Title - WATER FLOW IN PLANTS

By - Judy Schneider

Primary Subject - Science
Secondary Subjects - Science
Grade Level - 4- 8 (adaptable)
SCIENCE PROJECT OF THE WEEK

WATER FLOW IN PLANTS

PROBLEM: Can water travel through plant stems?

RESEARCH: Read about the parts of a plant in a science textbook. Especially look for xylem and phloem. Write three paragraphs about what you read.

HYPOTHESIS: Based on your research and your experience with plants, do you think water can travel through the plant stem?

MATERIALS:
graduated one liter bottle
1 white carnation with long stem
2 glasses
red and blue food coloring

PROCEDURE:
1. Pour 500 ml of water into each glass.
2. Add three or four drops of food coloring to each glass. Be sure the color is dark. Add more food coloring if necessary.
3. Very carefully cut the stem in half along the length of the stem from the bottom to about half way up to the flower.
4. Place one half of the flower stem in the blue water and the other half of the stem in the red water.
5. Let the flower stand in the water for 48 hours (2 days).
6. Enrichment: Repeat the experiment with another flower, but cover the flower only with plastic wrap and secure the bottom of the plastic wrap with tape.

DATA: Be sure to record your observations and inferences.

CONCLUSION: This is not optional. You must explain what you learned by doing this activity. Remember that you must answer the question you asked in your original problem statement.

NOTE: BE SURE TO HAVE YOUR PARENT OR GUARDIAN SIGNS YOUR WORK. PARENTS: YOUR SIGNATURE SHOWS YOUR STUDENT HAS DONE THE WORK.

TEACHER SECTION:
POSSIBLE HYPOTHESIS: The water will travel from the glass to the flower making it change color. OR The water will not travel up the flower and nothing will change.

POSSIBLE CONCLUSION: The water traveled up the xylem tubes to the flower petals. The color moves through the xylem allowing the color to be distributed throughout the cells of the petals causing their color to change.

E-Mail Judy Schneider!