

Lesson Plan Prepared By: Amanda Dennis
Lesson: What Does the Inside of a Seed Look Like?
Length: 20-25 minutes
Age or Grade Intended: 1st grade
Source: *Activities for Teaching Science as an Inquiry*

Academic Standards:

- 1.1.1 Observe, describe, draw, and sort objects carefully to learn about them.
- 1.1.2 Investigate and make observations to seek answers to questions about the world, such as “In what ways do animals move?”

Behavior/Performance Objectives:

After given a soaked and dry seed, students will observe the differences between the seeds.

After observing the outside of a wet and dry seed, students will dissect the seeds and observe differences.

After making observations and a class discussion, students will draw and label what they saw.

Assessment:

The teacher will collect the drawings at the end of the lesson. Did students recognize the differences between the seeds? Did they display the differences in their drawing?

Advanced Preparation by Teacher:

Provide lima bean seeds
Soak half of the seeds in water overnight
Bring in white paper and markers for drawing

Introduction/Motivation:

What do you think the inside of a seed looks like? I found these seeds at my house, and I began to wonder what might be inside this little seed. Would you help me figure it out? Great!

Step-by-Step Procedure:

- Give each pair of students 4 lima bean seeds (2 of which have been soaked in water for 24 hours)
- Have students observe the differences from the dry seeds and the wet seeds
- How are the soaked seeds different from the dry seeds? Why are the soaked seeds larger? What do you think was happening inside the seed?
- Have students peel the outer coat from one of the seeds, teacher might need to assist students, then examine. Next pull the coatless seed in half. Have students examine the inside of the seed, and draw what they see.
- Then have students pull apart the dry seed. Draw what they see.

Closure:

Ask for volunteers to explain what they saw. Then provide students with the names of the parts: seed coat, embryo, and cotyledon. Then have them label their own drawings with the names they learned. Can anybody tell me what the water did for the seed?

That's right, it was like a signal telling it to grow. Now we will take these seeds and put them in a cup with a damp paper towel and place them in the window, so that we all can watch them grow.

Accommodations/Enrichments:

The teacher may need to split the seeds for all students, due to progression of fine motor development.

Enrichment: Have students keep a daily journal of the growing seeds, documenting what they observe each day.

Reflection:

Did students recognize differences?

Did they record the differences?

Were they engaged?