



# Challenge 11

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# WHAT happened and WHY?



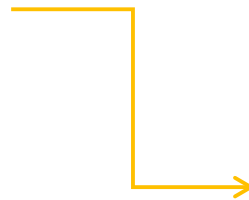
What caused the flower to change from white to the colour of the dye

- ❖ The coloured water is being pulled up to the stem, then up the leaves and pedals of the white flower. This causes the pedals to change their colour.
- ❖ Changing the levels of pigments (the natural colouring) in various combinations creates new colours the same way that mixing paints together results in different colours.

How do flowers change their colour?

- Geneticists change the pH in plant cells to create flowers in new colors. A plant's genes determine flower color the same way that human genes control eye color. By making a plant's cells more acidic or more alkaline, it's possible to change the plant's pigments.

The science behind this experiment



The cut flowers take up water through their stem and the water moves from the stem to the flowers and leaves. Water travels up sieve plates in the plant by a process called **Capillary Action**. Putting a coloured dye in the water in the vase allows us to observe capillary action at work.