

EXPERIMENT Ch 10: SHAPES OF MOLECULE

PURPOSE

What determines the shape of a molecule?

EQUIPMENT/ MATERIALS

Molecular model kit

Color Key:

Carbon = black

Hydrogen = white

Oxygen = red

Halogens (Cl, F, Br, I) = green

Nitrogen = blue

Phosphorus = purple

Sulfur = yellow

Boron = blue

PROCEDURE

1. Set up the following data table. **Leave at least 10 lines of space for each molecule.**
Your data table will cover at least 4 pages. Construct one model at a time and fill in table.

Formula	NAS	Lewis Dot Structure	# sigma bonds	# pi bonds
H ₂				
HBr				

Formula	NAS	Lewis Dot Structure	# sigma bonds	# pi bonds
H ₂ O				
NH ₃				
CH ₄				
HClO (O is in the middle)				

Formula	NAS	Lewis Dot Structure	# sigma bonds	# pi bonds
O ₂				
CCl ₄				
O ₃				
CH ₃ NH ₂				

Formula	NAS	Lewis Dot Structure	# sigma bonds	# pi bonds
N ₂				
SO ₂				
CO ₂				
H ₂ CO (C is in the middle)				

Formula	NAS	Lewis Dot Structure	# sigma bonds	# pi bonds
CH ₃ F				
C ₂ H ₆				
C ₂ H ₂				
C ₂ H ₄				

- Clean up:**
- 1. Put all atoms and bonds back in the baggie**
 - 2. Put all color pencils/markers back in the box**
 - 3. WASH YOUR HANDS!!!**