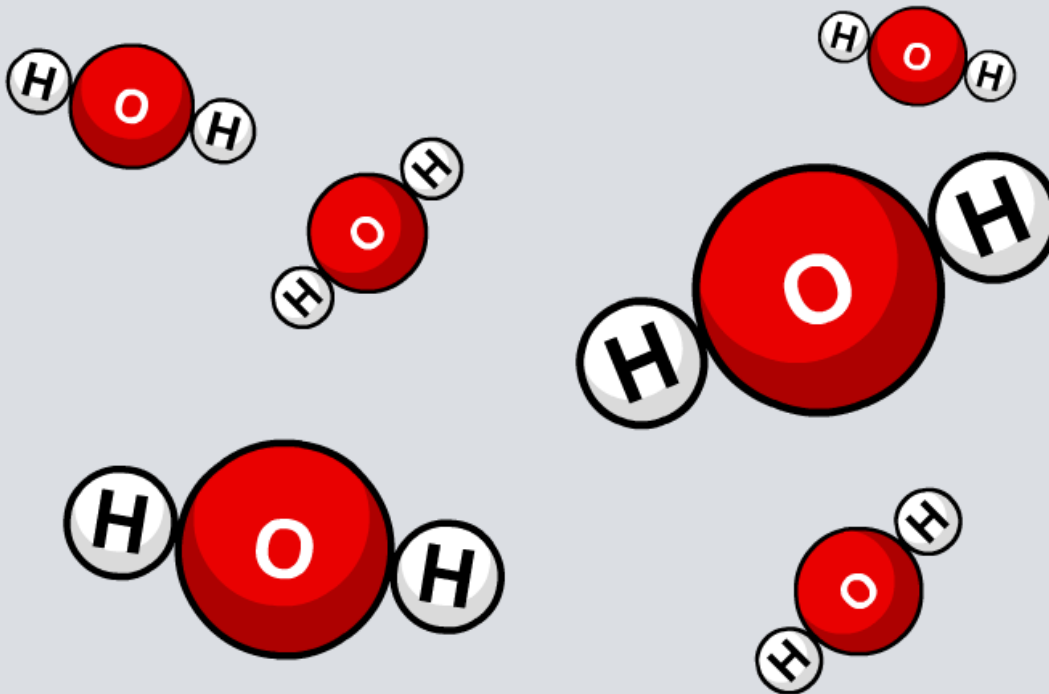
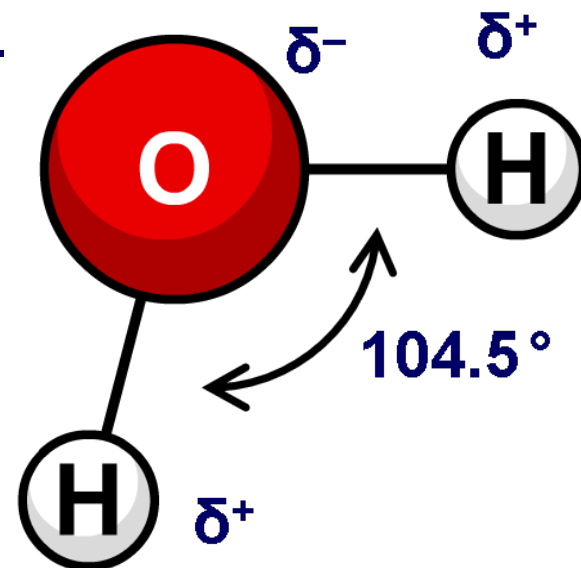


## Water



**Water** ( $\text{H}_2\text{O}$ ) consists of two hydrogen atoms covalently bonded to one oxygen atom.

Each hydrogen shares a pair of electrons with the oxygen. The oxygen has a greater affinity for electrons than the hydrogens, so it “pulls” the electrons closer.

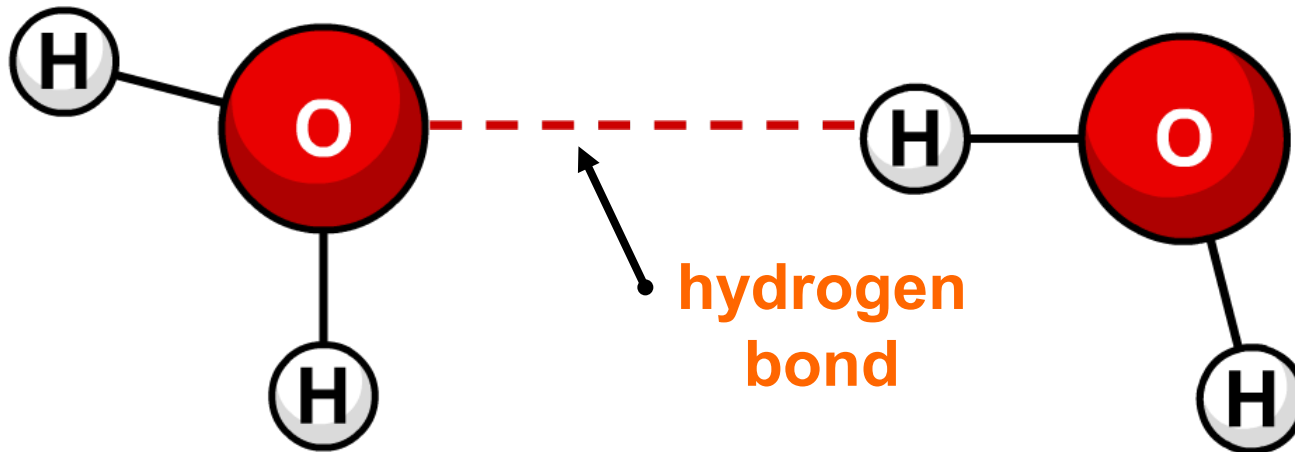


This makes the oxygen slightly **negative** (indicated by  $\delta^-$ ) and the hydrogens slightly **positive** (indicated by  $\delta^+$ ).

