

Seeds We Need

Grade: Early Childhood (Pre-K)

Key Words and Definitions

BUOYANCY	The ability of an object to float in a liquid
FLOTATION	The suspension of an object above the surface of a liquid
SAMARA	A kind of seed shaped like a wing, dispersed by maple and elm trees
SINKING	The act of an object falling to the bottom of a liquid rather than floating at the top

Pre-Field Trip Activity: Seed Sorting

One 20-minute session; pre-visit

Learning Objective

Students will advance their fine motor skills through a sensory activity while learning to identify different kinds of common seeds.

Materials

- Dried seeds and beans
- Large bowls
- Paper cups for sorting
- Plastic tweezers, if available

Procedure

1. Assemble a variety of seeds or beans—you can use dried beans/seeds from the grocery store like sunflower seeds, lentils, pinto beans, kidney beans, etc. Be mindful of allergies!
2. Mix seeds together in several large bowls and place these at different tables in the classroom, along with smaller bowls and sorting cups for each student to use.
3. If you have them, you can also place large plastic tweezers or disposable spoons at each table.
4. Tell students to take a scoop from the large seed bowl with a small bowl, assisting if necessary. Give them a few minutes to explore the seeds using their hands. What do they feel? What colors do they see? Do they know what they're looking at?
5. Say that during our field trip at Wave Hill, we'll be searching for different seeds. We've probably eaten seeds for lunch or dinner before without realizing it. All the beans and seeds they see in front of them were made by plants and will sprout into plants under the right conditions!
6. Next, challenge the class to sort their seed mixture into the small cups they were given. They should have a cup for each different seed. While they sort, ask what they notice about the seeds. Are they all the same shape? How are they different? Why do we think the seeds might have different shapes or colors?
7. Once everyone has finished sorting, they can put their names on each cup and set them aside for the later activity.

Post-Field Trip Activity: Sink and Float Experiment

One 20-minute session; post-visit

Learning Objective

Students will learn to investigate seeds' properties through a practical experiment and draw conclusions about the way these properties help seeds travel.

Procedure

1. Plan to collect and bring some seeds back from Wave Hill. This can be done during the activity at the beginning of the tour, which consists of students looking for and gathering seeds. Your instructor will tell you that you may bring these gathered seeds to the classroom if desired!
2. If there is space, set up a large bucket or basin of water outside or in the classroom. Alternately, you can distribute individual cups or a bowl of water for small groups of students to share at a table.
3. Take out the cups of seeds that were sorted earlier, as well as the seeds collected at Wave Hill. Say that we will be doing an experiment with the seeds we found!
4. Say that seeds like to travel far from where they were dropped so they have enough space to grow. There are many ways that seeds travel—they may be eaten by animals, stick to animals' fur, or travel through the wind. We will be exploring one method of seed travel in class today—water!
5. Ask students to take turns dropping seeds into their cups or bowls of water (think about using a low, stable bowl and filling halfway to avoid spills, or consider bringing the project outside).
6. Tell students to make a guess before dropping their seeds about whether the seed will sink or float! You can also incorporate other natural objects like leaves, twigs, or rocks for comparison. Dried seeds and pebbles may look similar, but will they interact with water in the same way?
7. Say that the seeds that float have adapted to be buoyant in order to make travel easier. If they find themselves in a body of water, instead of wasting their plant potential at the bottom of a lake or river, they can drift away and find a new home.
8. Ask if anyone was surprised by the experiment. What floated? Which materials or seeds sunk to the bottom instead? Remind the class of the names of the seeds they collected at Wave Hill—the spiky gumballs come from sweet gum trees, the acorns come from oak trees, and the little helicopters come from maple trees and are called “samaras”.

Materials

- Bucket/basin of water or individual cups filled halfway with water
- Seeds from Wave Hill and from the previous activity