

Colorful Celery Stalk

Concept: Water travels up through xylem tubes.

Materials:

- Celery stalks
- Water
- Food coloring
- Sharp knife (Be careful!)
- Tall, clear cup



Thinking and Predicting Question:

- How does water travel through a plant?

What to do:

Fill the cup about three-quarters full with water. Stir in a few drops of food coloring, so the water is brightly colored.

Remove one thick celery stalk from the bunch. With a sharp knife, carefully cut about an inch (2 cm) off the bottom of the stalk. Cut it at a slight angle and try not to "crush" the tubes. Keep the leaves attached to the top.

Place the celery in the colored water and wait for several hours.

What will happen:

The colored water will travel up the celery stalk and into the leaves. By the end of the day, you will see colors in the xylem (water tubes) and you will see the leaves slowly change color.

Why this happens:

Capillary action causes the water travels up the plant, through the xylem and into the leaves.

Vocabulary

Xylem - tubes that carry water through a plant.

Capillary Action - the tendency of a liquid to rise in narrow tubes

Try this: You can try the same experiment with a white carnation. The white flower will change color!

Name: _____

Colorful Celery Stalk

Directions:

Fill the cup about three-quarters full with water. Stir in a few drops of food coloring, so the water is brightly colored.

Remove one thick celery stalk from the bunch. With a sharp knife, have an adult carefully cut about an inch (2 cm) off the bottom of the stalk. Cut it at a slight angle and try not to "crush" the tubes. Keep the leaves attached to the top.

Place the celery in the colored water and wait for several hours.

Draw a picture of the celery before you placed it in the water.

Draw a picture of the celery several hours after you placed it in the water.

Describe how the celery stalk changed.

How does water travel through the celery?

Name: _____

Colorful Celery Stalk – ANSWER KEY

Directions:

Fill the cup about three-quarters full with water. Stir in a few drops of food coloring, so the water is brightly colored.

Remove one thick celery stalk from the bunch. With a sharp knife, have an adult carefully cut about an inch (2 cm) off the bottom of the stalk. Cut it at a slight angle and try not to “crush” the tubes. Keep the leaves attached to the top.

Place the celery in the colored water and wait for several hours.

Draw a picture of the celery before you placed it in the water.

Picture should show a green celery stalk with green leaves.

Draw a picture of the celery several hours after you placed it in the water.

Picture should show colors in the celery stalk tubes and leaves.

Describe how the celery stalk changed.

After placing the celery stalk in colored water for several hours, the stem and leaves started to change color.

How does water travel through the celery?

Answers will vary, depending on grade level. Younger students might simply state that the colored water travels from the bottom to the leaves on top. Older students might describe how capillary action pulls the water through the xylem tubes.