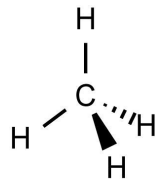
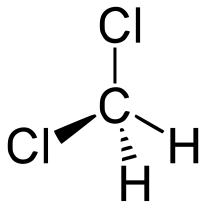
Name: Date: Pd:

Honors: Bond and Molecular Polarity Worksheet

Bond Polarity Practice:

Molecule:	Calculate EN difference for Bonds in this molecule:	Are the bonds Polar, Nonpolar, or Ionic?
		
		

Molecular Polarity Practice:

Name of Compound	Formula of Compound	Draw the "Rough Draft" of the Electron Dot Diagram	Final Electron Dot Diagram - Draw Dipole Vectors
Sulfur dichloride			
	CS_2		
	SO		
Nitrogen trihydride			

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Molecular Polarity PhET Questions - Demo on Screen - Link on website if you want to use it!

Two Atoms Simulation:

1. Describe what happens to the polarity of the bond as shown by the dipole vector when the electronegativity of atom B is increased.

2. What happens to the Bond Character when the electronegativity of atom B is increased? Why?

Three Atoms Simulations:

3. Why is the molecular dipole (net dipole) pointing up at the start of the simulation?

4. Watch as Mr. G increases the electronegativity of Atom A and Atom C.
   a. How did the dipole vectors of each bond change?

   b. How did the net dipole change?

5. Watch as Mr G. moves the molecule into a linear shape.
   a. What happens to the net dipole?

   b. Is the molecule considered to be polar or nonpolar?

Molecular Polarity:

Molecular Formula:	Draw Dipole Vectors and Predict the Net Dipole (if applicable)	Molecule Polar or Nonpolar?
H_2O		
SF_2		
NH_3		
CH_4		

***KEY POINT**: Does the shape of a molecule affect its polarity? _____*