How Plants Grow — Worksheet 2A

Name: _____ **Date:** _____

Plan and carry out an experiment to show how water is transported within plants. Use the equipment listed below.

Equipment

celery stick (with leaves on if available) | water | plastic container | food dye

Method

1. Pour some water into the container.
2. Add food dye to the water, a few drops at a time, until it is very brightly coloured.
3. Place the celery in the coloured water.
4. After a couple of hours, look carefully at your celery. You may need to cut into it to notice any changes.

Prediction *(What do you think will happen?)*

Diagram *(Draw and label a picture of your experiment once it is set up.)*

Observations *(What can you see? What do you notice happening?)*

Conclusion *(Why do you think this happened? What might happen if you leave the experiment running for longer?)*

Plants take in water by a process called 'capillary action'. Water naturally climbs up very small spaces such as the tiny tubes in the roots and stems of plants. Follow the instructions below to see how this process can make water travel 'uphill'!

You will need:

- two glasses or clear beakers
- water
- food dye
- kitchen roll

Fill one of the glasses with water.

Add food dye to the water (roughly 1-2 teaspoons) until it is brightly coloured.

Take a piece of kitchen roll (2-3 squares in length) and gently twist it to make a 'rope'.

Use some old books or boxes to raise the empty glass. If you want the capillary action to happen more quickly, only raise the empty glass a few millimetres above the full glass.

Place either end of your kitchen roll 'rope' fully into each glass. The liquid will begin to rise up through the paper due to capillary action! What do you think will happen eventually?