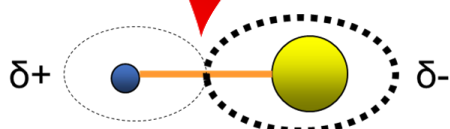


START HERE

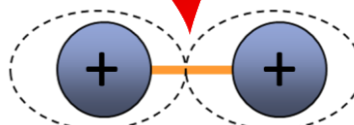
Does my molecule have different atoms in it or the same atoms?

Different

Same



Your molecule has **polar bonds** because the electronegativity is different in both atoms and the electrons are NOT shared evenly. The bond has a **dipole**.

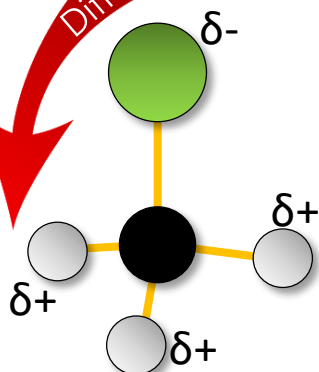


Your molecule has **non-polar bonds** because the electronegativity is the same in both atoms and the electrons are shared (distributed) evenly.

Does your molecule have the same or different atoms around the central atom?

Different

Same

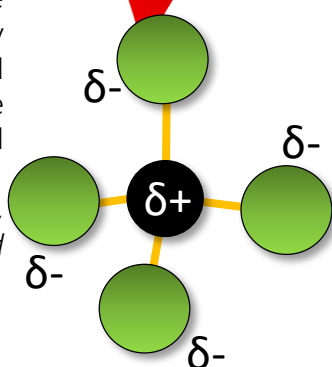


Your whole molecule is **polar** because the dipoles do not cancel out. i.e. CH3Cl

Polar

The polar bonds are spread symmetrically around the central atom and therefore the dipoles do cancel out. i.e. CCl4
Shapes: tetrahedral, trigonal planar and linear

Non-polar



Does your molecule have non-bonding pairs around the central atom?

No

Yes

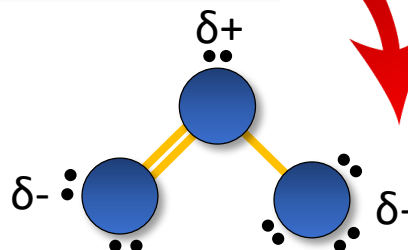
Your whole molecule is also **non-polar** with no dipoles. i.e. I2

Non-polar

Is my whole molecule symmetrical with no non-bonding pairs?

Yes

No



Your whole molecule is **polar**. Uneven sharing of electrons across the molecule create dipoles. i.e. O3

Polar

The polar bonds are not spread symmetrically around the central atom and therefore the dipoles do **NOT** cancel out. i.e. NH3
Shapes: trigonal pyramid, bent

Polar

