

A Bean is a Seed

Overview:

Youth will learn about the life cycle of a plant and make necklaces to germinate bean seeds.

Goals:

- Learn about the life cycle of a plant

Time Required: 1 hour

Materials:

For each student:

- Dried bean
- Small plastic jewelry bag
- Cotton ball
- 18-inch length of yarn
- A Bean is a Seed life cycle worksheet
(available at: <https://cdn.agclassroom.org/ok/lessons/primary/beans.pdf>)

For each group:

- Holepunch
- Scissors
- Glue / Tape
- Small cup of water
- Eyedropper or pipet (optional)

Procedure:

1. When a seed gets warmth, air and water, it starts to change. The stem and the root emerge from the seed. This is called germination. Germination occurs if the seed is in a warm place. We plant seeds in the spring when the ground is warming up. The seed is the food for the baby plant until it can grow its own root system. A seed is germinated when it can grow without the food stored in the seed.
2. Provide each student with one bean, a plastic jewelry bag, yarn and a cotton ball.
3. Instruct students to moisten the cotton ball with a small amount of water. An eyedropper or pipet can help reduce messes. You want the cotton ball to be damp, but not soaked.
4. Next, place the moist cotton ball and bean inside the plastic bag.
5. Help students punch holes in their bags with a hole punch.
6. String the yarn through the hole and tie the ends to make a necklace.



A Bean is a Seed

7. Ask students what conditions are necessary for a seed to germinate (*moisture, warmth, sometimes darkness*). Ask students where they might place the bags to provide the best conditions for germination.
8. Students will hang the bags around their necks and tuck them inside their clothes.
9. Tell students they are responsible for providing their bean with the best possible care until they have sprouted.
10. Send a note home to parents explaining the needs of the bean.
11. Students will record the progress of their seeds on their worksheet.
12. Each day students will discuss the changes taking place in their seeds.
13. At the end of three days, make a chart as a class showing how many of the seeds have sprouted.
14. If a student's bean did not sprout, lead a discussion on why it might not have sprouted. Some possible reasons might include: too much or too little water, not enough oxygen, temperature too low or too high, or it could be just a bad seed.
15. Students will predict what their beans will look like two weeks later.
16. Students will use the worksheet included in this lesson to show the sequence of a bean seed sprouting. Have students cut out the pictures and glue or tape them in the correct order on their worksheet. Instruct students to write a sentence for each picture explaining what is happening to the seed.

Common problems / Additional guidance:

- If you are planning to use these seeds for the next activity as well, germinate some extra seeds to cover any losses or seeds that don't germinate.

Adapted from the following lesson:

- Ok Ag in the Classroom, A Bean is a Seed:
<https://cdn.agclassroom.org/ok/lessons/primary/beans.pdf>

Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/expression, disability or veteran status with regard to employment, educational programs and activities, and/or admissions. For more information, visit <https://eeo.okstate.edu>.



A Bean is a Seed

Sample Note for Parents / Guardians

Dear Parents/Guardians,

Your child is learning about plant life cycles. Today, we learned what plants need to germinate (moisture, warmth, sometimes darkness). To help us watch germination in action, students made a bean necklace. Students should wear their necklace for the next 3 days to provide their bean with the warmth it needs to sprout.

If you have any questions about this project, please contact me.

Thank you for your support!

