Name: _____

Block: _____

Covalent Bond Polarity

For each bond:

1. Calculate the electronegativity difference ($\Delta\chi$) for the bond.
2. Classify the bond as either **polar** or **non-polar**.
3. If the bond is polar, draw an arrow above the bond showing the direction of polarity (pointing toward the more electtronegative atom).

You will need a periodic table with electronegativity values for these problems.

Bond	$\Delta\chi$	Bond Character
C—N		
H—O		
N—O		
S—O		
C—S		
Si—O		
P—Cl		
O—F		
B—F		
Se—O		
C—Cl		
C—Br		

Name: Key

Block: _____

Covalent Bond Polarity

For each bond:

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You will need a periodic table with electronegativity values for these problems.

Bond	$\Delta\chi$	Bond Character
$\overrightarrow{\text{C—N}}$	0.5	polar
$\overrightarrow{\text{H—O}}$	1.4	polar
$\overrightarrow{\text{N—O}}$	0.5	polar
$\overrightarrow{\text{S—O}}$	1.0	polar
C—S	0	non-polar
$\overrightarrow{\text{Si—O}}$	1.7	polar (on the border)
$\overrightarrow{\text{P—Cl}}$	0.9	polar
$\overrightarrow{\text{O—F}}$	0.5	polar
$\overrightarrow{\text{B—F}}$	2.0	ionic
$\overrightarrow{\text{Se—O}}$	1.1	polar
$\overrightarrow{\text{C—Cl}}$	0.5	polar
$\overrightarrow{\text{C—Br}}$	0.3	polar