

Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 5H – Polar and Non-Polar Molecules

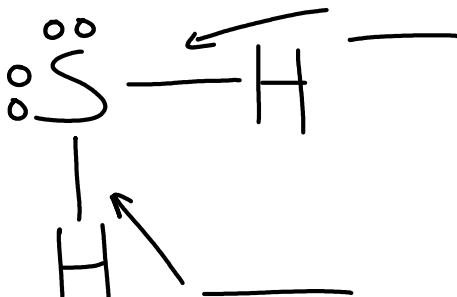
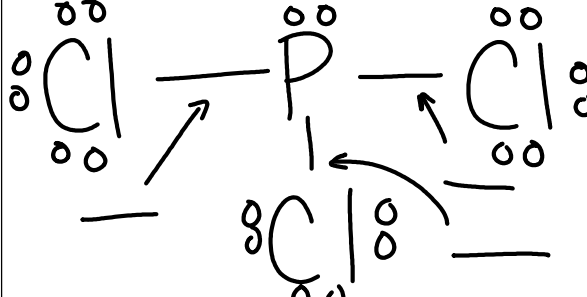
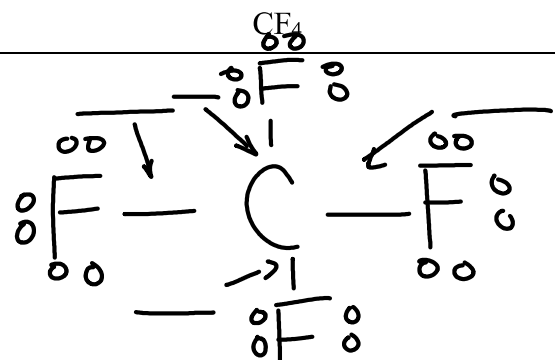
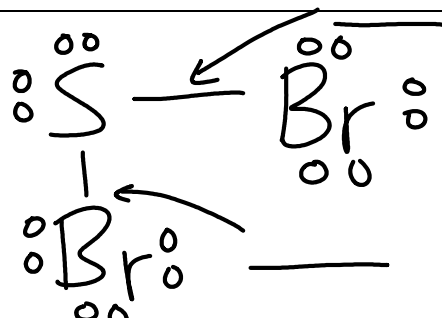
20 Points

Answer the following questions

What makes a molecule (<i>not a bond</i>) polar?	What makes a molecule non-polar?
What is a dipole in a molecule?	What is the interaction between polar and non-polar molecules?

Using the electronegativity chart with the VSEPR molecule structures to see if the bonds and the molecule itself is polar or non-polar. For polar bonds and molecules draw the dipoles.

Ionic – ED > 1.9	Polar – ED 0.5 – 1.9	Non-Polar – ED < 0.5
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H ₂ S	PCl ₃
	
Molecule Type (<i>Polar/Non-Polar</i>)	Molecule Type
CF ₄	SBr ₂
	
Molecule Type (<i>Polar/Non-Polar</i>)	Molecule Type

H 2.1	Electronegativity Table Metals and Non-Metals																He ---
Li 1.0	Be 1.5											B 2.0	C 2.5	N 3.0	O 3.5	F 4.0	Ne ---
Na 0.9	Mg 1.2											Al 1.5	Si 1.8	P 2.2	S 2.5	Cl 3.0	Ar ---
K 0.8	Ca 1.0	Sc 1.3	Ti 1.5	V 1.6	Cr 1.6	Mn 1.5	Fe 1.8	Co 1.8	Ni 1.8	Cu 1.9	Zn 1.6	Ga 1.6	Ge 1.8	As 2.0	Se 2.4	Br 2.8	Kr 3.0
Rb 0.8	Sr 1.0	Y 1.2	Zr 1.4	Nb 1.6	Mo 1.8	Tc 1.9	Ru 2.2	Rh 2.2	Pd 2.2	Ag 1.9	Cd 1.7	In 1.7	Sn 1.8	Sb 1.9	Te 2.1	I 2.5	Xe 2.6
Cs 0.7	Ba 0.9	La-Lu 1.1-1.2	Hf 1.3	Ta 1.5	W 1.7	Re 1.9	Os 2.2	Ir 2.2	Pt 2.2	Au 2.4	Hg 1.9	Tl 1.8	Pb 1.8	Bi 1.9	Po 2.0	At 2.2	Rn ---
Fr 0.7	Ra 0.9	Ac-No 1.1-1.7															