

Story Title: How a Seed Grows

Grade Level: 1st

Lesson created by: Julia Rowles and Elisabeth Deaton

Length of lesson: 1 day for the read-aloud. 2 weeks for the seed journal. Centers according to your situation – 1 week in our situation.

Science Objectives:

SOL 1.1: TSWUAI how to conduct simple science experiments.

1.3.5: Describe the life needs of plants (nutrients, water, a place to grow – soil or water – sunlight, and carbon dioxide – CO₂ – from the air).

1.3.10: Create and interpret a model/drawing of a plant including roots, stems, leaves, blossoms, fruits, and seeds (SOL 1.1, 1.4)

Language Arts Objectives:

1.1.4: Relate previous experiences to the topic and what is read (SOL 1.9)

1.1.9: Make, confirm, and revise predictions (SOL 1.9)

1.10: Ask questions about the text before, during, and after reading (SOL 1.9)

1.3.11 – Organize and record information by charting, mapping, and graphing

1.4.2 – Follow two-step and three-step directions (SOL 1.2)

1.6.2 – Write daily across the curriculum using a variety of tools and formats (e.g., learning logs, response journals, graphic organizers)

1.7 – Communicate ideas in writing using legible handwriting, punctuation, and capitalization (SOL 1.11, 1.12)

1.8 – Demonstrate effective oral communication (SOL 1.1)

Materials:

How a Seed Grows

Bean seeds – 2 per student

Wet paper towel – 2 per student

Ziploc bags – 2 per student

Tape

Plastic cups – 1 per student

Potting soil

Acorns, bean seeds, sunflower seeds, whirligigs – a few of each kind – this can vary according to your situation

Seed Journal (attached)

Handwriting paper

Magnifying glass

Seed Sort Sheet (attached)

Seed Talk Center sheet (attached)

Center Completion sheet (attached) – differentiate with writing or drawing

Seed/plant books for independent or buddy reading, according to your class

Plant diagram, cards labeled with plant parts, answer key

Procedure:

Engage: You are sitting with your class in a circle. Pull out the seeds. Ask children if they know what they are and how we use them. Then, begin to sort the seeds, asking the class to help.

Explain: Tell the class that plants begin life as seeds. Before reading, ask students how they think a seed grows into a plant. Record their responses on the easel. Read aloud the story How a Seed Grows. As you read, stop and discuss the following:

- the experiment that the children in the story are conducting
- which senses the children in the story are using to observe their seeds
- the things a plant needs to grow
- text-to-self connections: how have they grown seeds or seen plants grow?
- Predict what will happen during the story to the seeds
- Stop and check what is happening with the seeds alongside the students' predictions. Were they on track? Correct misconceptions.

After finishing the story, tell the children that they are going to plant their own seeds and measure the effects of sunlight on seed growth.

Explore: Each student receives 2 plastic bags. Write each student's name on his/her bags with permanent marker before distribution.

Give each student a bean seed and a wet (damp, not dripping) paper towel. Students place the paper towel at the bottom of the plastic bag. Then, they place the seed on top of the towel and seal the bag. The teacher tapes these plastic bags to the window, turning the seed towards the sun.

Students draw what their seeds look like on the first page of the seed journal.

Give each student a second bean seed and wet paper towel. Students draw what these seeds look like on the first page of the seed journal. Students place the paper towel at the bottom of the plastic bag. Then, they place the seed on top of the towel and seal the bag. Put these bagged seeds in a dark place, such as under a cabinet, in a closet, etc – wherever it will get no sunlight.

Over the next two weeks, students will periodically draw their seeds (day 3, 5, etc – see attached journal). They do not need to take bags off the window, since this could squish the seeds. Instead, they can just turn over bags and record as necessary. They can take seeds from out of the dark spot but must return the bags immediately after drawing. Students record observations and predictions in the attached journal.

The following centers accompany this investigation:

Writing Center: Write "A Day in the Life of a Seed" on handwriting paper.

Seed Sort Center: Take the seeds that you sorted whole-group, and put them in a center. Students can look at the seeds with magnifying glasses and design their own ways of sorting the seeds. Complete the attached seed sort sheet.

Seed Talk Center: Discuss your seed's growth with a buddy. Follow the Seed Talk Center sheet (attached).

Reading Center: Put out different books about seeds. Students read independently or with buddies, according to your class procedures. Differentiate according to reading level.

Plant Parts Center: Students look at a large diagram of a flowering plant. Diagram should include roots, seed, stem, leaves, and flower. This can be on a felt board, a laminated poster, the easel, etc. Students then take index cards and put the index cards next to the appropriate plant part, such as stem or flower. Students check afterwards by looking at a labeled guide (example: a picture in a file folder).

Evaluate: 1. Center completion sheet
2. Seed Journal

Name: _____

Seed Journal

Day 1

Seed in the Light	Seed in the Dark

How are these seeds the same? _____

What do you think will happen next to your seeds? _____

Day 3

Seed in the Light	Seed in the Dark

How have your seeds changed? _____

How are they different from one another now? _____

Day 5

Seed in the Light	Seed in the Dark

How are your seeds growing? _____

What do you think will happen next to your seeds? _____

Day 7

Seed in the Light	Seed in the Dark

How have your seeds changed? _____

How are they different from one another now? _____

Day 10

Seed in the Light	Seed in the Dark

How have your seeds changed? _____

How are they different from one another now? _____

Name:

Seed Sort Sheet

Directions: Sort your seeds. Draw your favorite way that you sorted.

Why did you sort your seeds like this?

Name:

Center Completion Sheet

CENTER	DID YOU DO IT?	DID YOU LIKE IT?
Writing		
Seed Sort		
Seed Talk		
Reading Center		
Plant Parts Center		

What is one thing that you learned about seeds?