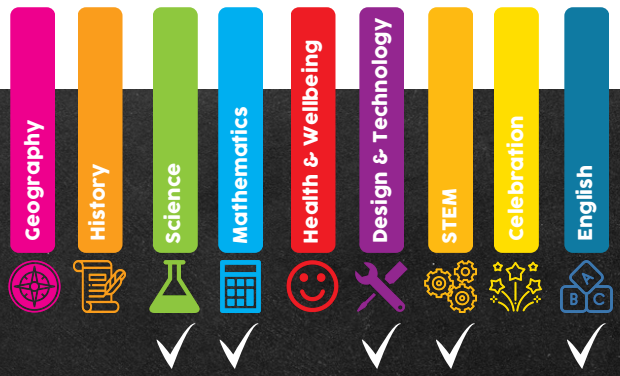


Supreme Incursions

Magic Starfish



The aim

- To learn about the properties of wood.
- To learn about absorption.
- To understand why wood might need 'sealing' when used for certain purposes.



Independent Inquiry



20 Minutes



Grade Foundation+

What you will need

5 Toothpicks (per person)

Tray, plate or board

Pipette

Water



Watch the video

Scan the QR code to watch the instructions



Follow these steps

Step 1 Collect 5 toothpicks and bend in half without snapping apart so that they look like a 'V' (about 45 degrees).

Step 2 Place the bent toothpicks on a tray so that all the 'elbows' (bottom of the 'V') are touching in the middle creating a small circle.

Step 3 Drop 1-2 drops of water (no more) into the centre and observe.

Step 4 Within 1-2 minutes you should see your pattern turn into a star!

**Patience is required, do not touch the toothpicks once you have added water.*

- Try using dye mixed with the water to observe how the water is absorbed into the wood
- Try using different materials e.g., plastic straws, skewers, paperclips, pipe cleaners and compare results on which absorb liquid the best.

The Science behind it

Wood is a **porous** and **fibrous** structural tissue found in the stems and roots of trees. A 'porous' material means that it has minature holes through which liquid or air can pass (also known as **capillaries**). This means that the water is **absorbed** into the wood fibres (due to capillary action) and in turn, puts **pressure** on the bent parts of the toothpicks to straighten out into a star shape!

- **Why might wood need sealing with varnish when used for purposes such as tables or floors? Think about what the varnish might do to the minature holes.**