# Lesson Plan: Jack’s Beans (Grades 2 – 5)

**Overview:**

During this lesson, the classic story of Jack and the Bean Stalk will spark an interest in plants with students. Students will explore the Internet, take a nature walk, and make observations to learn more about plants. A brochure will demonstrate their knowledge of plants. The following lesson has been adapted from, and uses portions of, Alabama Learning Exchange lesson plan “[Jack’s Beans](https://alex.state.al.us/lesson_view.php?id=7924)”.

**Subject Areas**: ELA, Science

**Objectives:**

* Students will describe how plants grow.
* Students will identify the basic needs of a plant.
* Students will explain why plants are important to our world.
* Students will use descriptions to write about their observations.
* Students will describe the life cycle of plants.

**Materials:**

* [KWL chart](http://www.readwritethink.org/classroom-resources/printouts/chart-a-30226.html)
* Brassica-fast growing seeds
* Soil
* Planters
* Name tags
* Water bucket
* Science Journal
* Light source (artificial/natural)
* Gale Databases
	+ Kids InfoBits
	+ National Geographic for Kids
	+ Research in Context (for advanced 5th grade students)
* [Jack and the Bean Stalk](http://www.dltk-teach.com/rhymes/beanstalk/story.htm) ([Spanish Version](http://www.dltk-ninos.com/educacional/leer/cuento-de-hadas/frijoles-magicos/1.htm))
* Poster
* Transparency of plant model
* Lima bean model
* Video: [Magic School Bus Goes To Seed](https://youtu.be/cGO32f68KCY)
* [Brochure rubric](https://alex.state.al.us/uploads/7924/brochure%20rubric.doc) (downloads a Word Doc)

**Background/Preparation:**

Familiarize the students with the story of Jack and the Beanstalk. Read a variety of literature about plants. Use a [KWL chart](http://www.readwritethink.org/classroom-resources/printouts/chart-a-30226.html) to review prior knowledge base. Students should have basic knowledge of creating a brochure using the computer. Students should have had experience navigating the Internet.

**Lesson:**

1. Have students recall the story of Jack and the Bean Stalk. Have them share why they think Jack's beans grew so well. Then have students use a [KWL chart](http://www.readwritethink.org/classroom-resources/printouts/chart-a-30226.html) to review prior knowledge of what they already know about plants in small groups. Record this information on a poster for later observations and reference.
2. Allow students time to visit the website [The Great Plant Escape](http://www.urbanext.uiuc.edu/gpe/case1/c1facts2b.html) and view a slideshow about plants to learn new information. Have students work in groups, research Gale databases such as Kids InfoBits, National Geographic for Kids, and/or Research in Context (for advanced 5th grade students), and write down new information they learn.
	* [The Great Plant Escape](http://www.urbanext.uiuc.edu/gpe/case1/c1facts2b.html). This website allows students to be detectives and find new facts about plants.
	* Kids InfoBits Examples:
		1. “plants” general search
		2. What is a Plant – video (1:26)
		3. The Plant Kingdom – video (1:08)
	* Research in Context Examples:
		1. “plants” general search
		2. Sample experiment (scroll to bottom of article for 2 different experiments)
	* National Geographic for Kids Examples:
		1. Plants
		2. Seed to Plant
		3. A Tree Grows Up
		4. 30 Cool Things About A Rainforest
3. Display the transparency of the plant structures and discuss them with the students. Then show the video [Magic School Bus Goes To Seed](https://youtu.be/cGO32f68KCY). Students will be responsible for writing down three new facts they learned during the video.
4. Model how to split a soaked lima bean and point out the major parts. Then let students split open a soaked lima bean of their own, label and discuss the major parts of the bean. Have students point out the differences between a dry and soaked bean. Have student demonstrate their new knowledge by having them label and color a lima bean model, then write a brief description of their observations.
5. Take students on a nature hike. Observe a variety of live plant examples. Bring in different types of plants to dissect. Dissect various parts of the plant. Then look at them under the microscope. Discuss what might be the function of each part. Use a ready-made transparency of a plant model for class to label.
6. Have students plant a particular seed type in each group. Students will be caretakers of their new plant that is created from a seed using water, a light source, and proper soil for the type of seed planted.
	* Student will keep a record of their observations in a science journal. During the time the plant is growing, have students identify why plants are important to the world. Have them conduct an Internet search to learn more information about plants.
7. Show students a sample newsletter. Have each student create a newsletter about plants. Make sure students describe what plants need to grow, describe the different parts of the plant, explain why plants are important to our world, and describe the different stages of their plant's growth.
8. Students can use math skills to measure and determine how fast their plant is growing.

**Assessment Strategies**

Students will create a brochure to explain the knowledge they gained from the mini-unit on plants. Use the [rubric](https://alex.state.al.us/uploads/7924/brochure%20rubric.doc) to assess brochures.