

Water H2O - solvent of life

Water is the dominant component of virtually all living organisms, and most biochemical reactions

one oxygen and two hydrogen (connected via covalent bonds)

allows chemical reactions to occur inside living organisms

necessary for the formation of certain biological structures

polar molecule that can form hydrogen bonds - tetrahedral shape (because of four pairs of electrons on outer shell)

gas → does not form hydrogen bonds

solid → molecules are held in a rigid state by hydrogen bonds

liquid → hydrogen bonds continually break and form as water molecules move

Evaporation Living systems use the evaporation of water, which disrupts hydrogen bonds, to dissipate excess heat that would otherwise cause problems.

Adhesion the attraction of water molecules to other molecules of a different type

cohesion the capacity of water molecules to resist coming apart from one another when placed under tension

surface tension water molecules stick to one another

Macromolecules

Macromolecules: (=Polymers) Function: energy storage, structural support, transport, protection and defense, regulation of metabolic activities, means for movement / growth / development, heredity

Proteins The functions of proteins include support, protection (e.g., skin surface), catalysis, transport, defense, regulation, movement, signaling, and storage

Carbohydrates contain carbon bonded to hydrogen and oxygen atoms and have the general formula $(C_1H_2O_1)_n$. act as energy storage and transport molecules and structural components

nucleic acids A polymer made up of nucleotides, specialized for the storage, transmission, and expression of genetic information. DNA and RNA are nucleic acids.

lipids Nonpolar, hydrophobic molecules that include fats, oils, waxes, steroids, and the phospholipids that make up biological membranes



By [ggcheatgg \(evelana\)](https://cheatography.com/evelana/)
cheatography.com/evelana/

Not published yet.
Last updated 18th July, 2019.
Page 1 of 1.

Sponsored by [Readable.com](https://readable.com)
Measure your website readability!
<https://readable.com>