

Thermal properties

- Water has high *specific heat capacity*
 - The amount of heat per unit mass required to raise the temperature one degree Celsius
- In other words water can absorb a lot of energy without a big change in temperature
 - A body filled with water can maintain its temperature easier
- Water has high *heat of vaporization*
 - The amount of heat required to convert a unit mass of liquid into vapour with no increase in temperature
 - It needs a lot of energy to evaporate
- Our body heat results in perspiration, which evaporates from our skin
 - The energy that turned the water molecules from liquid to vapour came from our body
 - Therefore, this change in the state of water lowers our body temperature and makes us feel cooler

Solvent properties

- The majority of molecules found in and outside most cells are also polar
 - Carbohydrates
 - Proteins
 - Nucleic acids
- Blood plasma is the liquid portion of the blood
 - Some of the more common solutes in blood plasma are:
 - Glucose
 - Amino acids
 - Fibrogen
 - A protein involved in blood clotting
 - Hydrogen carbonate ions
 - As means of transporting carbon dioxide
- Aqueous solutions in which reactions take place:

Aqueous solution	Location	Common reactions
Cytoplasm	Fluid inside the cell, but outside the organelles	Glycolysis, protein synthesis reactions