

Teacher's Name: Sammy & Ernestina
Unit Title: Lima Bean Plants
Approximate Time Frame: 3 weeks

School: Higginson School
Grade Level: 1st/Inclusion

UNIT PLAN TEMPLATE (Whole Unit – summary)

Stage 1-Desired Results (UNIT)

Standards (guiding the whole unit):

<http://www.doe.mass.edu/frameworks/current.html>

Standard: Life Science (Biology), Strand 1: *Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.*

Standard: Life Science (Biology), Strand 3: *Recognize that plants and animals have life cycles, and that life cycles vary for different living things.*

Students will know:

(Simple general single sentence statement)

- ~Students will know that plants are living things like humans and animals.
- ~Students will know that plants grow.
- ~Students will know that stages of a plants life cycle.
- ~Students will know that a plant needs food, air, and water to survive.

Students will be able to:

(Simple general single sentence statement)

- ~Students will be able to make predictions of the growth of a lima bean.
- ~Students will be able to draw/write their observations about the growth of their lima plants.
- ~Students will be able to describe the stages of a lima bean plants life cycle through role-play.
- ~Students will be able to describe the needs (i.e. food, air, water) a plant needs to grow.

Brief Summary of the Unit (overall view): Through this unit, students will engage in learning about the needs and growth (life cycles) of plants (lima bean plants). Students will engage in a variety of hands-on activities, critical thinking, answering guiding questions, read-alouds, etc. Students will begin the unit discussing how humans grow and change (i.e. babies-children-teenagers-adults) in comparison to a plant (seed-sprout-roots-plant). Students will assist in thinking of other living things that change, grow, and develop. Students will listen to the books Life Cycle of a Bean by Angela Royston and One Bean by Anne Rockwell. As students offer their predictions of what they think will happen to a lima bean, the teacher will write their predictions on chart paper. Students will act out the stages of the life cycle of a plant using their bodies. Students will “plant” their lima bean in a plastic cup and will make, write, and draw their observations every couple of days (in their observation journals) until the lima bean grows/sprouts (i.e. what does their lima bean look like, is a plant sprouting, etc). When their lima bean starts to sprout and grow, students will continue with their observations (writing/drawing in their Observation Journals) everyday. Students will be able to observe what is happening to their lima bean, what they see, describe the roots, etc. When their lima bean becomes a plant they will be able to plant it in soil and a pot.

Stage 2- Assessment Evidence (UNIT)**CLEAR DETAILED EVIDENCE DESCRIBING HOW THE STUDENT PERFORMANCE IS ASSESSED (whole Unit)****Students will know (detailed statements):**

- Students will know the four stages of a plants life cycle and demonstrate this knowledge through role-play.
- Students will know how to orally tell their predictions using complete sentences and staying on topic.
- Students will know how to use descriptive words about plants and the life cycle in writing/drawing their observations in journals.
- Students will know that plants need food, air, and water to survive and grow and will be able to demonstrate this knowledge through discussions.

Students are able do (detailed ASSESSMENT statements using six facets of understanding statement – explanation, interpretation, application, perspective, empathy, self-knowledge): (Include as many as possible.)

Application

- Students will predict what will happen to their lima beans by orally telling.

Interpretation

- Students will be able to role-play the life cycle of a plant.

Explanation

- Students will be able to use descriptive words about plants and life cycles when writing their observations in a journal.
- Students will be able to show their knowledge of the needs (food, air, and water) through discussions.

