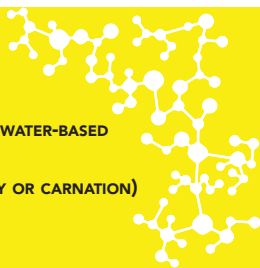




FLOWERS QUENCH THEIR THIRST

MATERIALS:

- **FOUR (4) CLEAR GLASSES**
- **FOUR (4) DIFFERENT COLORED INKS OR WATER-BASED FOOD COLORING**
- **THREE (3) FRESH WHITE FLOWERS (DAISY OR CARNATION)**
- **SCISSORS**
- **WATER**



PROCEDURE:

1. Pour a little food coloring or ink into each glass and add some water.
2. Trim the stems of all the flowers.
3. Take one flower. With the scissors, starting at the bottom, split the stem of the flower in two about five inches up.
4. Put a flower in each glass of colored water. The split stem flower goes into two glasses.
5. Leave the flower in a warm room. What happens to the flowers? What happens to the flower with the split stem?

WHAT THIS MEANS:

Most plants drink water from the ground through their roots. The water travels up the stem of the plant into the leaves and flowers where it makes food. This is called **capillary action**. When a flower is cut, it no longer has its roots, but the stem of the flower still drinks up the water and provides it to the leaves and flowers.






There are two things that happen to move water through plants. The first is **transpiration** or the evaporation of water from the leaves, buds and petals that pulls water up the stem of a plant. The second is **cohesion**. When the water evaporates from the leaves, it pulls other water up behind it to fill the space left by the evaporating water.

Coloring the water with food coloring does not harm the plant in any way, but it allows you to see the movement of water through the roots/stem to the shoots. Splitting the stem simply proves that the tiny tubes in the stem run all the way from the stem to the petals of the flower.

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