

# Water Transportation

The process of water transportation is the way water moves through a plant.

The roots absorb water from the soil.

The stem transports water to the leaves.

Water evaporates from the leaves.

This evaporation causes more water to be sucked up the stem.

The water is sucked up the stem like water being sucked up through a straw.



## Transportation Investigation



Scientists carry out investigations to find things out and answer questions.

There are lots of different ways to find things out, such as fair tests, comparative tests, exploring and observing, finding patterns or sorting and classifying.

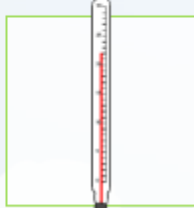
You are going to carry out an investigation to find out whether temperature affects how fast the stem sucks up water.

The best type of investigation to use for this is a **comparative test**, as you can compare what happens to plants in different temperatures.

# Transportation Investigation

If you put white flowers in coloured water at different temperatures, you could watch their petals to see which flowers change colour the fastest.

The flowers that change colour first have the quickest speed of water transportation, as the stem is transporting the coloured water the fastest.



Can you think of places around your home that are different temperatures? Think of a hot place, a place that is at room temperature and a cold place.

## Set It Up!

You will be changing the temperature in this investigation

You should keep everything else the same, such as the amount of water in each container (100ml), the size of the container, the type of flower, the length of the stem and the amount of colouring in each container (5 tablespoons).

1. Add 5 tablespoons of food colouring to the water in each container.
2. Put one flower into each container of coloured water.
3. Place the containers with flowers in the different places you decided on. Remember, each place should be a different temperature.



# Observing Changes

You are trying to spot which flowers start to change colour the fastest.

You will measure the time it takes the flowers in the different temperatures to change colour.

Decide how you are going to make your observations - how often are you going to check the flowers?

Make sure you keep careful records of your observations.



# Coming to Conclusions

A conclusion is the final answer to what you were trying to find out.

Look at each flower. Using your observations, which temperature helps the flower transport water the fastest?

Now write your conclusion explaining your findings.

