

**MANCHESTER COLLEGE**  
**LESSON PLAN by: Lauren Bailey**

**Lesson Title:** What is the Function of Each Seed Part in the Growth of A Plant **Length:** 2 weeks  
**Grade Intended:** Fifth **Source:** Activities for Teaching Science as Inquiry – Page 146-147

**Academic Standards:**

- Science 5.2.4 – Keep a notebook to record observations and be able to distinguish inferences from actual observations.
- Science 5.4.4 – Explain that in any particular environment, some kinds of plants and animals survive well, some do not survive as well, and some cannot survive at all.
- Science 5.5.1 – Make precise and varied measurements and specify the appropriate units.

**Performance Object:** Given an experiment, the student will illustrate plant growth with 100% accuracy.

**Assessment:** I will assess their experiment by looking at their daily observation journals. I will also check to make sure they have correctly illustrated the parts of the plant's growth correctly. I will also formatively assess the answers to their questions throughout the experiment.

**Advanced Preparation by the Teacher:**

- One baggie, one paper towel, several staples, several lima beans, and water for each student
- A camera will be needed to share among the students each day.
- Examples of the baggies for each group
- Scientific journals for each student
- Storage for the baggies for observation

**Procedure:**

**Introduction/Motivation:**

**Engage Stage:**

- “What are some things we do with seeds?” (Knowledge Question) and “What happens to seeds when they are planted”. (Comprehension Question) (Linguistic Intelligence)

**Step-by-Step Plan:**

**Explore Stage:**

- Split students into groups. Provide students with an example of how their baggie should be put together. (Closed baggie with a paper towel inside, staples one inch above bottom of the baggie with beans resting on top, a small amount of water in the bottom of the baggie) (Bodily-Kinesthetic Intelligence) (Inter-personal Intelligence)
- Have students observe in their journals for two weeks things like measurement, color, shape, texture, and other observations. (Intra-personal and Visual-Spatial Intelligence). Have the students take a picture with a camera to put in their journals each day to show the progress their plant is making.

**Explain Stage:**

- Have a class discussion about the observation the students saw. Ask the students, “What sequence of growth did the lima bean make?” (Analysis Question) Show the students what you found out about your plant as you charted it each day. Share your pictures that you took to explain the stages the plant went through and how the plant changed from a seed into a plant.

**Elaboration Stage:**

- Talk about seed and plant parts and what a lima bean needs to successfully grow.

**Closure**

**Evaluation Stage:**

- Have students create a drawing of their lima bean's growth sequence with correct labels.

**Adaptations:** I will create a chart of information for these students to fill out daily with specific observations they need to do. I will also provide extra help for them when they put together their baggie. I will also create a drawing of the growth sequence, so they can provide the labels.

**Enrichment:** As an enrichment activity I will allow students to try this experiment with other factors (different types of light, different temperatures, different amounts of water, different types of paper towel/water/beans/paper towels)

**Self-Reflection:**