

Water

WATER

- 2 Hydrogen Atoms + 1 oxygen atom that are covalently bonded
- Hydrogen bonds form between water molecules
 - Weak intermolecular forces
 - Attraction between the slightly positive H and the slightly negative O of different water molecules
- Cohesion
 - Created by the constant forming and reforming of hydrogen bonds between water molecules
 - Enables water to move against gravity for transport in plants
 - Creates surface tension
- Surface Tension
 - A measure of how difficult it is to stretch or break the surface of a liquid
 - Created by the cohesive property of water molecules
 - Water has a greater surface tension than most other liquids
- Adhesion
 - Water's ability to adhere to other polar molecules by forming hydrogen bonds
- High Specific Heat Capacity
 - Can absorb or give off heat energy without changing temperature very much due to the breaking and forming hydrogen bonds
 - The amount of energy required to change the temperature of water is relatively high
 - Allows organisms to maintain a constant temperature
 - Also acts as a temperature regulator within the body (blood moves warmer blood to cooler parts of the body)
- High Latent Heat of Vaporization
 - Transformation from liquid to gas
 - Water absorbs a great deal of heat when it evaporates
 - Used as a cooling mechanism
 - Creates sweat in animals and transpiration in plants
- High Boiling Point
 - Highest temperature reached in liquid state