



# COLOR-CHANGING CARNATIONS

★ GRADES 3-5 ✨ SCIENCE SKILLS: SOLUTIONS/MIXING/COLORS ★



## What you need:

- 4 plastic cups
- 4 white carnations
- Food coloring (red, blue and yellow)
- Scissors for trimming flowers
- Water



## What to do:

1. Fill 4 of the cups one-half full with water.
2. Add about 20 to 30 drops of food coloring to 3 of the cups of water (red, blue and yellow). In this case, more food coloring is better! The fourth cup should contain just water with no food coloring.
3. Trim the stem of each flower at an angle to create a fresh cut.
4. Place a white carnation into each cup.
5. Ask your students to make some predictions about what may happen:
  - Will the carnations take in the water that is colored?
  - Which color will be soaked up first?
  - How long will it take for the carnations to soak up the water?
  - What will happen to the flower petals?
6. Set the flowers aside overnight. In the morning, you should have pretty red, blue and yellow flowers that you can use to decorate your classroom!

## How does it work?

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. 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. Coloring the water with food coloring does not harm the plant, but it allows you to see the movement of water through the stem to the flower petals.

Like the colored dyes in this experiment, some chemicals that pollute our waters can get into the soil and groundwater and contaminate plants. Some chemicals and pollutants, just like the color dyes, may travel up into the plant and affect its health or growth.

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