Rubric to accompany Task (level of expected performance): (UNIT) (You will expand this rubric to include at least 4 rows)

Level Task (evidence)	1 (low)	2	3	4 (high)
Application: Students will make an oral prediction of what will happen to their lima beans.	Student does not make an oral prediction of what will happen to their lima bean.	Student implies an oral prediction of what will happen to their lima bean.	Student makes an oral prediction of what will happen to their lima bean.	Student successfully makes a meaningful oral prediction of what will happen to their lima bean.
Interpretation: Students will be able to role-play the life cycle of a plant (4 stages).	Student is unable to role-play any of the stages of the life cycle of a plant.	Student is able to role-play 1-2 stages of the life cycle of a plant.	Student is able to role-play 3 stages of the life cycle of a plant.	Student is able to role-play all 4 stages of the life cycle of a plant.
Explanation: Students will be able to use descriptive words when writing their observations in a journal.	Student is unable to use any descriptive words when writing their observations in a journal.	Student is able to be able to use 1 descriptive word when writing their observations in a journal.	Student is able to be able to use 2 descriptive words when writing their observations in a journal.	Student is able to be able to use 3 or more descriptive words when writing their observations in a journal.
Explanation: Students will be able to show their knowledge of the needs (food, air, and water) through discussions.	Student is not able to show their knowledge of the needs (food, air, and water) through discussions.	Student is able to show their knowledge of 1 need through discussions.	Student is able to show their knowledge of 2 needs through discussions.	Student is able to show their knowledge of all three needs through discussions.

Additional evidence (tests, essays, work sample): Predictions, discussions, and on-going observation journals.

Stage 3: Plan Learning Experiences and Instruction: (LESSON)**ONE LESSON from the Unit (described in detail)****TEACHER:** Sammy & Ernestina**DATE:** May 17, 2014**CLASS:** Grade One/Inclusion**UNIT:** Life Cycle of a Plant**LESSON TITLE:** Let's Plant Lima Beans!**Standards (specific to this lesson in the unit):**

Standard: Life Science (Biology), Strand 3: *Recognize that plants and animals have life cycles, and that life cycles vary for different living things.*

Phase/Time Frame	The Teacher Will	The Student Will
Introduction	<p>Start with a whole class discussion about how humans grow and how they are growing from being a baby to being school age (5-6).</p> <p>Discuss living things like humans (i.e. animals and plants).</p> <p>Introduce that we will be learning about how plants grow.</p>	<p>How did you get bigger? What changes do you see from when you were babies? Will you grow more? Are there people who are bigger than you?</p> <p>What are other living things? Do they grow like you?</p> <p>Asking if they know how plants grow will activate their prior knowledge for a discussion.</p>
Body	<p>Read: <u>Life Cycle of a Bean</u> (Pgs. 4-11) by Angela Royston and <u>One Bean</u> by Anne Rockwell.</p> <p>Explain that they will be planting lima beans, and allow children to predict what they think will happen to the lima bean.</p> <p>Facilitate students lima bean "planting."</p>	<p>Students will listen to both books.</p> <p>Students will offer their predictions to be written on the chart paper.</p> <p>Students will sit at their tables with other peers (which is a good way for them to help each other), but are working on individual planting.</p> <p>Students will be given their materials: one water bottle per table, one lima bean, clear plastic cup, and paper towel per child.</p>

	<p>Teacher will give students step-by-step directions of “planting” lima beans.</p> <p>Teacher will walk around and initiate conversations with students by asking questions (i.e. what do you think will happen first? What does a plant need to survive?).</p>	<p>Students will follow directions of loosely wrapping the lima bean in the paper towel (enough to still see the bean’s growth) and putting it in their clear plastic cup (while having the teacher model each step as they go along with the lesson).</p> <p>Students take turns using the spray bottle to add some water in the cup (teacher can refer back to books about how water and sunlight is important for the plants to grow).</p> <p>Students will take their plastic cups to designated window with sunlight.</p>
Closure	<p>Have students come back to rug area.</p> <p>Go over the 4 stages of a plants life cycle.</p> <p>Draw and write the stages on chart paper.</p> <p>Ask students if they can demonstrate the first stage, then the second, third, and fourth.</p> <p>Explain that during the next few weeks, they will be making observations in a journal using pictures and words.</p>	<p>Students will orally tell the four stages of a plants life cycle.</p> <p>Students will role-play the stages using their bodies.</p>

Sufficient and Revealing Evidence of Understanding (Lesson Plan)

Briefly explain which you will use and *why*:

Informal Check: I will informally observe whether students are on task (i.e. knowledge of plan life cycle, plant needs, etc.) during whole group discussions and hands-on activity.

