



Grade Level: K-5

Essential Skills: 1, 4

NGSS: 1-LS1-1, 5-LS1, 2-LS2-1, 1-ESS1-2, 3-LS1-1, 4-LS1-1

CCSS: RI.1, W.2.7

Time: 30 minutes, 15 days until plant is ready for soil

Materials:

Living Necklaces Kit, OR:

Jewelry bags; yarn - 30" length per child; cotton balls; kidney beans; water.

* Free kit with all materials available to Oregon educators; order from our [Lending Library](#)

AITC Library Resources:

Books:

Oh Say Can You Seed?; Plant Life; Roots, Shoots, Buckets & Boots; Project Seasons

Video:

Oregon Quality Grass Seed

More Lessons:

*Dirt Babies
Garden in a Glove
Growing Bracelets*

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.

11/19

Lesson to Grow

Living Necklaces

Description:

Here is a new twist on planting seeds. Students make a "living necklace" they can wear home or display in various places around the classroom. It is ideal for kicking off a plant unit or introducing the stages of plant growth and development.

A great way to begin is to read an age-appropriate book about plant germination. A great one from our Lending Library is *Oh Say Can You Seed?* a Dr. Seuss-style book that rhymes the vocabulary, making learning about plants fun with Cat in the Hat!

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.

