

WHAT DO PLANTS NEED?

UNIT 4: Changing Landscapes Lesson 8 — Grades K - 1 INSTRUCTIONS



Overview

In this lesson students will role-play the parts of a plant and review what is needed to have a plant successfully grow.

Objectives

On successful completion of this unit, students will be able to:

- describe parts of a plant and how they help a plant grow; and
- draw and label local plants

Alaska Standards

Alaska Science Standards

[K-1] SA1 Students develop an understanding of the processes of science used to investigate problems, design and conduct repeatable scientific investigations, and defend scientific arguments.

[K-1] SC2 Students develop an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms.

Alaska Cultural Standards

[E] Culturally knowledgeable students demonstrate an awareness and appreciation of the relationships and processes of interaction of all elements in the world around them.

[E.2.] Students who meet this cultural standard are able to understand the ecology and geography of the bioregion they inhabit.

Bering Strait School District Scope & Sequence

1st Grade Sequence #4

- A. Understands what plants need
- B. Understands what are the parts of a plant
- C. Understands how plants grow and change
- D. Use scientific processes to directly support the concepts of living things (plants)



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Materials

- National Geographic Readers: Seed to Plant by Kristen Baird Rattini
- Student Worksheet: Local Plants

Additional Resources

- *How a Seed Grows* by Helene J. Jordan
- *How Does a Plant Grow* by Larry Lowery
- *The Flower Alphabet Book* by Jerry Pallotta
- *The Vegetables We Eat* by Gail Gibbons
- *Up, Down and Around* by Katherine Ayra
- *Jack's Garden* by Henry Cole

Activity Preparations

1. Review Whole Picture section of the lesson for teacher background information.
2. Read *National Geographic Readers: Seed to Plant* to be familiar with the book.

Whole Picture

The wild plants that grow in Alaska provide essential nutrients for the traditional subsistence of Alaska Native people. Wild berries, roots, and greens are gathered, prepared and stored in traditional ways. The subsistence lifestyle requires botanical knowledge of plant growth and development, understanding of ideal plant habitats, knowledge of which part of the plant is edible, and practice of appropriate gathering processes for sustainability.

Young students are likely to be familiar with many of the edible plants in their region. Some plants may include: lingonberries (also known as cranberries), blueberries, salmonberries (also known as cloudberry), crowberries (also known as blackberries), raspberries, rosehip, fireweed, wild rhubarb, wild chive, wild celery, beach greens, sourdock, Labrador tea, willow, sea lovenge, and kelp.

Vocabulary

roots - holds a plant in soil. Takes water and nutrients in that the plant needs

stem - holds up the plant. It also carries food and water through the plant

leaves - takes light and air into the plant. Plants need leaves to make food for the plant



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flowers - produces seeds and fruits

fruit - holds and protects the seed

Activity Procedure

1. Watch the multi media about the growth of a salmonberry (cloudberry) to review how a plant grows.
2. Read National Geographic Readers: Seed to Plant and review the needs of plants (water, sunlight, air, nutrients). Review the vocabulary words.
3. Tell students that they are going to be act out being a plant. Have students stand in a circle and ask them to follow these directions:
 - Stand with your legs spread wide because your legs are the roots that must be strong and are absorbing water and nutrients into the plant.
 - Stand straight and tall with your arms beside you because your body is the stem that moves water and food through the plant. You can wiggle and bend a little or a lot because the wind may blow the stem around.
 - Stand straight and tall with our arms out wide and fingers closed to be flat because your arms and hands are leaves that are getting energy from the sun and air to make food for the plant.
 - Stand straight and tall with your arms out wide and your fingers spread apart because your hands are the flowers that will make seeds and fruits.
 - Stand straight and tall with your arms spread out wide and your hands as fists because your hands are the fruit that is holding and protecting the seeds.
4. Repeat the role-playing with the teacher giving the directions again. Then have students do the role-play with them saying the directions as a group. Next ask students if any of them would like to be the one giving the directions to the group.
5. Ask students to brainstorm kinds of plants that grow in the local area and list them on the board.
6. Tell students that they will be looking for local plants around their home and drawing a picture of them. Give them the Student Worksheet: Local Plants to take home to complete and bring back to class to share their results.

Extension Activity

Share one of the listed gardening books and discuss how students could start a garden at school or at home. Talk about what would be needed to grow a garden in the local area.



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Answers

Student Worksheet: Local Plants

Answers will vary depending on which plants students choose in the local area.

References

Jones, Anore (2010). Plants That We Eat: Nauriat Niginatqat" a guide to plants eaten by Inupiat people of Alaska. University of Alaska Press Fairbanks.

Klosterman, Michelle and Willey, Aaron. (2012). More is Less. Science and Children, National Science Teachers Association.



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STUDENT WORK



Student Worksheet: Local Plants

Name _____

Find 3 local plants. Draw a picture of the plant and label it by writing the name of the plant and any parts you know.

