Get $_2$ Know $H_2O$

# EXPERIMENT 17: CAPILLARY ACTION

**Objective: Can you make water run uphill?**

## WHAT IS CAPILLARY ACTION?

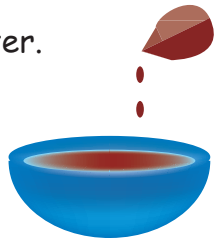
- Capillary action is defined as the movement of water within the spaces of a porous material due to the forces of adhesion, cohesion and surface tension.

## WHAT YOU NEED:

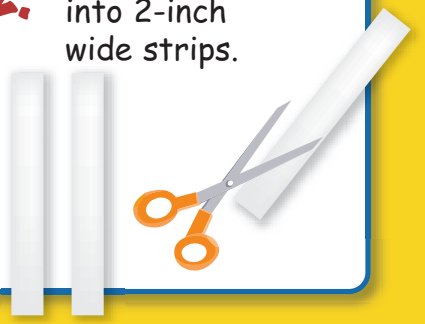
- Bowl of water
- Food coloring
- Two types of paper towels (choose ones with a different thickness or pattern)
- Scissors, ruler

## STEP-BY-STEP:

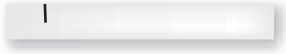
1. Add two or three drops of food coloring to water.



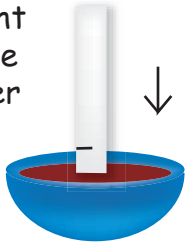
2. Cut paper towels into 2-inch wide strips.



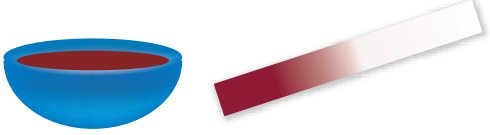
3. Place a mark on each type of paper towel 1-inch from the edge.



4. Carefully dip each paper towel straight down into the bowl of water just to the 1-inch mark.



5. Slowly lift the towel straight up out of the water and watch the water "climb" onto the paper towel.



6. Measure how far the water rises after 30 seconds.

## QUESTIONS:

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- Which type of paper towel did the water rise higher on? Why?
- What would happen if you put the paper towel into the water up to 2-inches?
  Do you think the water would rise more, less or the same amount?
- Would the same thing happen with another liquid? Soda? Milk?
- What other times might capillary action be used?

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