

Activity – Sprout Houses

Standard IV

Students will gain an understanding of Life Science through the study of changes in organisms over time and the nature of living things.

Objective 2

Identify basic needs of living things (plants and animals) and their abilities to meet their needs.

Intended Learning Outcomes

Generating evidence: Using the processes of scientific investigation (i.e. framing questions, designing investigations, conducting investigations, collecting data, drawing conclusions)

Communicating Science: Communicating effectively using science language and reasoning.

Knowing in Science: Understanding the nature of science.

Content Connections: Language Arts, Math

Background Information

Since plants are living things, they have a life cycle. We can study the life cycle of different plants and learn about a plant’s different stages and what helps a plant to live and grow. By growing seeds in a sprout house, we are able to see the beginning of the life cycle when a plant sprouts from the seed and begins to grow into the plant it will become.

Sprout houses do not provide everything a plant needs to survive or thrive. They do, however, give us the opportunity to observe what usually takes place underground. We can observe and describe the sprout, the roots, and stem growth.

(Activity Time: 1 hour first lesson, 10 minute checks over several weeks)

Invitation to Learn

Ask, “how would you like to have a sunflower house? How would you make a sunflower house? What would you have to do?”

Instructional Procedures

Read *Sunflower House* by Eve Bunting. Let students share if they have ever seen anything similar to the sunflower house. Talk about plants, how they grow, and what they need to grow.

Explain that you will be growing seeds and charting their growth. You will make a sprout house in a tall, clear glass so that you can see the whole plant grow. You will chart and graph the data/information you collect about the growth of the plant(s).

Materials

- Sunflower House* by Eve Bunting
- tall, clear glass or plastic cup
- cotton
- blotting paper(thick paper towels)
- graph paper (1/2 inch or smaller)
- bean seeds (Fava beans and/or other seeds)
- journal or booklet to record learning
- paper to chart growth

You may choose to have each student make a sprout house, or make a few for the class to study together.

1. Place the blotting paper on the inside of the glass and place the cotton inside the paper.
2. Put the bean, or other seed, between the glass and the blotting paper no more than one-half way up.
3. Tape a strip of graph paper to the outside of the glass. Mark the spot on the graph paper that is even with the center of the seed.
4. Fill the glass with water to cover the seed. Keep the seed covered with water throughout the experiment.
5. Mark the daily growth of the roots and stem on the graph paper.

Possible Extensions/Adaptations

Have students plant different types of seeds. Chart and graph the differences in growth rate.

Plant several of the same seeds for the class to experiment with. Try variations such as; too much water, not enough water, using sprite, low light, or no light.

Plant some seeds in sprout houses and some in soil. Compare the two plants as they grow.

Assessment Suggestion

Use a growth chart to show plant growth. Use pictures and words to journal the growth that is happening to the seed. Do the students see the growth, and can they put into words what is happening?

Additional Resources

www.arboretum.fullerton.edu

www.urbanext.uiuc.edu

Utah State University Extension (801) 269-9422

From Seed to Plant by Gail Gibbons

Family Connections

Have students grow some plants at home using the sprout houses. Have them teach their family how to make them.

Students can ask for a small part of the family garden to grow some items of their choice. They can try to grow some items in a sprout house that have roots as the main part of the plant (potatoes, carrots, etc.).