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## EXPERIMENT 15: Celery Straws

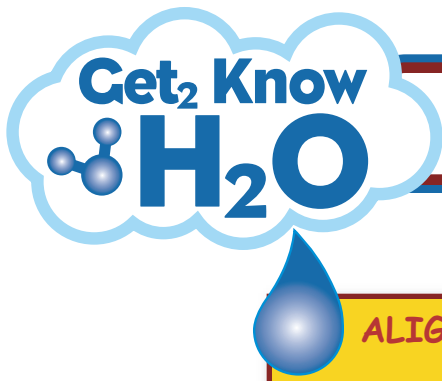
Challenge: See capillary action in action!



### QUESTIONS:



- How much water is absorbed by each stalk?
- How many minutes did it take for each stalk to change color above the water line?
- What happened to the leaves on each stalk?
- How does the wilted stalk feel now?



# EXPERIMENT 15: Celery Straws

## Instructor's Guide

**ALIGNMENT WITH ILLINOIS STATE BOARD OF EDUCATION GOALS**

<b>State Goal 11:</b>	<b>State Goal 12:</b>	<b>State Goal 13:</b>
Section A: 2a, 2b, 2c, 2d, 2e and 2f	Section D: 2d	Section A: 2b and 2c



**WHAT'S HAPPENING?**

The colored water should begin to change the color of the wilted celery from the bottom up. This effect happens because in plants, water molecules move through narrow tubes that are called capillaries. The crisp celery will absorb some colored water but not at the same rate as the wilted celery.

**WHAT COULD GO WRONG?**

Keep water at room temperature.

**LINKS**

[www.ga.water.usgs.gov/edu/capillaryaction.html](http://www.ga.water.usgs.gov/edu/capillaryaction.html)

**CREDITS**

U.S. Geological Survey

**WHAT ELSE CAN KIDS LEARN?**

**Nature's straws**  
If you could look at the cut edge of the celery stalk under a microscope, you'd see that it is made up of tubes. The wilted stalk has already lost most of its water, so its tubes sort of collapse and leave it wobbly. The crisp stalk is filled with water and feels firm, but is not able to absorb as much extra water.

**A firm understanding of turgidity**  
Turgidity is a fancy term for describing the firmness of plant tissue caused by the uptake of water and the consequent stretch of the cell wall. In other words, that celery stalk sucked up a lot of water and its ribs are being stretched taut-kind of like your uncle stretched out after a big Thanksgiving dinner.

**YOUR FEEDBACK**

Were the instructions clear? Did the class stay interested? Email us at [feedback@Get2KnowH2O.org](mailto: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!