

## Adventure Description:

In this adventure, you will think like a plant scientist and learn about how plants drink water.



## Activity

### Step 1: Background Information on Plant Scientists (5 minutes)

- Explain to students that plant scientists are experts on how plants grow.
- Ask students to list all of the things that plants need to grow. Show [Handout: What Do Plants Need to Grow?](#) Discuss how plants need sunlight, water, space, air, and nutrients to grow.
- Next, ask students if they know how plants get water. Explain that plants get water through their stems through a process called capillary action. Show [Handout: How Plants Drink Water.](#)

### Step 2: Experiment Set Up (15 minutes)

- Explain to students that they will do a science experiment to see how capillary action works in plants.
- Provide each student with the following materials:
  - Piece of celery that has a leafy top
  - Clear, plastic cup
  - Water
  - 3 red or blue food coloring drops
  - Spoon (to stir water)
- Teacher note: students can also work in pairs.
- First, have students put their name on their cup using a Sharpie. You can also write students' names on their cups before class.

Please contact Allison Bischoff, Director of Teacher Support , at [allison@rozzylearningcompany.com](mailto:allison@rozzylearningcompany.com) or 314-272-2560 with questions.

# Plant Scientist: Learning About Plants

- Next, have students make observations of their piece of celery. Have students record their observations in the top box on [Handout: My Plant Observations](#).
- Next, have students fill their cup half way with water.
- Next, have students that they will first put 3 drops of food coloring in their cup. Then they will stir the water until the color is mixed in. Explain that they will imagine that this is the water that a tree or plant is drinking.
- Next, have students place their piece of celery in the cup.
- Have students place their cups in a safe place in the classroom. Explain that students will now wait one day and see how the the celery drinks the water.

### **Step 3: Observing Plants (15 minutes)**

- After one day, explain to students that they will make observations about how their plant drinks water!
- Have students fill out the bottom box on [Handout: My Plant Observations](#).
- Optional: have students use magnifying glasses to look at celery up close.
- Teacher note: see [Handout: Example of Results](#). The celery leaves will begin to turn the color of the food coloring. The part of the celery that is in the water will also turn the color of the food coloring.
- Have a class discussion about what students' pieces of celery looked like and how the celery sucked up water through a process called capillary action. Discuss how plants act like straws because they are able to suck water up through their stems!

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## Materials List

### Provided online:

- Handout: What Do Plants Need to Grow?
- Handout: How Plants Drink Water
- Handout: My Plant Observations
- Handout: Example of Results

### Not provided:

- One piece of celery that has a leafy top
- One small, plastic cup
- 3-4 drops of red or blue food coloring
- Plastic spoon
- Sharpie (can be shared with other students)
- Magnifying glass (optional)

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