

HARVEST of the MONTH in the CLASSROOM



DRIED BEANS

HISTORY

Beans have been cultivated all over the world for thousands of years and are an important part of diets in cultures all over the world. Beans are in the legume family, along with clovers, vetch, peas, and alfalfa. Beans cultivated in Northern Africa and Asia (*vicia faba*) are also known as fava beans or broad beans. Beans native to Central and South America of the species *phaseolus* were first cultivated in Mexico and Chile by two groups of people around the same time over 7000 years ago. When Europeans first came to the "New World" they brought beans and grains with them.

FUN FACTS

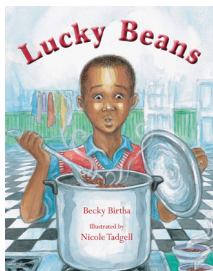
In ancient Greece, public officials were elected by dropping beans in a jar.

The world's tallest bean plant was over 45 feet tall. The largest individual pods can grow to be 5 feet long.

The top five beans grown in the United States are pinto beans, navy beans, black beans, red kidney beans and great northern beans.

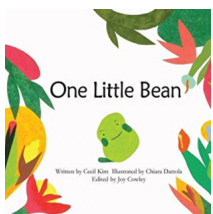
There are over 40,000 varieties of beans

BOOK RECOMENDATIONS



Birtha, Becky. Lucky Beans. 2010.

Like so many people during the Great Depression of the 1930s, Marshall Loman's dad has lost his job. There's little money, but there are plenty of beans-in fact, Ma cooks them for supper every single night! Becky Birtha's engaging story, based on her grandmother's memories of Depression years in the African American community, is illustrated by Nicole Tadgell's expressive paintings.



Kim, Cecil. One Little Bean. 2015.

This beautifully illustrated storybook depicts the life cycle of a bean plant. Children can learn the various stages and elements involved in the growth and reproduction of plants. Subject: Imagination - life cycle.



OBJECTIVES

Through close observation, students will identify and illustrate different types of bean seeds, and understand the conditions needed for them to grow.

ESSENTIAL QUESTIONS

How many different types of beans are there?
What is the life cycle of a bean?
What do beans need to grow?

MA STATE FRAMEWORK(S)

1-LS3-1
2-PS1-1

MATERIALS NEEDED

Dried Beans, different varieties
Drawing Paper and Pens/Pencils/Crayons
Soil/Cups/Masking Tape
Spray Bottle w. Water

PROCEDURE

Introduction

Tell students that there are over 4,000 different kinds of beans and during class they will learn about some of the kinds that grow in Massachusetts. Most dried beans grow very well in New England, with the exception of Lima beans, so you can bring in any assortment of dried beans that you can get. Pass out the containers with beans and tell students to each take one bean, observe their bean carefully, and figure out what kind it is using the Bean Variety Chart. With a piece of drawing paper, students can draw their bean, and include the name of the variety. This activity could be made into stations where students rotate around to observe different varieties and explore the similarities and differences.

If possible, you can read the nonfiction book [A Bean's Life Cycle](#) by Mary Dunn so students can see the life cycle of a bean, with photographs showing each stage.

Lesson Activity continued on Page 2

OBSERVING & GROWING BEANS

Page 2



Activity: Planting Beans

1. Give each student 3 bean seeds. Ask the students what is needed to help these seeds grow. (If they need prompting, remind them that seeds need moisture, air, and the right temperature to germinate).
2. Pass out planting containers (paper or plastic cups with drain holes punched in the bottom work well). Assist students in writing their name on the cups with a permanent marker.
3. Have buckets or containers with soil available. Model the following instructions for the students:
4. Fill a cup about 1/2-3/4 full of soil. Have students follow your example to fill their containers.
5. Poke three holes, using a pencil or your finger, about one inch deep into the soil.
6. Drop one seed into each hole. Cover the seeds loosely with soil.
7. Use a spray bottle to moisten the soil in the container or pour water on the soil until water flows out the holes in the bottom of the container. Be sure to water over a sink or container.
8. Assist the students with planting the seeds.
9. Place the containers in a sunny window and water when the soil is dry to the touch.
10. Discuss with students what they think will happen to the seeds. (Some ideas: the seeds will sprout, emerge from the soil, grow into plants, and eventually produce more seeds).
11. In five to ten days, a sprout will emerge in each container. If more than one seed sprouts or germinates, have students carefully pull out all but the healthiest plant.
12. Students can measure their plants weekly to observe the growth cycle.

EXTENSION ACTIVITY

Instruct students to take daily, weekly, etc. observations of their growing bean plant. They can also take measurements and diagram the growth of these plants.

Watch [The Life Cycle of a Bean](https://youtu.be/pgg2cspLy0I), (<https://youtu.be/pgg2cspLy0I>), a short stop motion video that shows a plant life cycle of a bean seed. Discuss the different stages.