

Let it Grow

Strand	Earth Patterns, Cycles, and Changes
Topic	Plant life cycle
Primary SOL	3.8 The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include c) plant life cycles.
Related SOL	3.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which a) observations are made and are repeated to ensure accuracy; e) length, volume, mass, and temperature are estimated and measured in metric and standard English units using proper tools and techniques; h) data are gathered, charted, graphed, and analyzed.

Background Information

In the plant life cycle, a seed grows into a new plant that forms seeds. Then the new seeds repeat the life cycle. Some seeds require a period of dormancy before growing.

Materials

- Cup - one per student
- Soil
- Flower seeds (marigold, sunflower, zinnia, etc.) Check germination times.

Vocabulary

seed, seedling, germinate

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

Introduction

1. Gather the class and explain to them that over the next several weeks, they will be growing plants. Review the plant life cycle and review the basic parts and functions of a plant.
2. Tell the students the particular type of plant they will be growing and have them research the needs of that kind of plant.
3. Have the students create a care guide and observation booklet for the growing of the plant.

Procedure

1. Provide each student with a cup, soil, and seeds.
2. Using the guide that they created, have the students plant their plant in the cup.
3. Have each student take the responsibility to maintain their plant based on the guidelines that they set up in their guide for that plant.

4. Have the students observe, draw pictures, and measure growth of their plant daily. Students should keep this information in their care guide and observation booklet.

Conclusion

1. Have the students create line graph showing the plant growth over time.
2. When the plants begin to flower, have the students create a life cycle chart for their plant showing the stages of the life cycle.

Assessment

- **Questions**
 - How are plants and butterflies alike?
 - How is the life cycle of a plant like any other life cycle? How is it different?
- **Journal/writing prompts**
 - You are a seed, but you don't know what you will grow up to be. Write about growing up and discovering the kind of plant you are.
 - How is your life like the life of a flower?
- **Other**
 - Draw and label the life cycle of a plant.

Extensions and Connections (for all students)

- Label the parts of the plant and describe functions of those parts.

Strategies for Differentiation

- Create a “waterfall or flip book” with each page depicting each stage of the plant life cycle.
- Have students act out each stage of the plant life cycle.
- On a paper plate, color flower petals, glue seeds in the middle (to show seeds some from the fruit/flower), glue a paper stem, leaves, and roots. Label the parts.
- In a plastic glove, place different kinds of seeds and a cotton ball of water in each finger. Fold the top over and tape it in the window of the classroom. Observe germination and growth of the different seeds.
- Have students create class gardens in plastic see-through containers and have students monitor and document the plant cycle. Students should be responsible for the care of the garden.