

MANCHESTER COLLEGE  
Education Department

LESSON PLAN BY: Candy Preston, Erica Hudson, Katherine Stoneburner, Tyler Kottkamp

Lesson: Incredible Seeds

Length: 1 hour/3 days

Age or Grade Intended: Second Grade

**Academic Standard(s):** Science

2.1.1 Manipulate an object to gain additional information about it.

2.1.3 Describe, both in writing and verbally, objects as accurately as possible and compare observations with those of other people.

**Performance Objectives:**

Given a group of seeds, students in small groups will sort and classify their seeds based on their observations with 90% accuracy.

Given 2 seeds, the student will draw a picture of each seed showing at least 2 characteristics of each.

Given a seed, the student will write 1 sentence describing 1 characteristic of the seed with 90% accuracy.

**Advanced Preparation by Teacher:**

1. Read *The Magic School Bus Plants Seeds: A Book About How Living Things Grow* By Joanna Cole.
2. Gather pea, corn, carrot, sunflower, green bean, lima bean, and soy bean seeds.
3. Acquire plastic cups, paper towels, Miracle Grow, and water pitchers.
4. Fill water pitchers with water and Miracle Grow plant nutrient.
5. Get science journals.

**Procedure:**

**Introduction/ Motivation:**

Teacher reads *The Magic School Bus Plants Seeds: A Book About How Living Things Grow*. The teacher then leads a class discussion on different types of seeds in the world and where they grow.

**Step-by-Step Plan:**

1. Teacher tells students that they will be given various kinds of seeds that they will be sorting, classifying, observing, and drawing.
2. Students are put into small groups of 3 or 4 for this activity and all group members must agree on the sorting/classifying of the different seeds.
3. Once the sorting and classifying is completed the students will individually observe two different seeds focusing on color, texture, firmness, etc. The results of the observation along with the drawings of the two seeds will be recorded in their science journal.

**First part of lesson over.**

4. The following day the students will present their method of sorting/classifying to the rest of the class and explain why they did it that way.
5. After the students are done the teacher will present his/her method for classifying to the class and explain why he/she did it that way. From this should come the idea that there are numerous ways to classify and one is just as good as the other as long as the classifier has a good reason for their product.
6. Now teacher asks about how the plants were grown in the book that was read the day before. Answers should include water, soil, nutrients. Teacher will then present the students with cups, paper towel, and pitchers of water and tell them to make the plants grow using only these materials. Students should plant the different classifications together in the same cup.

**Closure:**

Students will individually predict what their plants will look like in one day, one week, and one month by drawing the different pictures. Students will then individually write in their journal a story about a plant and how it grows. After completion students will compare the drawings of their future plants with those of their group mates.

**Extension:**

After one week, two weeks, one month, students can look back at how their seeds are growing and possibly even look at re-classifying their seeds/plants based on what the plants, leaves, stems, etc look like.

**Adaptations/Enrichment:**

*Spanish Speaking Student:* This student will receive directions and class discussion questions in Spanish as needed. The students will dictate their sentences in Spanish for their journals.

Students will write in their science journals the names of each seed beside the drawing of it, and if they don't know the real name they must create their own name for those seeds.

**Self-Reflection:**

1. Were students able to accurately observe their seeds, and based off of those observations separate them into different groups?
2. Did the students work productively in their groups?
3. Were the students able to sort their seeds?

**Bloom's Taxonomy:**

1. Knowledge: Recognized the differences in seeds.
2. Comprehension: Described the characteristics of seeds.

3. Application: Illustrated seeds.
4. Analysis: Compare/Contrast seeds.
5. Synthesis: Wrote about seeds.

**Gardener's Multiple Intelligences:**

1. Naturalist: Planted seeds.
2. Interpersonal: Working in groups.
3. Intrapersonal: Worked alone.
4. Visual/Spatial: Drew seeds.
5. Linguistic: Wrote about seeds.
6. Logical/Mathematical: Separated seeds into groups.