Get$_2$ Know H$_2$O

EXPERIMENT 17: CAPILLARY ACTION

Instructor's Guide

ALIGNMENT WITH ILLINOIS STATE BOARD OF EDUCATION GOALS

State Goal 11:
Section A: 2a, 2b, 2c, 2d, 2e and 2f

State Goal 12:
Section D: 2b

State Goal 13:
Section A: 2b and 2c

WHAT'S HAPPENING?

Everyone knows that moving water tends to flow downhill and standing water will seek its own level, but sometimes water can run uphill. In fact, in this experiment, the water will continue going up the paper towel until the pull of gravity is too much for it to overcome.

WHAT COULD GO WRONG?

Be very careful that the students dip the paper towels just to the 1-inch mark so they can get a fair comparison of results.

WHY IS CAPILLARY ACTION IMPORTANT?

Students need to understand that even if they've never heard of capillary action, it is still important in their lives. Capillary action is important for moving water (and all of the things that are dissolved in it) around.

AN EVERY-DAY-EXAMPLE

Capillary action plays a helpful role when you spill your glass of soda (which is, of course, mostly water) on the kitchen table and are rushing to wipe it up. First, you can thank surface tension, which helps to keep the liquid in a nice puddle on the table, instead of a thin film of sugary goo that spreads out onto the floor. Then, when you place a paper towel onto your mess, capillary action causes the liquid to attach itself to the paper fibers, and that helps you clean up fast!

WHAT ELSE CAN KIDS LEARN?

Capillary action also works like a straw for trees and plants. Plants put down roots into the soil that are capable of carrying water from the soil up into the plant. Water, which contains dissolved nutrients, gets inside the roots and starts climbing up the plant tissue. As water molecule #1 starts climbing, it pulls along water molecule #2, which, of course, is dragging water molecule #3, and so on. Plants and trees couldn't thrive without capillary action.

LINKS

http://ga.water.usgs.gov/edu/

CREDITS

United States Geological Society

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YOUR FEEDBACK

Were the instructions clear?
Did the class stay interested?
Email us at **feedback@Get2KnowH2O.org** and let us know what you think. We would like to share your suggestions with other teachers and give you credit for your great ideas!