Observation/Dialogue: I will initiate discussion, prior knowledge, and ask questions (previously stated above in lesson plan), while also doing the same when students are working on planting their lima beans.

Quiz/ Test: N/A

Performance Task / Project: I will check-in with students during lima bean planting.

Other: N/A

Adaptations: Case study from All Kinds of Minds case studies**Case Study Student Name:** Chelsea**Grade:** 6th (as 1st grade student)**Area of Disability:** Understanding Ideas

Modifications	Rationale
No modifications needed other than specially designed instruction.	Given specifically designed instruction and appropriate accommodations Chelsea can carefully access the curriculum.
Accommodations	Rationale
Helping her form complete sentences when making her prediction and writing her observations.	“Walking” Chelsea through her ideas, writing these ideas down, and focusing on how to make them into complete sentences. Allowing Chelsea this support will assist her in keeping organized with her thoughts and a step-by-step technique to incorporate her ideas into writing complete sentences.
Giving directions for planting step-by-step.	This will allow Chelsea to refer and accomplish one step (of a multi-step hands-on activity) before receiving the next step, so she doesn’t feel overwhelmed with too many directions being given at once.
Cards with pictures of the four stages of the life cycle of a plant.	Having Chelsea use visuals when learning new concepts may help her with her understanding of new ideas. These visuals can always be available to her for support, as she needs it.
Allowing her to help a friend.	Chelsea enjoys helping her friends. By doing this she is given the opportunity to foster her skills and reinforce areas in which she needs additional practice (i.e. step-by-step directions).

Resources Used: Websites, books, film clips, etc.

Massachusetts Department of Education (2001) *Science and Technology/Engineering Curriculum Frameworks*. Malden, MA. Retrieved on May17, 2014 from <http://www.doe.mass.edu/frameworks/current.html>.

Rockwell, Anne. (1999). *One Bean*. New York: Walker & Company.

Royston, Angela. (1998). *Life Cycle of a Bean*. Chicago: Reed Educational & Professional Publishing.

SIOP Feature (for First Lesson)

SIOP FEATURES		
PREPARATION	SCAFFOLDING	GROUPING OPTIONS
Adaption of content: Curriculum Frameworks	Modeling: Teacher Demonstration	Whole class: Discussion/Prior Knowledge
Links to background: Class Discussion	Guided Practice: Planting Lima Beans	Small groups: Planting Lima Beans
Links to past learning: Making Predictions	Independent Practice: Observation Journals	Partners
Strategies incorporated: Read-Alouds, Step-by-Step Directions	Comprehensive input:	Independent
INTEGRATION OF PROCESSES	APPLICATION	ASSESSMENT
Reading: Read-Alouds	Hands-on: Planting Lima Beans/ Predictions	Individual: Successfully Made a Meaningful Prediction and Planted Lima Bean
Writing: Making Predictions	Meaningful:	Group:
Speaking: Orally Telling Predictions and Discussions	Links to objectives: Rubric	Written:
Listening: Listening to Directions for Planting Lima Beans	Promotes engagement: discussion/Lesson	Oral:

Example of Prediction Chart

Our Predictions:

- It will grow.
- It will be green.
- It will be really big.
- It will be tall.
- It will turn green.
- The vine will twist as it grows.
- The plant will grow straight up.
- The bean will become a plant.
- Leaves will grow out of the vine.

The leaves will be green.

The plant will be fat.

The plant will grow tall.

The plant will slant when it grows.

The shell of the lima bean will come off.

It's going to grow flowers.

The bean will grow.

The bean will turn into a plant.

The bean will get bigger.

The bean will grow up.

The bean will grow.

Example of Observation Journal (for following lessons in unit)

