





California State University of Bakersfield, Department of Chemistry

# **Colorful Carnations**



#### **Standard:**

<u>LS1.A</u>: Structure and Function: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

4-ESS3-1: Cause and effect relationships are routinely identified and used to explain change.

#### **Introduction:**

Have you ever wanted a multicolored flower where you can choose the colors? In this experiment you will learn the structure of plants and learn how water is absorbed. By adding food coloring, you will see that water travels through the roots, up the stem, and is absorbed through the petals. By the end of the experiment you will see the change in color of the flower petals.

### **Materials:**

- White Carnations
- Two 500ml beakers
- Water
- Food coloring

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Knife

## **Safety:**

- Always have an adult with you to help you during your experiment.
- Always wear eye protection and gloves when doing chemistry experiments

#### **Procedure:**

- 1. Pour 400 mL of water into the two beakers
- 2. Pour in two different food colorings into each beaker
- 3. Cut the carnation vertically down the middle to split it
- 4. Place carnation into the beakers, with half of the stem in one liquid and the other side of the stem in the other color
- 5. Wait for an hour to observe the carnation

### **Data and Observations:**

- 1. The petals of the carnation should slowly start to change color within the hour
- 2. The color change will start at the tops of the petal and slowly work its way down the flower

### **Questions**:

1.	What would	happen if	you take	e the co	lored	carnation	and	put it	into	another	color?	

2. What would happen if you put the carnation in another type of liquid besides water and added the food coloring?

#### **References:**

1. Steve Spangler | Keynote Speaker & Best Selling Author. (n.d.). *Steve Spangler*. Retrieved August 4, 2014, from http://www.stevespangler.com.