

DR. CHRISTOPHER'S CAPILLARY ACTION AND CHROMATOGRAPHY EXPERIMENT INSTRUCTIONS



Background Information

A **capillary** is a very small tube.

- *In biology, this same term can be used to describe blood vessels*

A diameter is a measurement of the size of a circle. The diameter is always measured through the center of a circle, from one side of the circle to the other.

Capillary action explains how plants take up water from their roots to the plant. It is the ability of liquids to flow

Watch the Video
on Youtube



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EXPERIMENT INSTRUCTIONS



Celery Activity

Estimated Time to Complete: Overnight

Supplies Needed

- Celery
- Food Coloring
- Cup
- Water

1. Take a **cup** and fill it halfway with **water**
2. Add a couple of drops of **food coloring**
3. Take a stalk of **celery** and cut off the bottom
4. Put the celery stalk in the cup.
5. Leave it overnight

What did you observe?



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Capillary Color Activity

Estimated Time to Complete: Several hours to Overnight

Supplies Needed

- 5 Clear Cups
- Food Coloring (Red, Yellow, Blue)
- Water
- Paper Towel

1. Put all of your **cups** in a line. Fill the one on each end and in the middle, halfway with **water**.
2. Add **food coloring** to the cups with the water putting a different color in each one with yellow in the middle.
3. Take **4 pieces of paper towel** and fold them into strips about 2-inches wide.
4. Connect the cups with the paper towel
5. Leave them for several hours or overnight and observe.

What did you observe?



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Chromatography Ink & Paper Experiment

Estimated Time to Complete: Several hours

Supplies Needed

- Chromatography Paper or Flattened Coffee Filter
- Plate
- Dropper
- Water
- Black Marker
- *Optional:* Other Colored Markers

1. Take one piece of **chromatography paper** and with a **black marker**, draw a circle or other design around the center of the paper.
2. Place the paper on a **plate**.
3. Using a **dropper**, drop several drops of **water** at the center of the plate.
6. Observe the ink as it is transported by the water. This process may take several hours.
7. Try this experiment with other markers.

What colors do you observe were used to create a black marker?

What do you observe with different marker colors?

