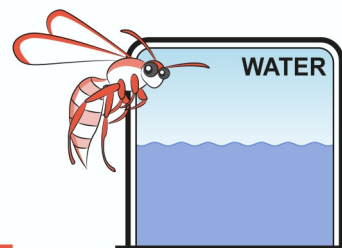


Adhesion (Capillarity) - Student Activities



Cohesion (surface tension) = Attracted to the same thing water to water
Adhesion (capillarity) = Attracted to another thing water to another

Capillarity in plant fibres

Although paper was made from rags and papyrus in historic times, it is mostly made from wood nowadays. Trees use long thin tubes in their roots and trunk to pull water with dissolved mineral nutrients from the soil to their leaves. Water molecules are attracted to the sides of the tubes and move up them pulling other molecules up behind them. Borers can kill trees by breaking the chains of cohesive water molecules, effectively starving them.



Papyrus

Comparing capillarity in different papers

Materials per student or group:

- Three different papers cut into strips
- Scissors, pen and a ruler
- One beaker half full of water (food colouring optional)

Cut different papers into equal sized strips 130mm by 40mm. I used a ruler as template. Mark the long sides with 10mm divisions. Hang the strips to the same depth in the beaker of water. Leave paper in beaker for 15minutes. Remove and compare water absorption to find which paper has the greatest capillarity.

Paper type	Initial reading	Final reading	Rise

Which paper would be best to mop up a milk spill? _____

Which paper would be best to use as a sandwich wrap? _____

USE YOUR KNOWLEDGE

Why are microfiber cloths such efficient cleaners? _____

Why is it difficult to write on a plastic take-away container? _____