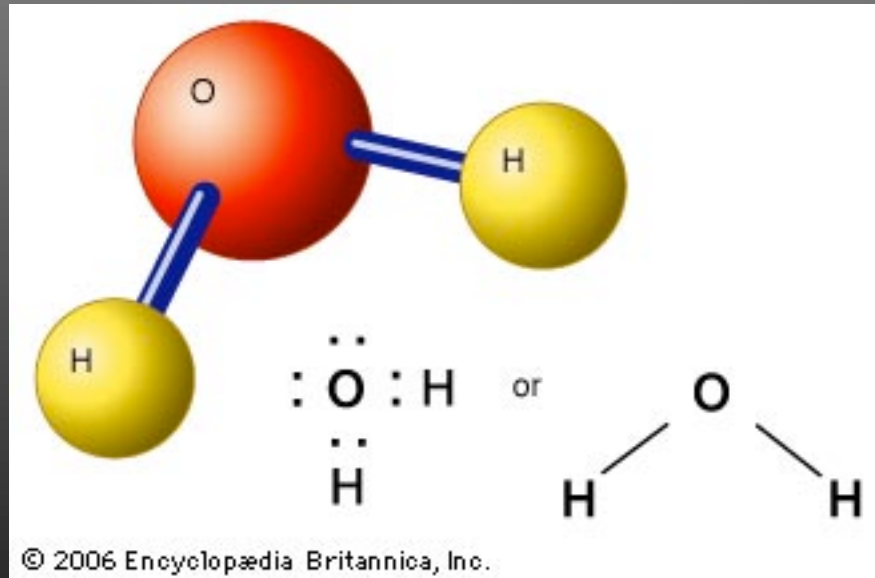


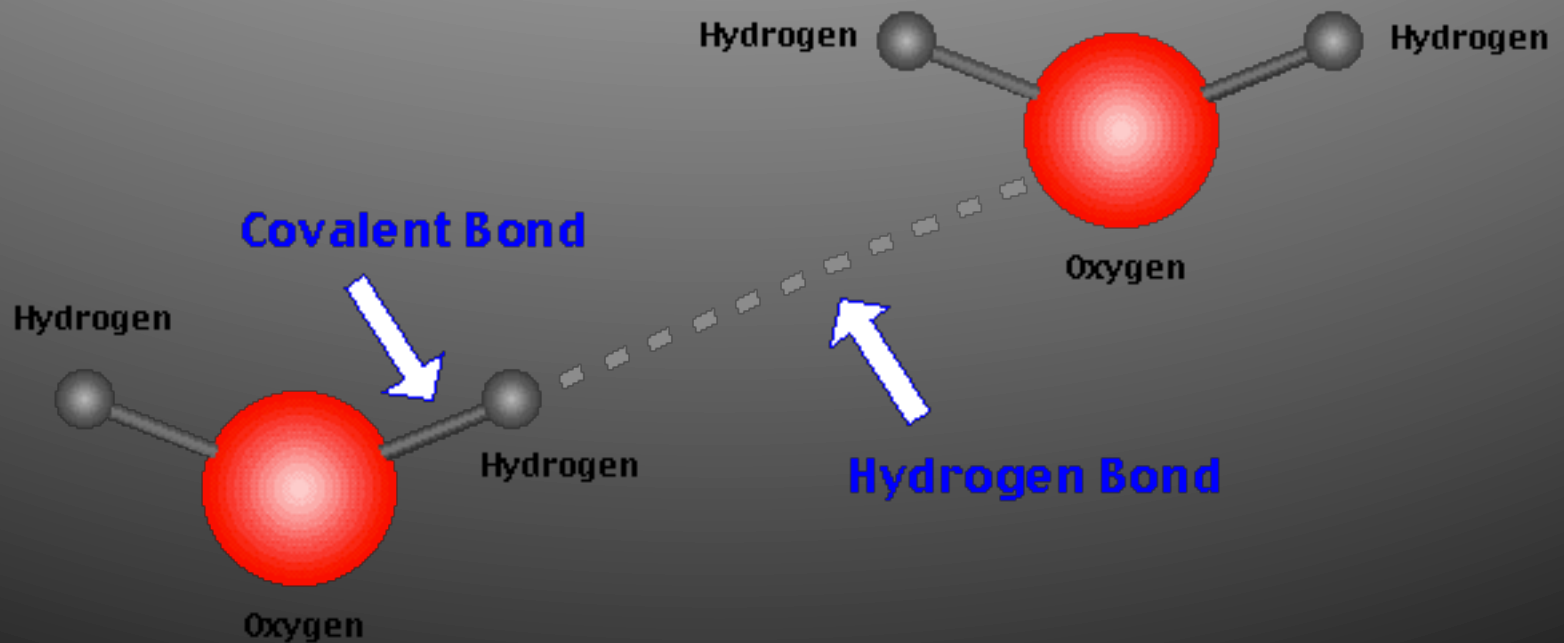
Ch 2-1: Properties of Water

Essential Questions:

- Why are water molecules polar?
- What are acidic and basic solutions?



- Uneven sharing of e^- between O and H = + and – “poles” to water molecule
- Attraction between + and – ends is weak attraction = *hydrogen bond*



- H-bonding explains many properties of water
 - ***Cohesion*** – water attracted to itself
 - ***Adhesion*** – water attracted to other molecules
 - Capillary action – water rises in a narrow tube
 - Thermal properties
 - High ***specific heat*** – takes more energy to move molecules relative to each other



- Solutions & suspensions
 - **Mixture** – NOT chemically combined
 - **Solution** – mixture, components evenly mixed
 - **Solute** – subst. that's dissolved
 - **Solvent** – subst. doing the dissolving
 - Water is an excellent solvent due to H bonding
 - Polarity allows it to dissolve other polar molecules & ionic compounds



- Acids, bases, pH

- Water can react to form ions



- Pure water: same # of + and – ions, so neutral

- pH scale: shows conc of H^+

- Acid: compound that forms H ions in solution

- $[\text{H}^+] >$ pure water, $\text{pH} < 7$

- Base: compound that forms OH ions in solution

- $[\text{H}^+] <$ pure water, $\text{pH} > 7$

