



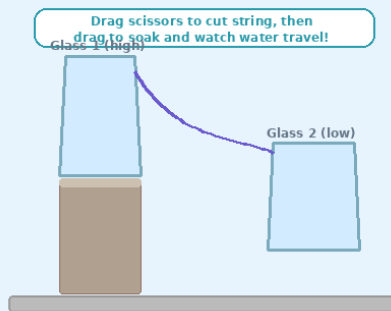
Travelling Water

How water sticks — learning about adhesion

By Sandra Beale | Toddler and Early Years STEM

■ What you need

- Two drinking glasses
- Wool string (~30cm)
- Scissors
- Gaffer tape
- Water
- Food colouring
- Tray (optional)



■ Try the interactive game at toddlerstem.com

■ What to do

1. Gather the children and ask them what they know about water.
2. Explain that water molecules are made up of hydrogen and oxygen and that water molecules like to hug other water molecules.
3. Put a glass on the table, then cut a piece of wool string about 30cm long.
4. Stick one end of the string onto the inside of the glass using the gaffer tape.
5. Pour some water into the glass and let the string soak. Squeeze a drop of food colouring into the water so that it is easier to see.
6. Pull the string out of the water, ensuring that the bottom end is still attached to the glass.
7. Gently lift the glass up and pour the water down the string into a second glass or tray on the table.
8. The water will follow the string because the string is wet and water molecules are adhesive — they stick to other water molecules.

■ Top Tip

Use string made of wool to get the best effect. This activity is best done outside — or use a tray, as it can get messy!

■ The Science

This activity teaches children that water is adhesive or sticky due to hydrogen bonds, which enable water molecules to stick to a wet string.

What's in it for the children?

Children discover that water can defy expectations when it travels sideways and downward along the string — sparking curiosity and scientific thinking.

■ Taking it further

- Ask the children what might happen if you tried to pour water down a dry length of string (without soaking it first).
- Be prepared for them to make a mess while testing out their predictions!

Key Words

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| • Adhesive | • Hydrogen bond |
| • Molecule | • String |
| • Flow | • Gravity |