4.4 VSEPR & Molecule Polarity Notes

Reminder Box:

Review: What does polar mean?

When is a bond polar?

What if there’s more than one bond?

Some Definitions

Bond Dipole

Partial Charges

Bond Character

Electrostatic Potential

Electron Density

Molecular Dipole

2 atoms:

3 atoms:

More than 3 atoms:

What makes a molecule polar?Example Molecules

For each of these, after you sketch the VSEPR shape, predict the bond polarity, molecule polarity, and where the partial charges are (δ+ and δ-).

HF

O2

BF3

CO2

CH2O

H2O

NH3

Why is it important to discuss these shapes and the polarity?