

Changing a Flower's color by Absorption

Materials: three cups or vases, water, food coloring, two flowers (carnations work the best but I have also used roses), scissors.

Vocabulary:

- Absorption – the process in which one substance goes into another such as when a sponge soaks up (absorbs) water.
- Capillary action - process that occurs in plants where water is absorbed up into the stem of the plant

Directions:

1. Fill the three cups/vases half full with water.
2. Add about 30 drops of food coloring to each cup/vase of water. The more food coloring you add the faster/better the effect. Red, blue and green seem to work the best. Lighter colors are harder to see.
3. Have your parent cut the stem of both flowers. I find it better if you cut at an angle. On one flower, have your parent split the stem into two parts.
4. Place one flower in a single cup/vase. Place the other flower (split stem) into two cups/vases with a part of the stem in each cup or vase.
5. Check back often. Time will vary and it depends on how much food coloring you used. It can take a few hours or it could take 24 hours

The Science...

Plants like people need water to live? People drink water while plants absorb it. As well as absorbing water from the atmosphere (air) through their leaves, they suck water up through their stems. The water travels up the stem of the plant into the leaves and flowers. The plant uses the water to make food. When a flower is cut, it no longer has it's roots. But the stem of the flower still "drinks" up the water and provides it to the leaves and flowers. By using food coloring you can see how water and nutrients travel up the flower stem.