



What it takes to grow!

OBJECTIVES: Students will be asked to recognize characteristics of two different habitats and create a model of a growing environment.

OVERVIEW:

Students are introduced to the basic components of two different ecosystems. By exploring images/videos, students will describe both the desert and temperate habitats. This will include direct observations (i.e., adjectives describing the images) as well as inferences (i.e., if there is water in the image, what types of animals might be there?) Key focus areas include soil type, temperature range, and moisture. At the end of the lesson, students should be able to identify the major requirements of a growing habitat

Students will demonstrate their understanding by creating a growing environment for grass seeds.

STANDARDS ADDRESSED:

Core Ideas K-ESS3-1: Interdependent relationships in ecosystems: animals, plants, and their environment

Science and Engineering Practices: Analyzing and interpreting data; developing and using models; engaging in argument from evidence; obtaining, evaluating, and communicating information.

CCSS ELA/Literacy R.1.K.1: With prompting and support, ask and answer questions about key details in the text.

CCSS ELA/Literacy W.2.8: Recall information from experiences or gather information from provided sources to answer a question.

MATERIALS:

- 2 small potted plants: one should be a cactus (or succulent) while the other should represent a temperate climate
- Age-appropriate picture book illustrating a diversity of habitats or a variety of projectable images of both temperate and desert habitats. These images should include both plants and animals.
- Chart paper and markers

For each student for growing grass heads:

- Nylon stocking feet (knee-high stockings work well) or Styrofoam cup
- Small container (single-serving yogurt or cottage cheese, coffee cups, or small Dixie® cups)
- Topsoil
- Grass seed
- Water (as needed)
- Markers

ACTIVITY STEPS:

1. Open the lesson by sharing the live plants and inviting students to offer descriptions. List information on the chart.
2. Explore the two habitats.
 - a. If using a picture book, read the book while encouraging students to add words to the chart based on both the text and the photos.
 - b. If using images, have students describe the photos and add student-generated suggestions to the chart.
 - c. If using videos, play the clips and then have students add words to the chart.
3. Using a Venn Diagram, organize the chart to highlight common factors (i.e., soil, sunlight, moisture). Encourage students to identify the differences (i.e., amount of water, color of the soil, sunlight). If possible, discuss animals (or the lack of) and how that provides information about the habitat. At the end of the lesson, the students should be able to identify the key requirements for growing seeds.

ASSESSMENT:

Students will demonstrate their understanding by growing grass seed. They will be able to identify the requirements for growth (soil, water, sunlight).

1. Put some grass seed into the nylon stocking foot.
2. Add some topsoil on top of the seed.
3. Turn upside down and tie a knot in the stocking foot and trim so only a little bit hangs down. The seed should be right side up.
4. Place the filled stocking foot, knot side down, into a small container or coffee cup (filled with water).
5. Decorate the stocking with permanent marker to create a face.
6. Store inside the classroom on a window ledge or where space is available.
7. Water as needed.
8. Each day let the students check to see if any grass has grown!

A Styrofoam cup can be used instead of a nylon stocking foot.

EXTENSION (OPTIONAL):

Photograph the student work and create a digital portfolio of the work.