

Colouring Flowers

What you need:



- 1 or more cut flower (preferably plain coloured)
- 1 or more colours of food colouring
- Cold water
- Cup

Instructions:



1

Add around 5cm of water with 30 drops of food colouring (be generous so the colour can easily stand out) into each cup.



2

Cut 3 flowers from your garden (plain coloured is better) but any colour should work.

Place each flower in a different coloured water.



3

4

Great scientists like to predict what happens, predict what you think may happen to each cup?

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Instructions:

5

Leave you flowers and observe what happened after 1 hour, 6 hours, 12 hours, 24 hours.
Write notes or take photos each time so you can compare the difference.

Flower	After 1 Hour	After 6 Hours	After 12 Hours	After 24 Hours
Blue Cup				
Green Cup				
Red Cup				

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Results:

Can you observe what is happening?
You will see this begin quite quickly.

Record your measurement results on a table similar to above.

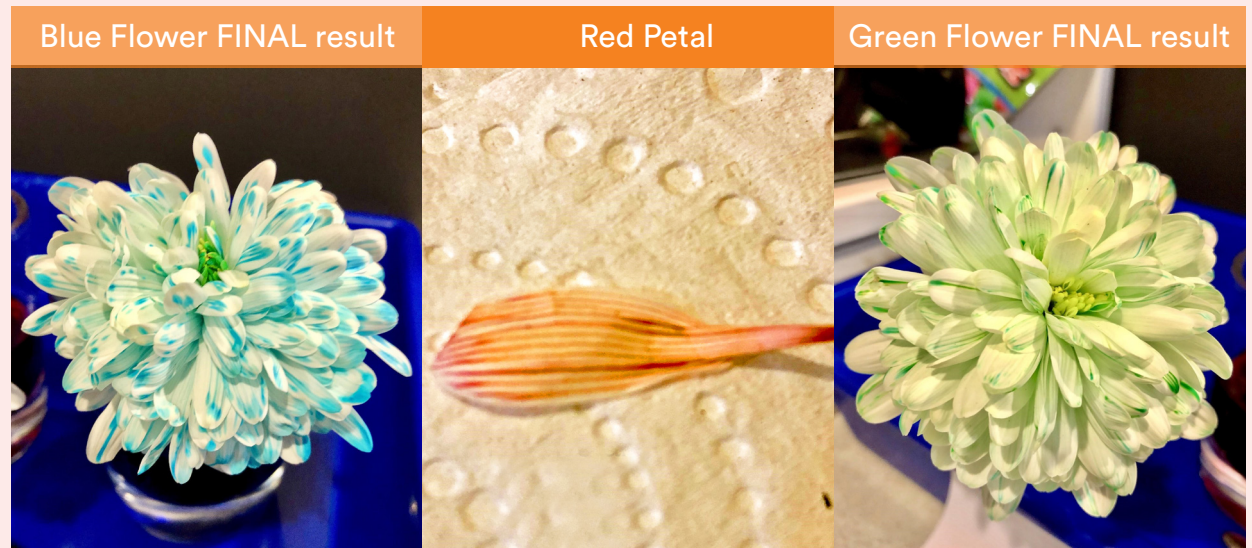
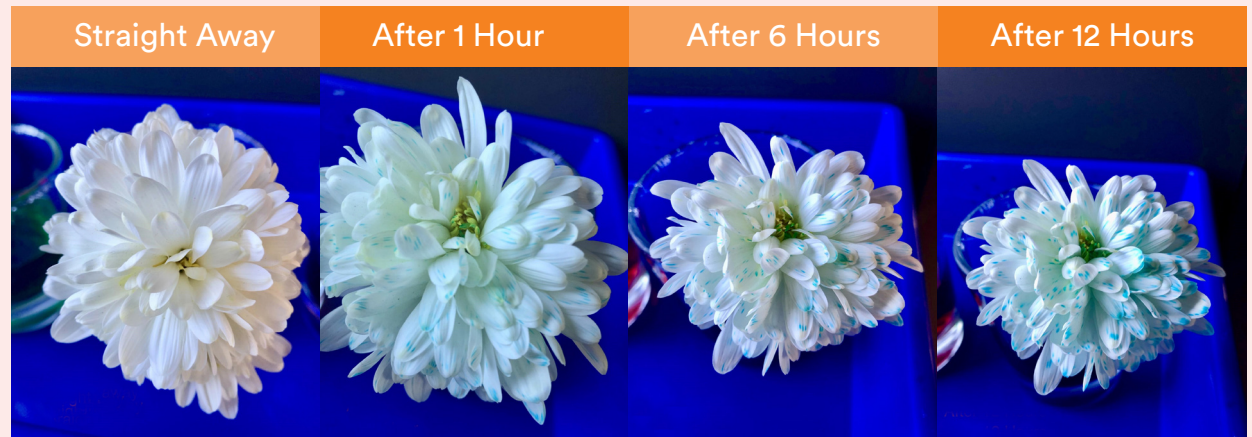
Take photos each time you walk past and observe and compare the changes that occur with time.

Science experiments don't always work the way you expect. My red flower was not very good at all. In Fact it was only when I looked at the individual petals that I saw it had worked. When this happens we have to **problem solve** to figure out what may have gone wrong.

I realised by looking at the cups of coloured water that the red dye was a lot weaker (I needed to add more food colouring) and then it would have resulted the same as the others.

This is also why when we are experimenting we need to try and be more precise with our measuring.

HOW do you think this worked?



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The Science Behind:

This is the science of
TRANSPIRATION.

This simply means that the plant
draws water up through its stem.
This is through the xylem vessels.

The water is then evaporated from
the leaves and flowers through
openings that are so small we
cannot see them called stomata.

As the water evaporates, it
creates pressure that brings more
water into the plant – similar to
drinking from a straw. This pulls
the different coloured water up
through the stem and colours the
petals.

When trees transpire, the water
evaporates and becomes a part of
the water cycle.

Act Like A Scientist:

Good Scientists like to ask and explore
and ask more questions!

Repeat this experiment and observe

- Used different colours of food colouring?
- Would it work quicker with different flowers?
- Would the temperature affect how quickly it works?
- Do the same but instead if flowers use celery. Observe what happens.
- Another fun experiment to see transpiration in place is to simply put a snap lock bag over a plant for a couple of days and see if you collect any moisture in the bag. See below.

The same way the coloured water moved up the stem should happen to the plant and be released through the stomata (tiny holes on the leaf) as small drops of water in the bag.

