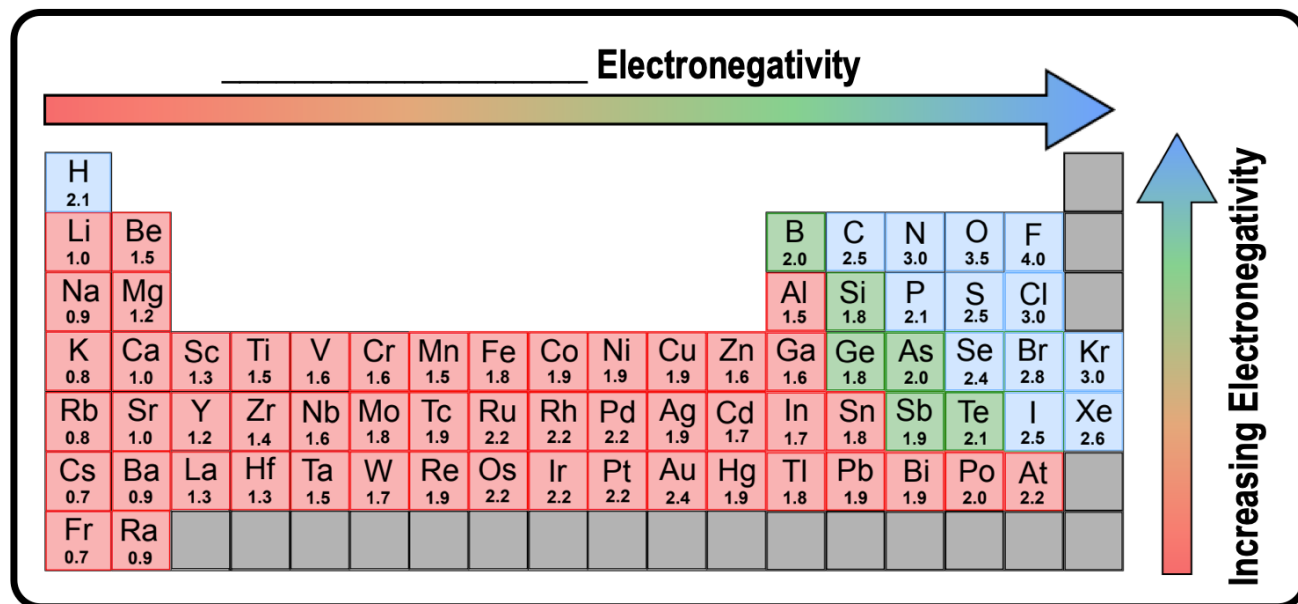


CONCEPT: COVALENT BONDS

- _____ Bonds: an interaction between 2 atoms resulting from the _____ of electrons.
 - _____ types of covalent bonds: 1) _____-Polar Covalent & 2) _____ Covalent.
- The two types of covalent bonds exist due to differences in atoms' _____.
 - *Electronegativity*: a measure of an atom's attraction to _____ (scaled from 0-4).



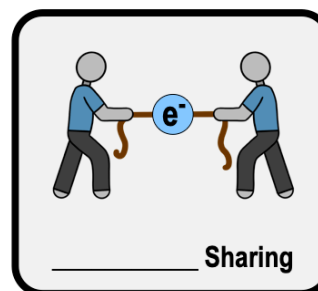
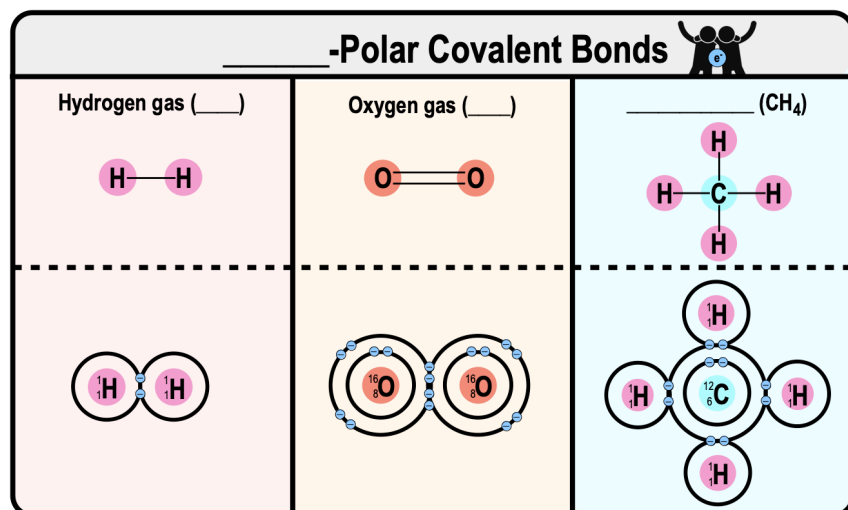
PRACTICE: When two atoms share a pair of electrons, the bonding is referred to as:

