	black
	Nitrogen:	blue
	Sulfur:	red