

Name: \_\_\_\_\_  
Per: \_\_\_\_\_

### Molecular Structure Lab

II. Purpose: To model covalently bonded molecules to better understand their geometries and symmetries.

III. Procedure:

1. Collect a model kit and familiarize yourself with the atoms and bonds present
2. For each molecule:
  - a. Draw the Lewis Dot Structure
  - b. From the LDMS build a model of the molecule
  - c. Sketch the model in the space provided
  - d. Fill in the remaining information for each molecule

IV. Data

<u>Compound</u>	<u>LDMS</u>	<u>Drawing</u>	<u>DG</u>	<u>MG</u>	<u>Angle</u>	<u>Symet- rical?</u>
H <sub>2</sub> O						
CH <sub>2</sub> O						
BrCN						
CH <sub>2</sub> Cl <sub>2</sub>						
CF <sub>4</sub>						

IV. Data Continued.....

<u>Compound</u>	<u>LDMS</u>	<u>Drawing</u>	<u>DG</u>	<u>MG</u>	<u>Angle</u>	<u>Symet- rical?</u>
HClO						
C <sub>2</sub> Cl <sub>2</sub>						
SO <sub>4</sub> <sup>2-</sup>						
C <sub>6</sub> H <sub>6</sub>						
CH <sub>3</sub> COOH						
CH <sub>2</sub> CCH <sub>2</sub>						

VI. Conclusions

How do we determine the domain geometry of a central atom in a molecule? How do we determine the molecular geometry of a central atom in a molecule? What is true of the central atom if domain and molecular geometries of the molecule are the same?

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