

Do Plants Need Sunlight?

Objectives:

Students will!

- Understand that plants need sunlight in order to make chlorophyll
- Understand that chlorophyll is the chemical that makes plants green

Educator Notes

- This lesson does not necessarily show the effects of light, but rather, underlines the negative effect of a lack of light on plants
- If 3 – 4 students per group is too large, have kids choose a partner so that they can engage in the activity and with each other on a more personal level

Materials:

- A Healthy, Green, Leafy Plant
- Paper Clips
- Black Construction Paper

Preparation:

Create an area in which the plants are on a shelf or table where they get plenty of sunlight.

Key Vocabulary:

chlorophyll | plants | sunlight

Activity:

Give each pair or small group of 3–4 students a plant. Have them cut out of the black construction paper 4 square or oval pieces. Cover up 2 leaves on the plant with the pieces of black construction paper, one on top of the leaf and one piece on the bottom of the leaf. Secure the papers on the leaf with paper clips.

Direct students to check their leaves and make sure that the entire leaf area on top and on the bottom is covered up and won't be able to get any sunlight.

Direct the students to leave their leaves on a windowsill with light.

After a week, remove the paper clips and pieces of black construction paper. What do the leaves look like? What color are they? What do you think happened? Leave the plants on the windowsill or tabletop for another week. Water the plants when needed. Watch the leaves and

see what happens to them when they are able to get sunlight again. What causes them to turn green again?

Wrap-Up:

Listen as children discuss their experiment, what they observed, and draw conclusions on what they think happened to leaves when they were covered up and then uncovered. Encourage them to use terms including sunlight, energy, chlorophyll, and experiment. If possible, let them help another group conduct this experiment. You can really see if they understand the concepts when they teach someone else!

Extension Activity (K-5):

Older students can observe their seeds daily and record changes and observations in personal journals. This lesson also can be used to teach basic measuring skills. Once plants grow to the top of the cup, students can measure and track their height growth using string and rulers. The educator can use the lesson to teach students about different parts of plants (i.e. roots, stems, leaves, flower). To explore where and how plants grow best, seedlings can be placed in various locations (i.e. refrigerator, dark cabinet, window sill) with and without water to teach students what ingredients plants need to grow.

Sources:

<http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/sunlight.html>

<http://www.learnnc.org/lp/pages/3299>