

Traveling Seeds

Lesson Description



In this lesson, students learn about different methods of seed travel. They develop a hypothesis and do an experiment to learn more about seed travel. An Elder guest instructor introduces local seeds and discusses traditional uses for seeds. The Elder guest instructor discusses the idea of seed saving.

- Time required: 60 minutes
- Location of lesson: Classroom or garden



Learning Objectives

- Identify at least 4 ways that seeds travel.
- Test a hypothesis through an experiment.
- Recognize local seeds and describe traditional uses for seeds.
- Describe the purpose of seed saving.


Materials and Preparation

- Seeds, at least 4 different kinds that travel differently (seeds that float; seeds that fly; seeds that stick to fur or clothing; seeds that are eaten by animals); enough for each student to have at least 2 seeds
 - Suggestions for seeds: walnuts, acorns, dandelion seeds, poppy seeds, apple seeds, local hitchhiker seeds
- Pencils or pens; 1 for each student
- Bowl of water
- Fan
- Fleece sock or fleece blanket
- Set up 4 seed travel experiment stations: 1 with the bowl of water; 1 with the fan; 1 with the fleece material; 1 for smelling the seed (no supplies needed for the seed smelling station)
- Local seeds for students to take home (if possible)
- Small envelopes; 1 per student, to take seeds home
- Invite an Elder to join the class to discuss local seeds, traditional uses for seeds, local seed travel and seed saving
-  **How Does Your Seed Travel**
-  **Seed Station Cards** – print and post at the 4 stations
- Prepared vegetable snack of the week – 1 for each student
- Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student

Class Warm-up: Champion Cheer and Veggie Taste Test (5-10 minutes)

- Give each student a cup of water or ensure that they have a filled water bottle in front of them.
- Give each student the prepared veggie snack of the day.
- Lead the students in enthusiastically reciting the  **Champion Cheer**.
- At the end of the cheer, drink water and eat the veggie snack together.
- Have students complete their  **Taste Test Observations** about the vegetable snack of the week.

Review of Last Lesson (2-3 minutes)


- Review the evaluation questions from last week's lesson. Evaluation questions from all lessons are listed at the end of the workbook .



Class Discussion (5 minutes)

Ask some warm-up questions about seed travel (if you are in the classroom, list the responses on the board about the way seeds travel)

- *Do seeds move around and travel?*
- *Why do seeds travel?* (Answer: to make new plants in new places)
- *What are some different ways that seeds travel?* (Answers: fly in the wind; float in water; animals or people transport them; animals eat them and then they are in their droppings; some plants explode and send seeds into the air; heavy seeds fall to the ground)

Activities (40-45 minutes)

-  **Seed Travel Experiment (25 minutes)**
 1. Lay out the seeds in front of the classroom so the students can see the different varieties.
 2. Give each student 1 seed and introduce the experiment.
 - a. *Today we are scientists and we are going to do an **experiment** to learn about how seeds travel. What does **experiment** mean?* (Answer: a test to learn something new)
 - b. *First we are going to **predict** how your seed will travel from one place to another. What does **predict** mean?* (Answer: guess what will happen in the future)
 - c. *In science we call a prediction the **hypothesis**. Repeat that word back as a group: **hypothesis**. What is a **hypothesis**?* (Answer: our guess or prediction about what will happen)
 - d. *You are going to come up with a **hypothesis** and then test it out. After you do the **experiment**, you will either accept your **hypothesis** as true or reject it as not true.*

3. Show an example, using a seed that is lightweight but will not float in water.
 - a. *I am doing an **experiment** with this seed. My **hypothesis** is that my seed will float and travel in water because it is not very heavy.*
 - b. Test your seed at the station with the bowl of water and show that it sinks.
 - c. *My **hypothesis** is wrong and I can reject it. If my seed floated in the water, I would have accepted my **hypothesis**.*
4. Guide the students through the questions and drawing on the first 2 pages of  **How Does Your Seed Travel** in their workbooks. Have them write their responses in their workbooks.
5. After everyone has noted a hypothesis in the workbook, have each student walk around to each of the 4 testing stations and test their seed at each station. If there is time, have students test out a different kind of seed.
6. Guide the students through the question on the 3rd page of  **How Does Your Seed Travel** in their workbooks. Have them write their responses. Discuss as a group:
 - a. *What did you hypothesize? Were you correct?*
 - b. *Raise your hand if you accepted your hypothesis as true. Raise your hand if you rejected your hypothesis as not true.*
 - c. *Was your seed able to travel in one way but not in other ways?*

Class Discussion with an Elder Guest: Local Seeds (20-25 minutes)

Introduce local seeds and discuss local uses for seeds. Emphasize seed travel and the different ways that seeds move around in the local community. Discuss the idea of seed saving and discuss why seeds are saved each year. If possible, pass out seeds to the students that are special to the community. Pass out envelopes so that students can take the seeds home and show their family.

Evaluation Questions (5 minutes)

1. *Why do seeds travel?* (Answer: to make new plants in new places)
2. *What are 4 ways that seeds move around?* (Answers: fly in the wind; float in water; animals or people transport them; animals eat them and then they are in their droppings; some plants explode and send seeds into the air; heavy seeds fall to the ground)
3. *What is an experiment?* (Answer: a test to learn something new)
4. *What is a hypothesis?* (Answer: in science, this is our guess or prediction about what will happen)
5. *What are some local seeds that are special to our community?*
6. *Why do we save seeds each year?* (Answer: to plant next season and to keep our local plants growing each year)
7. *How much water should you drink every day?* (Answer: at least 6 cups of water a day)

8. *How many fruits and vegetables should you eat every day?* (Answer: at least 5 fruits and vegetables a day)
9. *Does gardening connect you to your culture and help you learn new words in your language?* (Answer: yes)

Preparation for Future Lessons – Reminder for the Instructor

- Review the materials and preparation needed for the next lesson.
- Remember that an Elder guest instructor is needed for these Fall lessons: Lesson 2 (Exploring Plant Parts), Lesson 4 (Traveling Seeds), Lesson 6 (Winterizing the Garden) and Lesson 10 (Companion Planting and Traditional Cooking).

Notes
