Molecular Geometry
A molecule consisting of only two atoms has a __________ shape. A molecule with __________ atoms bonded to the central atom with __________ unshared pair(s) of electrons has a linear shape. A molecule with __________ atoms bonded to the central atom with __________ unshared pair(s) of electrons has a trigonal planar shape. A molecule with __________ atoms bonded to the central atom with __________ unshared pair(s) of electrons has a tetrahedral shape. A molecule with __________ atoms bonded to the central atom with __________ unshared pair(s) of electrons has a bent shape. A molecule with __________ atoms bonded to the central atom with __________ unshared pair(s) of electrons has a trigonal pyramidal shape.

Predicting Molecular Shapes
Draw each molecule and predict the shape each molecule will form.
IBr
CCl₄

PCl₃
H₂S

C₂H₂
SO₃

NH₂Cl
Polarity in Molecules
Determine the type of bonds in each of these molecules using the "Table of Electronegativities." Then, determine whether each of these molecules will be polar or nonpolar. Explain your reasoning.

IBr  CCl₄
PCl₃  H₂S
C₂H₂  SO₃
NH₂Cl

Intermolecular Forces
While bonding is the force of attraction WITHIN molecules, __________________________ are the forces of attraction BETWEEN molecules. Circle these forces in the following diagram.

Define "Dipole-dipole Forces."

Define "Hydrogen Bonding."

Define "London-Dispersion Forces."

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