

You Are My Sunshine

Purpose

Students will observe and evaluate the importance of sunlight and water to the survival of plants.

Materials

For each student: copy of Black Line Master (BLM) *Plant Data Sheet*

For each group of students: 20 beans (or store-purchased plants), paper towels, 4 small pots or baby food jars, plastic wrap, soil

Activity

A. Pre-Activity Discussion

1. Ask students what plants need to survive [water, sun, soil, air].
2. Discuss: "How could we find out if plants really do need these things?" [Take one away and observe the results.]

B. Experiment Setup and Data Collection

1. Divide students into small groups and pass out four pots (or jars) to each group. Instruct students to label each pot or jar in the following way:
 - A. No water
 - B. No air
 - C. No sun
 - D. Water, sun, air, soil
2. Have students plant and water three or four beans in each pot or jar EXCEPT jar A (no water). Have students plant the same number of beans in jar A, but make sure they do not add any water.
3. Instruct students to cover and seal jar B (no air) with the plastic wrap.
4. Put each of the jars in a windowsill or sunny place EXCEPT jar C (no sun). Place that jar in a closet or cabinet.
5. Make sure students make daily observations of each of the four plants. Have them use the BLM *Plant Data Sheet* to keep track of their observations of plant growth over the next week and a half to two weeks. Make sure students regularly water all plants except A.

(continued)



connecting across the curriculum

Mathematics

Measure the height of each plant and compare the differences in height.



EXTENDING THE ACTIVITY

Have students transplant the plants that survive the activity into larger pots and assign a student daily to take care of the plants. Not only will the plants provide aesthetic value to your classroom, but may be useful for other activities.

Standards Links
2.1.1, 2.1.3, 2.1.5

Activity (continued)


C. Discussion and Wrap-Up


1. Have students refer to their data as they discuss which of the plants have grown, which ones have not, and make inferences about why.
2. Students may find that the plant in the dark actually grew more than expected. Ask students: “Does it look healthy?”
3. Groups may have different results; discuss the various reasons groups may have obtained different results.


Questions for Review

Basic Concepts and Processes

After the investigation, assess students’ understanding of the needs of plants:

 Do plants need [*sunlight/water/air*] to live and grow?

 How did you determine this?

 What else do living things need to stay alive?

Name: _____

Plant Data Sheet

Day	A. No Water	B. No Air	C. No Sun	D. Control
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

Plant Data Sheet

Teacher Directions

Direct students to use the BLM *Plant Data Sheet* to record their observations of the growth of their plants each day.

Answer Key

Student answers will vary; assess the accuracy and detail of students' observations.