

Growing Plants: Science in a School Garden

Synopsis

Students may be amazed to learn that human beings eat flowers – the portion of the broccoli plant that we eat is its flower! In fact, depending on the plant, we are able to eat every part of the plant: roots, stems, leaves, flowers, fruit and seeds. Growing Plants: Science in a School Garden is an entertaining and informative program that demonstrates the complete cycle of plant growth through the vehicle of raising a school garden: from propagation to harvest. Students will learn the importance and benefits of plants, the process of photosynthesis, the relationship between plants and insects, the interaction of plants and the environment, and the relationship between plants and the water cycle. Hands-on, simple and effective experiments reinforce for students the concepts covered in the program. Vocabulary introduced includes such terms as: photosynthesis, evaporation, transpiration, pollination, germination, propagation, compost, and entomologist. This insightful program is a

fascinating media supplement for life science and ecology units on the life cycles of plants, and humans' practical use of them.

Questions to ask before viewing

1. How are plants beneficial?
2. Explain the relationship between plants and insects.
3. What is photosynthesis?
4. What is the water cycle? Explain the relationship between plants and the water cycle.
5. Name the parts of a plant.
6. Name the parts of a plant that we can eat, and give an example of each.
7. What do plants need in order to grow?
8. What kinds of things make up soil?
9. What is compost?
10. Explain the process of pollination.

Questions to ask after viewing

1. Name the parts of a plant. (seeds, roots, stem, leaves, flowers and fruit)
2. Name the parts of a plant that we can eat, and give an example of each. (Answers may vary, but can include the following: seeds such as corn, roots such as carrots, stems such as celery, leaves such as lettuce,

flowers such as broccoli, fruit such as strawberries.)

3. What do plants need to grow? (water, air, light, nutrients and soil)
4. Soil is made up of _____. (tiny bits of rock, the parts of decaying, dead insects and animals, old, rotten plants, drops of water, tiny animals called microorganisms that help to break down the organic matter)
5. What is compost and how is it used? (a mixture that consists largely of decayed organic matter that is used for fertilizing and conditioning soil)
6. How are plants important and beneficial? (Answers may vary, but can include the following: plants can be a source of food and medicine, plants are a source of oxygen, plants are a source of shelter for birds, insects and other animals, plants can be a source of clothing, etc.)
7. What is photosynthesis? (The initial process in photosynthesis is the decomposition of water into oxygen, which is released for us to breathe; direct light is required for this process.

Energy from the sun helps the chlorophyll in leaves convert water and carbon dioxide into food for the plant.)

8. How do insects benefit plants? (Most insects benefit plants by eating the pests that kill plants. Some insects also help with the pollination process.)
9. Explain the process of pollination. (An insect, such as a bee, collects pollen from the male part of a plant and spreads it to the female part of the plant. This process allows the plant to produce seeds.)

Annotation

The part of the broccoli we eat is a flower! Growing Plants: Science in a School Garden is an entertaining and informative program that uses activities in a school garden to demonstrate the life cycles of green plants, the importance and benefits of plants, the process of photosynthesis, the relationship between plants and insects, the interaction of plants to the environment and the relationship between plants and the water cycle.

Length

22 Minutes

Subject Areas

Life Science

Audience Level

Grades K-8

Catalog Number

#2735-EN-VID

Related titles in the AIMS collection

#2288-EN-VID: Real World Science: Seeds and Plants

#8786-EN-VID: Learning About Ecology

#8598-EN-VID: Learning About Science: Flowers

#8595-EN-VID: Photosynthesis

#2283-EN-VID: Real World Science: Habitats

#8559-EN-VID: Ecosystems: Nature in Balance



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Discussion Guide

Growing Plants: Science in a School Garden

Objectives

- To understand the life cycles and the importance of plants
- To understand the interaction of plants, the environment and the water cycle
- To understand the relationship between plants and insects
- To introduce the care and maintenance of plants

