

Grade Levels: preschool – 1st

Description:

Students will discover the beauty and importance of the Garden. Through activities and discussions, students will understand how we use plants, what plants need to grow, the parts of a plant, and how plants change through the seasons.

Objectives:

Upon completion of this lesson, students will be able to

- Name the main parts of plants and the job they perform
- Explain what plants need to grow
- Demonstrate how trees change through the seasons
- Find shapes, colors, and numbers in the Garden

Please use the following materials as an aid to help prepare your students for their visit to Green Bay Botanical Garden. The vocabulary list consists of terms that may be used during your visit and the activities listed below are designed to familiarize your students with the topics that will be covered during their visit. They are listed as options – it is not necessary to complete them all or do them in any particular order. Please feel free to modify the vocabulary definition or activities in any way to better suit your students. Keep in mind, their experience will be enhanced if they are familiar with the concepts before their visit, or if the learning that took place in the Garden is reviewed and reinforced back in the classroom.

Vocabulary

Carnivore: animals that eat only other animals, or meat

Flower: attract and feed some pollinating birds and insects, but most importantly, produce seeds

Herbivore: animals that eat only plants

Leaves: grow from the stems of plants and collect sunlight and carbon dioxide to make food for the plant

Nutrients: an essential component of soil or food, required by a plant or animal to grow

Omnivore: animals that eat both plants and animals, or meat

Plant: a living organism that is rooted in the soil and makes its own food through photosynthesis

Roots: keep the plant secure in the ground and take in water and nutrients from the soil

Season: one of four divisions of the year, each season is about three months long and each usually has a certain kind of weather and temperature

Seeds: the beginning of the plant lifecycle, new plants grow from seeds

Soil: consists of bits of rock particles, organic matter, and nutrients that plants need to grow

Stem: connects the leaves to the roots and helps to hold the leaves up to the sunlight

Activity 1:

Have students brainstorm a list of their body parts. Once you have a list, discuss why we need each part and the job it does for us. (Examples: Legs help us stand, feet help us walk, head protects our brains, hands help us hold things, etc.) Explain to students that just like us, plants have different parts that have special jobs. Using pictures or a real plant to work from, have students brainstorm a list of different plants parts and the jobs they do. Focus on the roots, stem, leaves, and flower, but allow other suggestions as well. What would happen if a plant didn't have any roots or leaves? Have students create pictures of a plant and all its parts.

Activity 2:

Bring a variety of plant seeds into the classroom to observe. (Some easy to grow seeds include lettuce, beans, sunflowers, pumpkins, and peas.) Discuss with the students their color and shape, size, and texture. Allow students to guess what they will turn into and what plant they are from. What will the seeds need to grow? (water, sunlight, soil). Plant as many of the seeds as you can in small cups or pots and watch them grow.

Activity 3:

Using small plants, or plants that have sprouted from Activity 2, ask students what the new plants will need to grow? (water, sunlight, soil, air). Do simple experiments to see if they are correct about what the plants need. Place one plant in a box or bag to keep it in the dark, but continue to give it water. What happens? Stop watering one plant. What happens?

Activity 4:

Have students make a list of the four seasons. For each season, ask students how they know it's that season, what do they see or feel that tells them it's winter, for example. Make a list of their observations under each season. What do they like best about each season? What do they like least about each season? Have students create pictures or collages about each season.

Activity 1:

Review the parts of a plant with students. Discuss with them that the vegetables we eat come from different parts of the plant. Using a carrot, celery, lettuce, and broccoli, play a guessing game to have them guess with part each vegetable is. (Example: This carrot grows where we can't see it. It helps get water for the plant. It is found underground. What part is it? The root!). Provide students with a carrot, celery stalk, lettuce leaf, and piece of broccoli and have them create a plant picture, with each part in the right place. Enjoy their masterpiece!

Activity 2:

Visit the school yard and go on a search for different plant parts. How many different stems can you find? (A tree trunk is a specialized stem). Can you find flowers? How many different colors are there? How many different shaped leaves can you find?

Activity 3:

Create a classroom weather station. Visit <http://www.fi.edu/weather/todo/todo.html> for information on how to build several weather tools. Create a classroom weather calendar and have students take turns completing daily weather observations. They can check the temperature, amount of rain each day, wind direction, whether it's cloudy or sunny, etc. Use the calendar of observations to compare weather during different months and different seasons.

Activity 4:

Grow a Grass Head Creature. On a Styrofoam cup, have students create a face, without hair. The face can be drawn on or created out of construction paper shapes. Carefully fill the cup with soil and sprinkle a thin layer of grass seeds onto the soil. The grass will become the hair of the creatures. While the grass is growing cover all the basic plant needs, water, sunlight, soil, and air. Students can measure their grass hair as it grows or do experiments to compare how quickly the hair grows depending on how much light and water it receives.

Teacher Resources:

Jurenka, Nancy Allen and Blass, Fosanne J. 1996. *Beyond the Bean Seed: Gardening Activities for Grades K-6*. Englewood, CO: Libraries Unlimited, Inc.*

Ocone, Lynn. 1983. *Guide to Kids' Gardening*. New York: John Wiley & Sons, Inc.*

Student Books:

Anthony, Joseph. 1999. *In a Nutshell*. Nevada City, CA: Dawn Publications.*

Carle, Eric. 1987. *The Tiny Seed*. New York: Aladdin Paperbacks.*

Cushman, Doug. 1994. *Mouse and Mole and the Year-Round Garden*. New York: W.H. Freeman and Company.*

Ehlert, Lois. 1989. *Eating the Alphabet: Fruits and Vegetables from A to Z*. New York: Harcourt, Inc.*

Hall, Zoe. 1998. *The Surprise Garden*. New York: The Blue Sky Press.*

Jordan, Helene J. 1960. *How a Seed Grows*. New York: Thomas Y. Crowell Company.*

Muller, Gerda. 1995. *Circle of Seasons*. New York: Dutton Children's Books.*

Pallotta, Jerry. 1988. *The Flower Alphabet Book*. Watertown, MA: Charlesbridge Publishing.*

Petty, Kate and Scheffler, Axel. 1997. *Rosie Plants a Radish*. Kansas City, MO: Andrews McMeel Publishing.*

Rockwell, Anne. 1998. *One Bean*. New York: Walker and Company.*

** Books available for checkout in Green Bay Botanical Garden's Children's Library*