

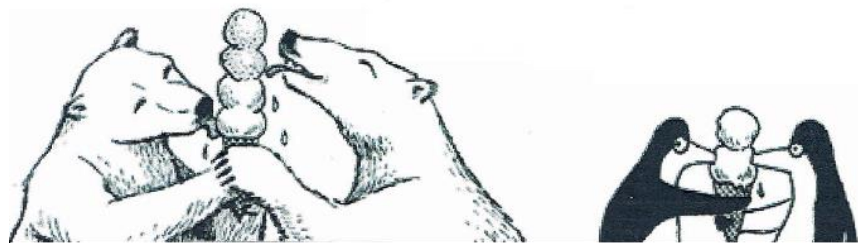
VERBAL Jumpstart

Welcome Back!

Picture 1



Picture 2



Hope you had a great
VaCation!

How do Picture 1 and 2 relate to what you have learned about atoms and how they bond?

Guiding Questions:

- 1) What do the polar bears represent?
- 2) What do the penguins represent?
- 3) What does the ice cream represent?
- 4) What kind of bond is represented in Picture #1
- 5) In Picture #2?

Molecular Forces

Vocabulary

INTRAmolecular Forces

Forces holding together the atoms **INSIDE** a molecule or compound.

Examples: Ionic forces, covalent forces, polarity

INTERmolecular Forces

Attractions or repulsions which act **between neighboring molecules**

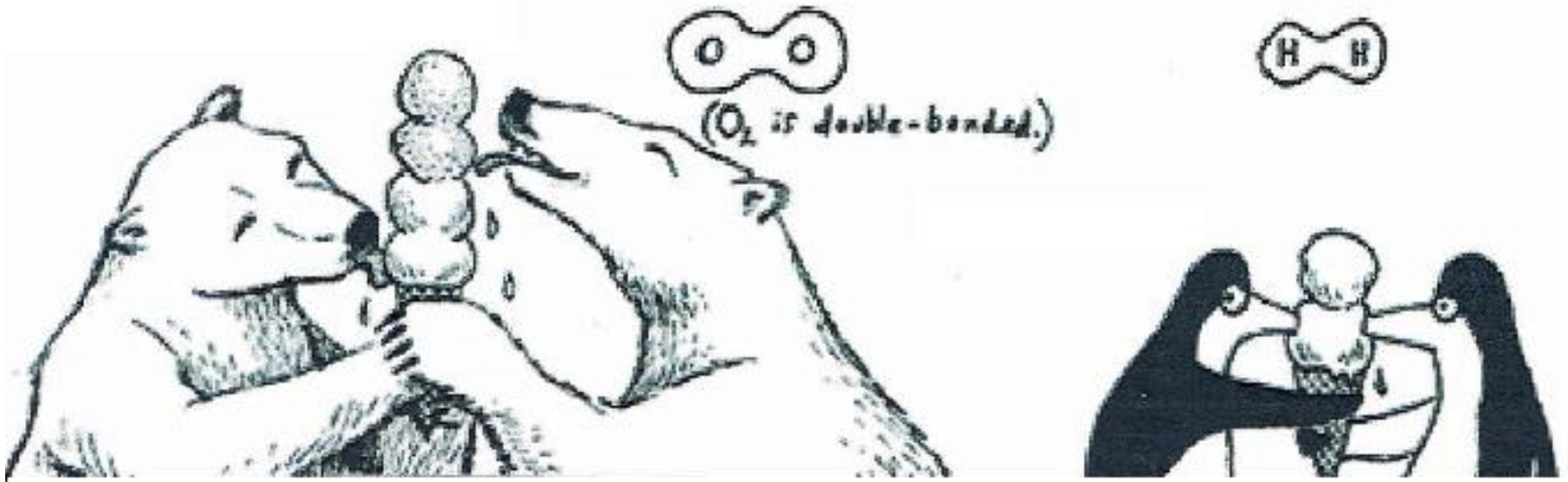
Examples: Hydrogen bonding, dipole-dipole forces, London forces

Intramolecular

Polarity (Intra)

What's happening inside covalent molecules like O_2 or H_2 ?

