Science experiments to try at home

KS2 Biology

1. Plants: growing an avocado tree

Lesson: observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy!

Materials

- Avocado seeds
- Toothpicks
- Drinking glass or jar
- 10-inch pot
- Potting soil
- Trowel

Instructions

1. Eat an avocado and save the pit! Wash it and once dry, insert four toothpicks along the middle of the pit.
2. Suspend it (broad end down) in a glass and pour water in so it submerges the bottom third of the pit.
3. Let it grow! Place it somewhere where it will get enough light and occasionally refill the water. You should begin to see roots from from two to six weeks.
4. A sprout should grow from the top of the pit. When it reaches about six inches, cut it back to encourage root growth. After it grows back, pot it in soil in a 10-inch pot and let it grow!

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2. Plants: experimenting with flowers

Lesson: identify and describe the functions of different parts of flowering plants. Understand the relationship between structure and function. Observe the way that water is transported in plants.

Materials

- White flowers - white carnations work very well
- Food colouring
- Drinking glass
- Water
- Spoon
- Scissors
- Kitchen knife

Instructions

1. Trim an inch off the ends of the flowers. Perhaps cut different lengths on each flower to see how it affects the speed of colour absorption.
2. Fill the drinking glasses with water.
3. Add at least 10 drops of food colouring into the water and stir it.
4. Place a couple of flowers into each glass. Save a couple for dissection.
5. Write down what you think will happen to each plant in the coloured water!
6. Use the spare flowers for dissection. Name and label all the different parts of the flower and explain what purpose each part has.
7. Observe how the flowers change every day and think about how it compares to your hypothesis.

Short explanation: The coloured water is absorbed through capillary action. It is transported through the xylem and dispersed throughout the plant from stem to tips of the petals.