

What is inside a seed?

Grade Level: K

Season: Any

Larger IGS Unit: Seeds

Essential Question: How does a seed grow?

Objective: To learn about the inside of a seed and understand that every seed has a tiny embryo and food for the baby plant.

Materials:

- Dried beans (lima or other big beans), enough for three per student
- Soaked beans
- Small jars with covers or plastic wrap, enough for one per student
- Water
- Paper and pencils

Introduction:

A seed is a magical package. Inside rests a baby plant awaiting the right conditions for its emergence and growth. The baby plant (embryo) is 'asleep' in the seed along with enough food to supply energy for the plant until it grows its leaves. Many children (and adults) are fascinated when they first see the 'baby' resting inside the seed. The following is a simple activity for unlocking the magic of the seed.

Activity:

1. Pass out three beans to each student. Ask students to trace the shape of the beans on a piece of paper. Students share any observations of the bean. Write down the observations on a board.
2. Pass out three beans, which have been soaked overnight, to each student. Have the students compare the soaked beans to the dry beans. How have they changed? Write these observations next to the dry bean observations on the board.
3. Instruct the students to, very gently, peel the seed coat (thin, pale layer covering the meat of the bean) from one of the beans. Have them gently split the bean into two halves. Share observations.
4. Guide students through identifying the different parts of the sprouted bean (roots, sprout, leaves, etc.)

Wrap up/ Assessment:

Students draw the sprouted bean next to the traced dry bean. Ask students to draw all of the parts of the bean.

Extensions:

Seed life cycle puzzle

Bean planting experiment (see lesson plan)