Electrons are shared *equally*



Molecules become **POLAR** when electrons are **not shared equally**

Example: HF

HF is covalent but electrons are not shared equally



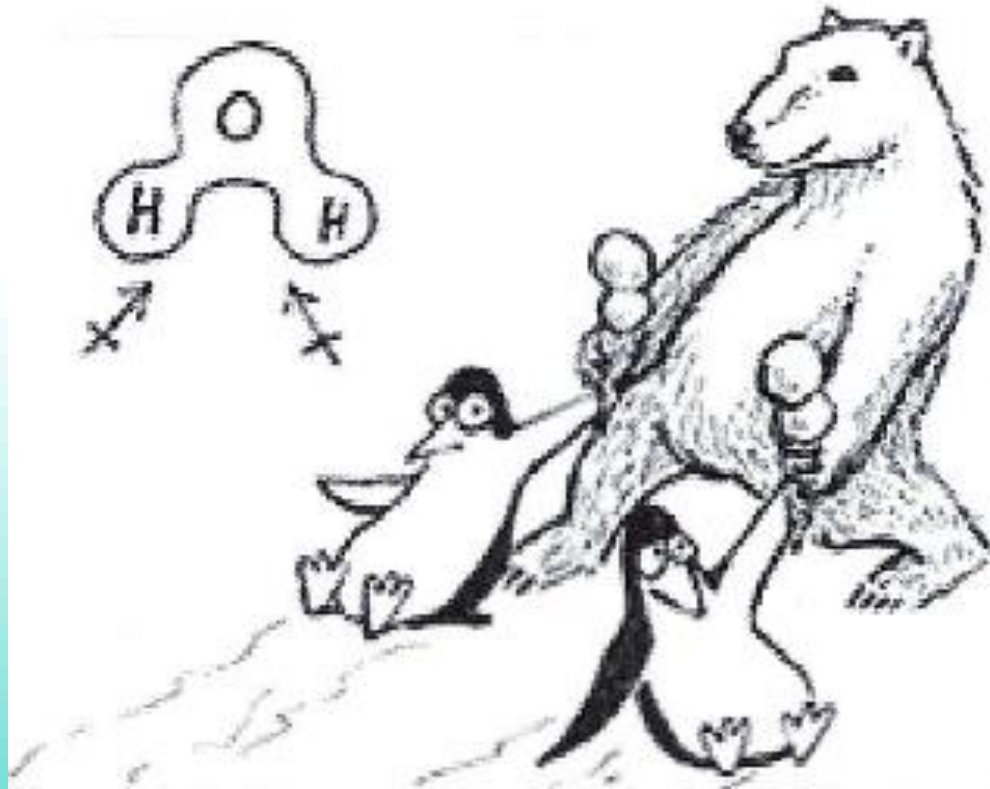
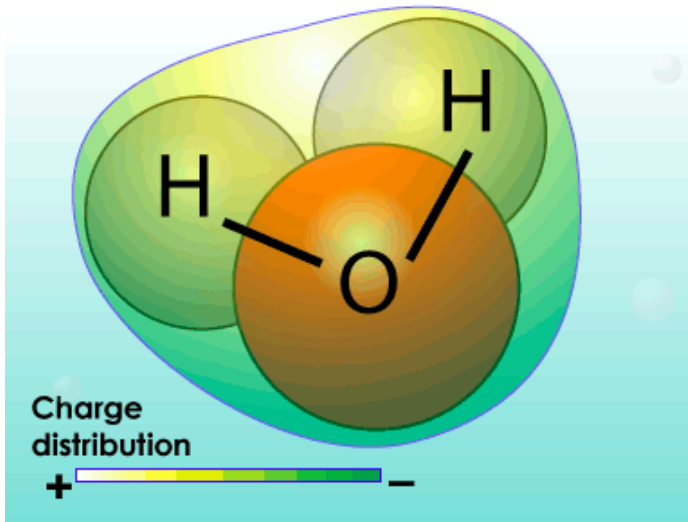
Polar molecules with more than 2 atoms

Water has:

2 H's willing to almost give up electrons

1 electronegative O

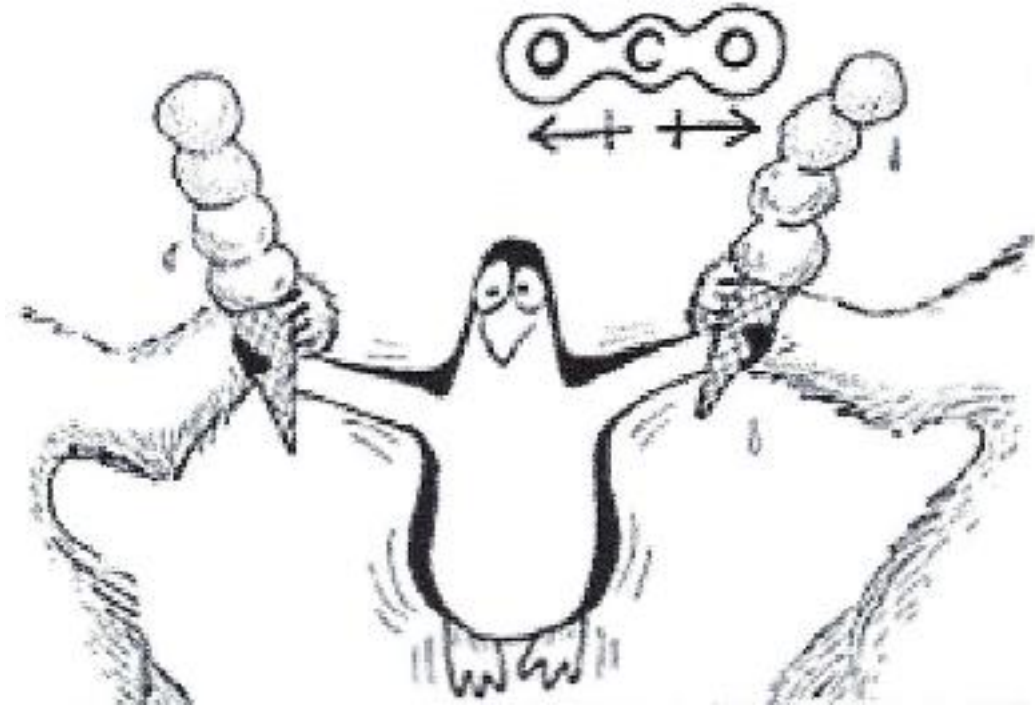
Ends up UNEQUAL



Symmetry...the pole destroyer!

CO₂

Has 1 carbon surrounded by 2 electronegative Oxygens, but is **NOT** polar?!?!



Symmetrically pulling electron density away from the center of a molecule **EVENLY** makes it non-polar

INTERmolecular Forces Research

Make smart choices....

Don't make me take away the iPads 😊

Exit ticket discussion

- 1) Today's lesson helped me to understand.....
- 2) One new think I learned today was.....
- 3) One thing that I was surprised by today was.....
- 4) One topic from today that I need more clarification on is.....