

Plant Dependencies – Who they need and Who needs them

4th Grade

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References:

- Google Image Search
- Reference 2

Benchmarks:

SLC/GLI #: LS-2: Relate plant structures to their specific functions (e.g. growth, survival, and reproduction).

Objectives:

The objective of this lesson is to learn about the survival and reproduction of plants and other living things from the point of view of dependencies. Plants are dependent on many other things in nature, including other plants and animals as well as forces of nature such as weather and the sun. In turn, other living things are very dependent on plants. In this lesson, we will see examples of many of these dependencies and how they relate to the plant's survival and reproduction needs.

Materials:

- Many pictures from google images of things which are dependent on plants and things that plants are dependent on. I found an image for each student in the class of things such as bees, butterflies, birds, rabbits, deer, bears, even the sun, rain, and wind, etc.
- Several examples of plant seeds.
- Student worksheet

Initial Demonstration:

Bring in many different kinds of plant seeds, specifically ones that are very different to show different ways that those plants are dependent on different means of getting their seeds dispersed so that they can reproduce. Ask the students why they think they all look so different, and see if they can tell you what function the different seeds serve by being the way that they are. Have this lead into a discussion on plants being dependent on other things in order to survive and reproduce.

Target Observations:

- Since plants can't actually move to actively reproduce, they must rely on outside forces (nature) to help them survive and reproduce. One way they do this is through the special types of seeds they produce, which help them survive and reproduce.

Procedure:

Students will be handed out a picture and a student worksheet (below). Have each student find a partner (or group of three if odd number of students). Each group should discuss their pictures and write as many dependencies as they can think of: how plants are dependent on the item in the picture and how the item in the picture is dependent on plants. Students are not expected to create a full encompassing list. This is meant as an inquiry, independent thinking activity. Once the students have been given time on their own to come up with dependencies, go around the room and discuss each case. See if other students in the room can add to the list, if not, see if you the teacher can add to the list. Make a master list on the board or the overhead, so that students can copy for all other pictures that the other students had.

Target Observations:

- Plants are dependent on many things in nature for reproduction and survival
- We and other living things are highly dependent on plants for our own survival

Target Revised Model:

- Students should reach the conclusion that many things in nature are connected and dependent on each other for survival, and plants play an integral role in these dependencies.

Summary:

This lesson focused on the survival and reproduction of plants based on dependencies in nature – both of plants on other creatures and aspects of nature as well as their dependence on plants. Students came up with a list of dependencies based on many pictures of different creatures and aspects of nature. All of these were then discussed in class. A Type II writing question on this lesson could be: Name three ways that plants are dependent on something else and how? This could also be extended to also name one thing that is dependent on plants and how?

Plant Dependencies Student Worksheet

Complete the chart below based on ideas of how the objects in the pictures are dependent on plants or plants are dependent on the objects in the pictures.

Plants are dependent on me because:	I am dependent on plants because:
Object _____	
Object _____	
Object _____	
Object _____	
Object _____	