- a) Ionic. b) Covalent. c) Unstable. d) Hydrogen. e) Polar.

Nonpolar Covalent Bonds

1) *Nonpolar Covalent Bond*: _____ sharing of *electrons* between atoms (due to *similar* electronegativities).

EXAMPLE: Nonpolar Covalent Bonds.



CONCEPT: COVALENT BONDS

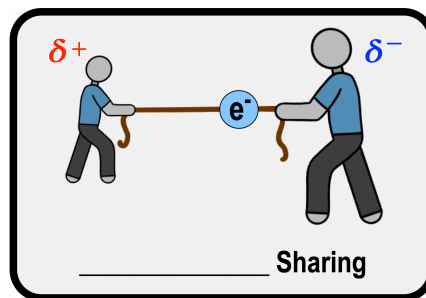
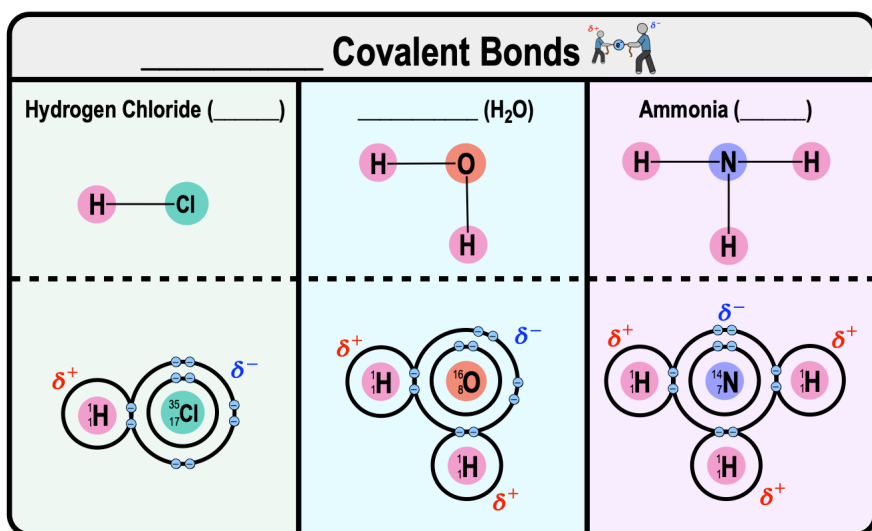
PRACTICE: What makes a covalent bond nonpolar?

- a) The bonded atoms share electrons unequally.
- b) The bonded atoms share electrons equally.
- c) The bonded atoms have equal electronegativities.
- d) The bonded atoms have unequal electronegativities.
- e) a and d only.
- f) b and c only.

Polar Covalent Bonds

2) *Polar Covalent Bond*: _____ sharing of *electrons* between atoms (due to *different* electronegativities).

□ Unequal distribution of electrons between atoms leads to _____ (δ) charges.



PRACTICE: If a covalent bond is polar:

- a) Electrons are not shared by atoms.
- b) Protons are shared by atoms.
- c) The bond is not important to living cells.
- d) One of the atoms has a partial negative charge.
- e) The bond is not a strong bond.

CONCEPT: COVALENT BONDS

PRACTICE: Bonds between two atoms that are equally or similarly electronegative are _____.

- a) Polar covalent bonds.
- b) Nonpolar covalent bonds.
- c) Intermolecular bonds.
- d) None of the above.

PRACTICE: The hydrogens and oxygen of a water molecule are held together by _____ bonds.

- a) Electron.
- b) Hydrogen.
- c) Covalent.
- d) Osmotic.
- e) Non-covalent.
- f) None of the above.