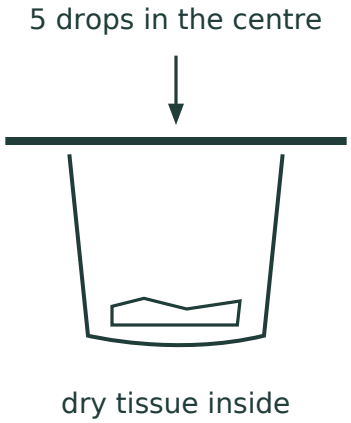
Waterproof Materials: Get Ready

Can water pass through these samples? Make a prediction, then check.

An adult stays with you. Work on a tray with a small cup of room-temperature water and a dropper. The adult prepares all samples and wipes up spills.

Set up four matching tests.

Use 8 cm squares: plain paper, cotton cloth, kitchen foil and plastic sheet. Each must be dry and one layer thick. Use four clear plastic cups with 5 cm openings.



Put a fresh, dry tissue square in each cup. Cover each opening with one sample. Tape only around the rim, leaving the centre clear. Check for holes and gaps.

Use the same dropper. Put 5 drops on the centre from 2 cm above it. Wait 30 seconds. Keep cups still. Check the tissue through the cup before moving the sample.

Predict before you test.

Will water reach the tissue below?

Sample	Circle your prediction
Plain paper	yes no unsure
Cotton cloth	yes no unsure
Kitchen foil	yes no unsure
Plastic sheet	yes no unsure

The adult handles cutting and foil edges. Use clean materials and keep water away from electricity.

Waterproof Materials: Observe

Record the two observations separately. An unexpected result still counts.

Record what happens after 30 seconds.

Circle Y = yes, N = no or U = unsure for each observation.

Sample	Sample soaked up water?	Tissue below became wet?
Plain paper	Y N U	Y N U
Cotton cloth	Y N U	Y N U
Kitchen foil	Y N U	Y N U
Plastic sheet	Y N U	Y N U

Absorb means soak up water. Waterproof means water does not pass through. Water sitting on top is different from water soaking in. A sample may soak up water while the tissue below stays dry during this short test.

Choose one result. Finish: In our test, ...

Which sample would you test again, and why?

A grown-up can write your words. Say what happened to these samples in this test.