

Focus on: Growing Plants

This lesson is meant to support the focus on Plants on Earth. It can be done to generate background knowledge prior to teaching the unit, during the unit to reinforce lessons, or as a follow up to the unit to increase the retention of information. How you guide your students will depend on the information you have already taught and the information you want to introduce. The lesson is enhanced if there is a plant growing in the classroom to compare with the garden plants.

Clarifying Objectives:

3.L.2.1 Remember the function of the following plant structures as it relates to the survival of plants in their environment:

- Roots –absorb nutrients
- Stems –provide support
- Leaves – synthesize food
- Flowers – attract pollinators and produce seed for reproduction

3.L.2.2 Explain how environmental conditions determine how well plants survive and grow.

3.L.2.3 Summarize the distinct stages of the life cycle of seed plants.

Key Vocabulary:

Definitions can be found at <http://learnersdictionary.com>

-Function
-Plant Structures
-Survival
-Environment
-Roots
-Absorb
-Nutrients
-Stems
-Support
-Leaves
-Synthesize
-Flowers
-Pollinators
-Produce
-Reproduction
-Environmental Conditions
-Summarize
-Stages
-Life Cycle
-Seed Plants

Focus Question(s):

How does the growth of the plant in the garden compare to the growth of the plant in the classroom?

Materials:

School Garden
Garden plants that your class planted
Graph Paper
Precut Paper Strips
Centimeter Cubes

Activities:

- Tell students they are going to measure the growth of their plants in the garden.
- Distribute graph paper and have students put the age and date of their plant in the appropriate place. Students should select one plant to measure for the duration of the unit. You can use craft sticks with the students' names/initials on them to mark the garden plants.
- Review how to use the precut paper strips to measure the height of the plants.
- Review how to use the centimeter cubes as a measuring tool.
- Have students measure their garden plants.
- Have students give their graph a title, record date and age of the plant.
- Plan other sessions to return to the garden and use the same procedures each time to measure and record.
- Compare the growth of the plants in the garden with the plants in the classroom. Discuss.

Guiding Questions:

- How do the plants in the garden look?
- What do you notice about the plants that are the same or different from the last time we saw the plants?
- What part of the plant is new or larger?
- How much has your plant grown?
- If there was a growth spurt, what do you think may have caused it?
- Did anything happen that might have inhibited the growth?
- How is the plant in the garden similar to or different from the plant in the classroom?
- How does the growth of the plant in the garden compare to the growth of the plant in the classroom? What is the same? What is different?
- What could explain the similarities?
- What could explain the differences?
(amount of rain vs hand watering; amount of direct sunlight vs amount of light in the classroom; garden pests vs the lack of pests in the classroom; human intervention or lack of intervention to care for plants; etc.)