

LIVING NECKLACES

Materials:

Jewelry bags; yarn - 30" length per child; cotton balls; bean seeds; water.

Vocabulary:

Germination: The process in which a seed or spore emerges after a period of dormancy under the right growing conditions.

Cotyledons: A cotyledon (literally "seed leaf") is the embryonic leaf-like structure within the seed that provides food for germination.

Embryo: The rudimentary plant usually contained in the seed.

Watch:

Who Grew My Soup!

Video

<https://youtu.be/6vJi6iSWES8>

Book Read Aloud

<https://agclassroom.org/teacher/soup/>



Agriculture Commissioner
Doug Goehring

North Dakota Department of Ag
600 E Boulevard Ave Dept 602
Bismarck, ND 58505

www.ndda.nd.gov/aitc

701-328-2231 • ndda@nd.gov

Description:

Today you will make a "living necklace." Wear your necklace home or display in various places around your home/classroom. It is ideal for kicking off a plant unit in your home/classroom or introducing the stages of plant growth and development when starting your backyard garden!

Directions:

- 1) Dip cotton ball in water and gently squeeze out the excess moisture so it is not dripping. Flatten it like a pancake or tortilla.
- 2) Place the bean seed in the middle of the damp cotton ball and wrap the cotton around the bean seed.
- 3) Place the seed and cotton ball in the jewelry bag and seal tight.
- 4) Thread a piece of yarn through the hole at the top of the bag, and tie the ends to make the necklace.
- 5) Each student may wear their "living necklace" home or keep them in their classroom for observation.
- 6) The seed will sprout in three to five days.
- 7) After three days, open the bag to allow the seedling to get oxygen and add a little water. You can either plant the seed in soil at this point, or it can live for about two more weeks on the cotton ball, as long as it is provided with water and oxygen.

Extension Activities:

Learn what a seed needs to germinate. A seed is alive! It needs water, soil (or cotton in this case to hold the moisture), the appropriate temperature, air or carbon dioxide. Most seeds are not affected by light or darkness, but some seeds, including species found in forests, will not germinate until an opening in the canopy allows sufficient light for growth of the seedling.

Hypothesize what environmental conditions affect germination. Ask students where they think the seeds will germinate best (a sunny window, dark corner, warm place, cold place). Place seed bags in the areas proposed, have students record their hypothesis, monitor seed germination, and draw daily progress or seed anatomy (roots, root hairs, cotyledons, etc.).

Discuss what a plant needs after germination and grow a crop of beans. (Add light and nutrients to the list above.) The bean seedlings can be planted in soil, be grown and finally harvested. The harvested beans can be eaten fresh (green) or dried. The dried beans can also be planted to grow another generation of bean plants.

Discuss how humans use plants. Humans use plants as food for people and animals, clothing, medicines, housing, the control of soil erosion, aesthetics, etc.

Discuss where to get produce. Grocery stores, farmers markets and your own garden are all places to purchase or grow fresh produce! On your next visit to the grocery store take a moment to look at the variety of fresh fruits and vegetables available!