

Material Preparation

MATERIALS

- pair of socks
- plastic bag
- paper plate
- white glue
- plastic cups
- large seed such as a walnut or avocado seed
- package of bird seed mix
- seeds of various sizes, such as:
 - pumpkin seeds
 - sunflower seeds (with the shell)
 - lima beans
 - watermelon seeds
 - corn seeds
 - small seed from birdseed mix

NOTE: Seeds should be bigger than the opening of a standard drinking straw.

For each child:

- sorting tray with six sections or one half of an egg carton
- plastic cup
- standard, **not flexible** drinking straw
- six different types of seeds
- Ask Me About Plants sticker

PREPARE IN ADVANCE

- Prepare pair of socks:
 - Pour small amount of bird seed onto the paper plate.
 - To make bird seed stick to the socks, spread white glue on bottom of each sock, then roll in seeds on the plate.
 - Place socks in plastic bag after they have dried, and set the bag aside.
- Fill one plastic cup per child with an assortment of six seeds.



SET UP THE LESSON AREA

- Set aside plastic cups with seeds, sorting tray and drinking straws for each child.
- Gather the large seed and the bag with socks.



For each child



walnut or avocado seed

OBJECTIVE

Children will learn to compare seeds by size and explore how a seed travels in the wind.

EXCITE

1. Gather the children in the ECHOS lesson area. When the children are seated, reveal the pair of socks with the seeds stuck to the bottom. **Oh my, look at what's on my socks today! Early this morning, I took my shoes off at the park and walked around in my socks. What happened to them? There are things from outside stuck to my socks.**
2. **What do you think they are?** Wait for children to respond. **Yes, they are *seeds*. Where do you think the seeds came from? Some seeds fall from trees and plants. They stay on the ground and begin to grow into new *plants*. Seeds make new plants.**



INTRODUCE

1. **Today, we are going to look closely at seeds that are different sizes. We are going to be *botanists*!** [bot-n-ists] **A botanist is a person who studies seeds and plants. Botanists compare plants and seeds by color, shape or size. When we compare items, we need to look at them very closely.**
2. **Here is a cup that has six seeds in it.** Give each child a cup with the assortment of six seeds of various sizes. **You'll need a tray to sort and compare your seeds.** Give each child a sorting tray.
3. **How many spaces does your tray have?** Guide the children to count the spaces. **Yes, six spaces.**
4. **Place one seed in each space.** Assist as needed.



5. **Count with me like this.** Guide the children to count the seeds. **How many seeds do you have? Yes, six seeds. There are six seeds in six spaces. You are great counters!**
6. **Now look closely at your seeds. Point to the smallest seed. Point to the biggest seed.** Observe that each child is pointing to the correct seed.
7. **Can you hold the smallest seed on your hand like this?** Model how to place the smallest seed on the palm of your hand. **Pick up the smallest seed. I wonder what would happen if we blow on the smallest seed. Let's try it together.** Allow the children to blow the smallest seed from the palm of their hand.
8. **What happened?** Wait for children to respond. **The seed moved. It traveled to a different spot.**
9. **What made the seeds move?** Yes, we blew on the seed just like the **wind**. Wind helps seeds **travel** or move. When something travels it moves from one spot to another.
10. **When seeds move in the wind, they land in a new place. Once they land, they stay in the ground and begin to grow into plants. Some seeds do not travel at all in the wind. Other seeds need a lot of wind to move even a little bit.**



EXPLORE

1. **Let's predict which seeds will travel with the wind. When we predict something we try to figure out what's going to happen. Which seeds do you predict will travel faster in the wind?** Prompt children to identify a possible factor for wind travel, such as *size* or *shape*.

2. **Let's find out! You will all be the wind and help your seed travel. But how will we make wind?** Wait for the children to respond. **Yes, we can make wind with our mouths.**
3. Hold up a straw for the children to see. **We can also use this tool. What is the name of this tool? Yes, it's a straw. A straw can help us make wind. We can blow through it. Remember to blow out! Let's try it.**
4. Choose one child to go first. Give that child a straw. Direct the child to choose a seed. **On the count of three, you will blow the seed away from you. Let's count: 1, 2, 3... go!** Discuss observations. **What happened? Did the seed move? How do you think we can make it move *farther*?**
5. **Let's observe what happens if the wind gets stronger.** Ask another child to help. Give that child a new straw. **On the count of three, both of you will blow on the seed. Let's count: 1, 2, 3... go!** Observe the seed with the children. **Did the seed move? How do you think we can make it move even farther?**
6. **What if we choose a really big seed?** (Use a walnut, avocado seed or any other large seed.) **Do you think three children can make stronger wind?**
7. Have one child try first, then a second and then a third. **Some seeds may need a lot of wind to blow them away.** Repeat the process with other children. When everyone has had a turn, collect the straws and discard them. Discard any seeds found on the floor.



INTERACT

Interact to accommodate children's individual needs and strengths. Use these suggested strategies as needed:

- If children have trouble using the straws they may make wind by blowing the seeds with their mouths.
- Encourage children who want to repeat the sorting activity to sort by additional attributes.
- The word *travel* refers to something that moves from one location to another. You may need to spend some more time explaining this word throughout the lesson.
- Prepare a cup of additional seeds to have on hand in case too many seeds blow away or land on the floor during the **EXPLORE** activity.

OUTCOMES

1. Regroup the children in the ECHOS lesson area: **What did we discover today?**
Listen to the children's responses. If needed, use suggested prompts to elicit key concepts and vocabulary. Encourage responses from everyone.
 - **What makes seeds move outside in nature?**
 - **What did you notice about some seeds and how they moved in our classroom?**
 - **Which seeds moved the farthest?**

2. Give each child an *Ask Me About Plants* sticker.



Remind the children to tell their family something they have learned about plants.

3. After you have completed *Lesson #1: Traveling Seeds* with all the children in your classroom, add the ECHOS materials suggested below to your science area to encourage exploration.

VOCABULARY

- botanist
- farther
- plant(s)
- seed(s)
- travel
- wind



large seed(s)