

Cappillary Action/Traveling Water Experiment



Theme: Capillary Action (or moving water)

Curriculum Area: Physical Science

Activity:

By modeling capillary action using 3 cups of water and paper towels, students will gain a better comprehension of the importance of this process in trees. Seeing how water is absorbed into the plant. 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. Gravity works hard to pull down, but with capillary action gravity is no match! Students will witness capillary action moving water out of a cup and pour into another cup!

Age of Children: 5-6th grade

Materials Needed:

Things we need
3 clear cups
Water
Food coloring (2 colors; Yellow and blue)
2 Paper towels
Spoon
Scissors

Developmental Objectives/Domains:

By participating in this activity, children will:

1. Understand that even if they've never heard of capillary action, it is still important in their lives.
2. Comprehend capillary action is very important for the topic of moving water, including all things that dissolve in water.
3. Know how Capillary action much like a straw for trees and plants.
4. Explain why water climbs or travels through certain materials.
5. Investigate the process of capillary action using different materials.

Procedure:

1. Prepare your water! Line all 3 cups in a line
2. Fill in the first cup and the second cup about $\frac{3}{4}$.
3. Add 4 drops of food coloring in one of the cup of water and the other color in the other cup of water.
4. Mix the water with a spoon.
5. Take a paper towel and fold it hot dog style twice.
6. Then fold it in half (hamburger style).
7. Cut a little bit at the end.
8. Add your paper towels in the cups.
9. After a while you will start to see water traveling up the paper towel and making its way to the empty cups.

Reference:

<https://thestemlaboratory.com/walking-water-rainbow/#:~:text=The%20colored%20water%20travels%20up,a%20process%20called%20capillary%20action.&text=The%20water%20molecules%20are%20also,to%20draw%20more%20water%20upwards>

5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. **[Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is**

food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]

Video: <https://youtu.be/fWJe9qoXb2E>