

Episode 2: Rainbow Water



How does a plant drink water? Rachael is learning about capillary action by making a rainbow water experiment using water glasses and paper towels. This episode will have you soaking up all sorts of fun facts!

Scientific concept:	Capillary action (when liquid travels in an upward direction, against gravity).
Science process skills:	Observing, measuring and predicting.
Let's investigate:	<i>How does water travel up a plant's roots to the leaves?</i>

Materials

- Cups or glasses
- Paper towel
- Water
- Food colouring (red, blue, yellow)

Experiment procedure

1. Fold 6 sheets of paper towel in half lengthwise and in half again lengthwise.
2. Line up 7 glasses in a row. Fill up every second glass halfway with water.
3. Add food colouring into each glass of water in the following order – red, blue, yellow, red.
4. Position the 6 folded paper towel sheets, draping over each glass so they connect to each other.
5. Watch as the water starts to travel up the paper towel. Wait a few hours and observe how the water has travelled and made a rainbow by mixing the colours. It's like the water is walking or surfing!



How it works: The water moves up the paper towels through a process called capillary action. The paper towel is made from fibres and water is able to travel through the gaps in the fibres. The gaps in the paper towel act like capillary tubes and pull the water upward. This is what helps water climb from a plant's roots to the leaves at the top of the plant or tree.

Early Education links

Episode themes relate to [EYLF Learning Outcomes](#) 4.2, 5.1 and 5.2. Use open-ended questioning to encourage children to observe, predict and gather information throughout this experiment – *What do you think will happen to the water? Why do you think the colours are changing? Do you think something is pulling the water upwards?* Promote mathematical understandings by inviting children to fill the glasses halfway.

Follow-up learning

- Delve deeper to explore how water travels through plants. Place red coloured water in a glass and observe how liquid moves up through the stem of a large green leaf. Children can use magnifying glasses to watch as the red coloured water moves slowly through the leaf over 3 days.
- Get outside and get grubby! Learn how to plant and grow seeds with [Dirtgirl World](#).

