

Source: [\[KBhBIO101Watah\]](#)

# 1 | Properties of water

## Cohesion

- Individual molecules held up well +
- Strong surface tension

## Adhesion

- Water attracts other molecules, and it stick to water pretty well
  - If we make water molecules touch another molecules, it will stick to it and start moving
  - Think: a straw — a thin straw could draw up water without additional pressure just by water working its way up using adhesion
- This is how we make “xylum” and “Pholem” happen
  - Water’s adhesive force — and adhesive force only — is how water travels upwards from a tree
  - Given that some trees are, em, pretty tall, this means that the capillaries that the water travel in must be very small
  - A Pico-Gauge could be used to measure the pressures within the phorlem

## Water...

- is wet => Strong tetrahedral H-Bonds
- is sticky => Has both Cohesive and Adhesive Properties
- have a **high specific heat capacity**.
  - Strong bonds
  - Resistant to change

## Water’s Universal Solvent Properties

Water has high solubility

- Many things could dissolve in water
- Makes chemical processes quite easily
- Quite versatile — could dissolve stuff easily

## Hydrophillic + Hydrophobic Effects of Water

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- In hydrophillic senarios, water will to “puddle out” (“Wetting”) — adheres to the surface
- In hydrophobic senarios, water leverage its cohesion properties to create spheres