

## Do Plants Really Need Light?

**OVERVIEW:** In this lesson, students use the scientific method to discover that plants really do need sunlight and why.

**OBJECTIVES:** The student will be able to

- Identify sunlight as one of the main things along with soil and water that a plant needs to grow.
- Explain that plants use sunlight to get the energy to produce sugar, their food.
- Define photosynthesis as the process a plant uses to make food.

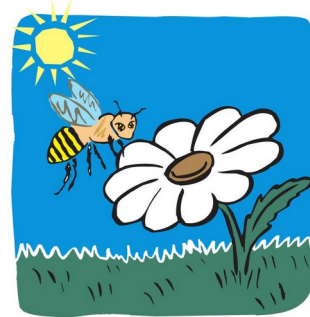
**GRADES:** PreK-5

**MATERIALS:**

3 similar plants in pots

Photosynthesis sheets

“Do Plants Really Need Sunlight?” worksheet



**PROCEDURE:**

Tell students plants are special because they can do something that nothing else in the world, not even a person, can do. Does anyone know what it is? Plants are the only living things that can make their own food. We know a plant needs light, but why does a plant need light? Plants need light to make their food through a process called photosynthesis.

Pass out photosynthesis sheet. Tell students that a plant uses sunlight along with carbon dioxide in the air and water from the ground to make a type of sugar, which is its food. During photosynthesis, the plant releases oxygen, which we breath. So along with being a source of food, plants also help supply the oxygen that we breath. Explain that people breath out carbon dioxide, which the plants use during photosynthesis.

Ask students how we can prove that a plant needs light, using three different plants. Allow the students to discuss this question until they decide to place one plant in a sunlit window, one plant in a shady spot away from the window, and one plant in a closet or under a box where it is totally dark. Give students the plants to put in these places. Ask students what else we must do in order for our experiment to work. (Water the plants frequently so they do not die from lack of water.)

*NOTE: In this experiment, all the plants must be watered regularly so that students can observe the effects of the light versus the dark.*

Students observe the plants over a few weeks and record the changes they see.

When the plant that has been placed in the dark has died, discuss with the students why this has happened.

### EVALUATION:

Students will be able to explain why a plant needs light and what photosynthesis means.  
Completed *“Do Plants Really Need Sunlight?”* worksheet

### New Jersey Learning Standards

Science: PreK: 5.1.1-5, 5.3.1-4, 5.4.2    K:LS1.C    1:LS1.A    2:LS2.1  
3:LS4.C    4:LS1.A    5:PS3.D

NAME \_\_\_\_\_

## Do Plants Really Need Sunlight?

In this experiment, we want to prove that plants really do need sunlight to live. We will place one plant in a sunny spot, another in a shady spot, and one plant in the dark. We must remember to water both plants frequently. What do you think will happen?

---

---

---

What do the plants look like after one week?

**Plant in the sun:** \_\_\_\_\_

**Plant in the shade** \_\_\_\_\_

**Plant in the dark:** \_\_\_\_\_

What do the plants look like after two weeks?

**Plant in the sun:** \_\_\_\_\_

**Plant in the shade** \_\_\_\_\_

**Plant in the dark:** \_\_\_\_\_

What do the plants look like after three weeks?

**Plant in the sun:** \_\_\_\_\_

**Plant in the shade** \_\_\_\_\_

**Plant in the dark:** \_\_\_\_\_

# Photosynthesis

