

BUILDING MOLECULES

Purpose:

The purpose of this activity is to build models of molecules with covalent bonds and determine if they are polar or non-polar molecules.

Materials:

- Molecule modelling kit
- pen or pencil
- paper

Method:

1. Determine which colour of ball represents the different elements.
2. Build molecular models for each of the following molecules:

- a. H₂ b. O₂ c. N₂ d. CH₄ e. CO₂ f. C₂H₂
- g. HCl h. H₂O i. Cl₂ j. CCl₄ k. NH₃ l. HF

Observations:

Molecule	Lewis Diagram	Sketch

Be sure to use correct VSEPR diagrams where necessary.

Discussion:

1. Which of the molecules contain double bonds? How many electrons are present in double bonds?
2. Which of the molecules contain triple bonds? How many electrons are present in triple bonds?
3. Use the Electronegativity values to fill in the following table for each molecule.

Molecule	ΔEN Value	Bond Type (Polar Covalent or Mostly Covalent)	Partial Charges (if any)	Molecule Type: Polar or Non-polar