This creates different charged regions, making water a **polar** molecule. Because it has two charged regions it is **dipolar**.

Many of the properties of water are due to its ability to form **hydrogen bonds**.

The slight negative charge on the oxygen atom makes it attract the slightly positive hydrogen atom of another water molecule.

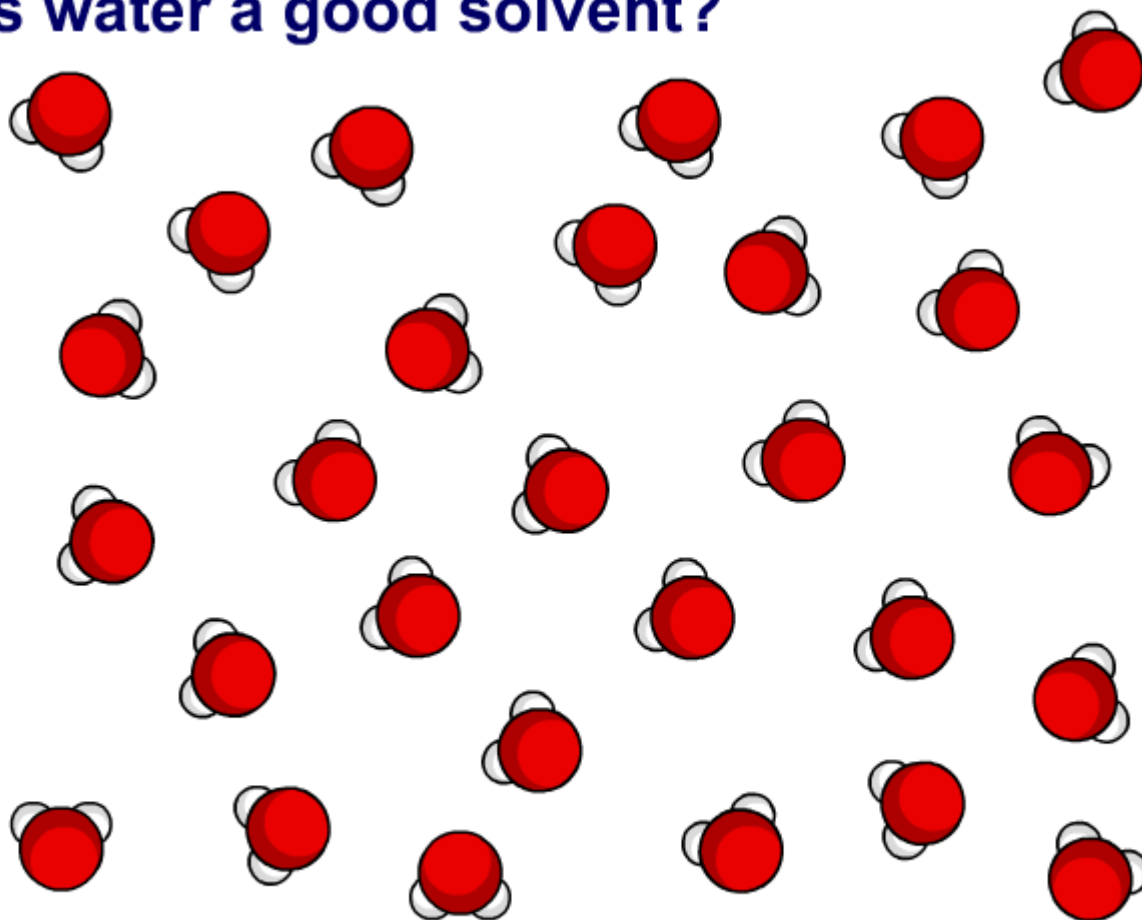


The numerous hydrogen bonds in water make it a very stable structure.

## Why is water a good solvent?

The dipolar nature of water molecules makes water a good solvent for dissolving ions and other polar substances.

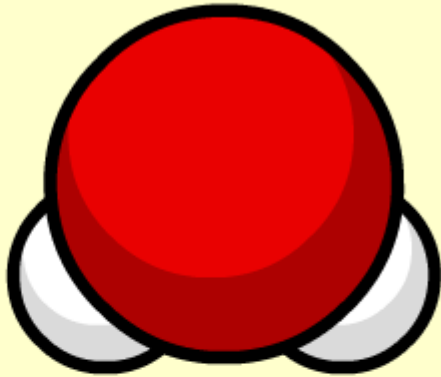
Click "**start**" to find out more.



start



## How are water's properties linked to its biological roles?



Click a button to find out more about how the properties of water affect its biological roles.

universal solvent

liquid at room temp

specific heat capacity

latent heat of vaporization

latent heat of fusion

density

wetness

capillarity

surface tension

other properties

