

3rd Grade Seed Saving Lesson - Fall

Date: Fall September or October

Objective: Students will learn how to save seeds and the importance of doing so.

Background: Saving seeds helps to develop resilient local food systems. Biological and social diversity is decreasing, limiting our adaptability to changes. Around 75% of agricultural crop diversity has been lost since the beginning of last century. Saving seeds can help counteract this problem and increase our resilience and sustainability.

Preparation:

- Identify three areas around the garden with harvestable seeds. In this lesson, there will be 3 stations harvesting corn, tomato and lettuce seed. While harvesting corn seed, students will focus on saving money as a reason to save seeds. At the lettuce seed station they will focus on growing better adapted plants as a reason. The last station will focus on genetic diversity as a reason, and will save tomato seeds.
- Make copies of the seed life cycle illustrations
- Gather materials and place them at each station:
- For corn - gather paper bags or several plates and a pen to label
- For lettuce - gather zipper bags, several plates, some wax paper folded to make a crease and a pen to label.
- For tomatoes -gather a large bowl, a spoon, water and strainer, small knife, a plate and some paper towels or napkins.

Action:

Introduction: Tell the class that they're going to be focusing on saving seeds. Ask students to think about why we would want to save seeds. At each station, they will be reviewing that plant's life cycle and talking about one reason to save seeds. Split students into three groups. Remind them to stay with their group and of the garden rules.

-Station sheets are on next three pages.

Station 1: Save Money/Saving Corn Seed (10 min)

1) Brainstorm Reasons Activity

- Have students describe the life cycle of the corn plant in the garden, compare that with the illustration and spend time talking about the seeds and pollination. Corn is not self-pollinating; pollen must be carried by the wind from tassels of one plant to silks of another.
- Ask the small group for reasons to save seeds. Why is it a good idea?
- This station will focus on saving money as a reason.
- Have students imagine that they want to plant 5 different plants. If each seed packet costs \$2.00, how much would they have to pay to buy those seeds? What if they wanted to plant 10 different things?
- Now ask students how much money they would save if they decided to collect those seeds from their garden.

2) Seed Saving Activity

- Evaluate the ears of corn on the stalk and choose to harvest one that is from a strong, healthy plant. The corn will be mature and dry on the stalks. After picking one ear, rub them off the ears with your hands onto the plates.
- Have kids take turns rubbing a small section of kernels off the ear of corn, and place them in a paper bag. Label with the date.

Station 2: Better Adapted Plants/ Saving Lettuce Seed (10 min)

1) Brainstorm Reasons Activity

- Have students describe the life cycle of the lettuce plant in the garden, compare that with the illustration and spend time talking about the seeds and pollination. Lettuce is mostly self-pollinating, but in some instances, can cross-pollinate with the help of insect pollinators like bees.
- Have students brainstorm possible reasons for saving seeds, then talk about how saving seeds helps grow better adapted plants.
- Talk about how plants are specially adapted to survive in different climates and conditions. If there were only a few varieties, the plants would be less resilient to changes in weather, adverse conditions.
- Ask the students “If we save the seeds of this lettuce from our garden, which grew very well here, will they grow better or worse than lettuce seeds we get from the store?”

2) Seed Saving Activity

- Have students carefully gather a few seeds from a healthy looking lettuce plant with their fingers and observe the tiny seeds with their little parachutes.
- Use a magnifying glass to observe if time permits.
- Place the seeds on a piece of wax paper on a plate.
- Carefully tip the wax paper and tap the seeds into a zipper bag and seal.

Station 3: Genetic Diversity/Saving Tomato Seed (10 min)

1) Reason Activity

- Have students describe the life cycle of the tomato plant in the garden, compare that with the illustration and spend time talking about the seeds and pollination.
- Have students brainstorm possible reasons for saving seeds, then talk about how saving seeds helps preserve genetic diversity.
- Ask students what a “variety” means in terms of plants. It is a different type of the same plant. Some tomatoes are small and orange, while others are large and deep red. These are different varieties. Check out a seed catalogue.
- “Why would it be good to have lots of different types (varieties) of one crop?” (If a disease comes that kills all of one type of tomato, you will still have other types of tomatoes to eat. In the 1800’s people in Ireland grew just one type of potato. When potato blight destroyed their crop, almost 1 million people died of starvation.
- Let them know that when they save seed they are helping to keep different plant varieties alive, and creating new ones!

2) Seed Saving Activity

- Cut open a tomato.
- To clean wet seeds, scoop the seeds from the fruit, pulp and all. Students can squeeze some tomato pulp into a bowl with water. Healthy seeds will sink to the bottom, while dead seeds and most of the pulp will float. Use a sieve to gather the floating seeds and discard. Explain that these seeds are no good. Use your fingers to gently separate all the seeds from the pulp. Leave seeds to dry on a plate.