

Lesson 1: Observing Parts of a Plant

NGS Standard:

SC.3.L.14.1: Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.

Lesson: In this lesson, students will explore the different parts of a plant and understand their specific functions through a hands-on experiment.

Objective:

- Identify the parts of a plant and describe their roles in water transport and nutrient absorption.
 - Conduct an experiment to observe water movement through plant stems.
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Materials:

- Celery stalks
 - Clear glass jars or containers
 - Food coloring (red, blue, or green)
 - Water
 - Ruler
 - Chart paper for observations
 - Access to STEMScholarsHub.net for interactive quizzes
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Safety Precautions:

1. Always handle glass jars carefully to prevent breakage.
 2. Be cautious with food coloring to avoid spills.
 3. Ensure children do not consume celery or food coloring.
 4. Clean all materials thoroughly before and after use.
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Procedures:

1. **Introduction:**
 - Begin with a brief PowerPoint presentation or video on the parts of a plant, explaining their roles in food production, water and nutrient transport, and reproduction.
2. **Experiment:**
 - Fill each clear jar with water and add a few drops of food coloring.
 - Place a celery stalk in each jar.
 - Leave the celery in the jars for several hours or overnight.
3. **Observation:**
 - Observe how the colored water moves up the celery stalk over time.
 - Use a ruler to measure the height of the colored water in the celery after 3-4 hours.
 - Record these observations on a chart or in a notebook.
4. **Generalization:**
 - Discuss how water travels through the stem of the plant and why it's important for the plant's survival.
 - Explain how different parts of a plant work together to transport water and nutrients.

5. Assessment:

- After the experiment, guide students to visit STEMScholarsHub.net for an interactive quiz on the parts of a plant.
- Students will take the quiz to test their understanding of plant anatomy and water movement.

Note: Clean-up

- Dispose of celery and used water.
- Wash jars and tools thoroughly with soap and water.
- Rinse and dry the materials used in the experiment.