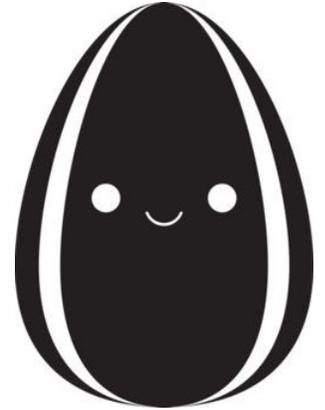


Seed Necklaces

A lesson from the New Jersey Agricultural Society Learning Through Gardening Program

Overview: This simple seed-sprouting activity enables your students to watch the process of seed germination up close, while it gives them the opportunity to walk around school all day with their own "beanie buddy."



Grades: PreK-5

Objective: Students will be able to:

- Observe and describe the process of seed germination.

Materials:

bowls of quickly germinating seeds such as radish seeds
extra-small ziplock bag, such as those jewelry comes in. The 3x3-inch size is ideal,
available on the Internet or ask for a donation from a local jeweler.
cotton balls
string or yarn
hole-punch
bowls of water

NOTE: The activity goes more smoothly and quickly if you punch holes in the tops of the ziplock bags ahead of time, and thread the yarn or string through the holes. The students can then just open the bags and insert the cotton balls.

Procedure:

Discuss the meaning of the word germination and the process with your students. What do they think happens first when a seed germinates? How long do they think it will take to see the seed sprout? Explain to students that you are going to plant seeds in a way that the students will be able to watch the entire germination process.

Divide the students into small groups around a small bowl of water. Ask them to dip one cotton ball into the water and then squeeze it gently to remove excess water. (Another way to do this is to line up a bowl of cotton balls, water, radish seeds, and

envelopes, and have students pass down the line to assemble their necklaces.) Press the moist cotton ball into the bowl of radish seeds so that a bunch of seeds stick to the cotton. Place the cotton ball into the small ziplock bag carefully so that the seeds do not fall off. (It's okay if a few seeds drop off.) Seal the ziplock bag. Punch a hole at the very top of the ziplock bag above the seal (not in the bag itself.) Thread string or yarn through the hole that is long enough to make a necklace for the student. Tie the string and place around the student's neck. Ask the students to write their names in marker on the back of the bag.

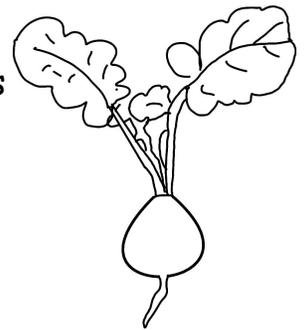
Note: Students should not open the bags again until the seeds have germinated and they want to remove the seedlings.

Ask the students to record their observations of the germination process every morning in their science journals.

NOTE: Radish seeds are optimal for this activity because they germinate extremely fast. On the second day, students will see changes in the seeds. By the end of a week, a little plant will have grown in the bag.

IMPORTANT NOTE: It is a good idea for the teacher to collect all the seed necklaces every afternoon rather than to allow the students to take them home. This way, no necklaces will be forgotten or lost.

After watching the germination process for about 10 days, the students can plant their seedlings in small pots in the classroom, or they can take them home to be planted.



Evaluation:

Students observations of the germination process in their journals.

Extension:

Ask the students to think about where seeds grow and ask them whether they think it is preferable to wear their necklaces outside or inside their shirts. Or you can do a class experiment - have half the class wear the seed necklaces on the outside of their shirts and half on the inside and compare the seeds' growth. (Seeds grow underground - they don't need the sun for light, they need warmth. Seeds in a necklace worn inside a shirt will be warmer and therefore will germinate faster.)