



BIG GREEN LESSONS

Seed Saving: 3rd–5th grade

Lesson Outcomes

In this lesson students will harvest seeds.

- Seeds can be harvested or collected from our Learning Garden.
- There are various ways seeds are dispersed.
- Seeds are dispersed so the plant will reproduce and grow a new plant of the same species the next year.

Standards Alignment

Next Generation Science Standards

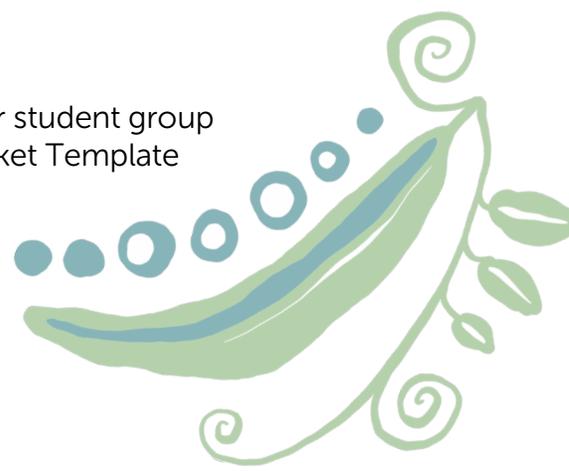
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some less well, and some cannot survive at all.
- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior and reproduction.
- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

Common Core – English Language Arts

- SL.3.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- SL.3.3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
- SL.3.6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- SL.4.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly
- SL.4.3. Identify the reasons and evidence a speaker provides to support particular points.
- SL.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- SL.5.3 Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Materials & Preparation

- Seed Saving Materials
 - Container or brown paper bag, 1 per student or student group
 - Envelopes for long term storage, see Seed Packet Template
 - Sharpie to mark storage envelopes or bags
- Seed Saving Signs (Write in plant name.)
- Paper plate, 1 per station
- Magnifying glass, 1 per station



- Seed Quest worksheet, 1 per seed per student
- Review lesson and familiarize yourself with your Learning Garden
- *Optional: supplies for additional Learning Garden activities*

Teacher Background

Many plants in the Learning Garden will produce seeds that are easy to harvest. Seed saving is a fantastic activity for students to participate in because it touches on so many different classroom connections. Seed saving will stimulate your students' five senses while also providing an opportunity for you to teach cycles, seasonality, and stewardship. In addition to the classroom connections, seed saving expands on the potential utility you can get from plants in your garden, and it is also economical!

Seed collecting is a simple process. Before you collect seeds with your students, take a tour of your Learning Garden to identify which seeds you plan to collect. Some seeds will be in pods or husks, while other seeds will be growing right on your plants! To collect seeds, have students use their hands to either remove the dried and hardened seeds or the pods or husks (which contain dried and hardened seeds). Students can place the seeds directly into a small container or a brown paper bag. Collect seeds in the early fall while it is still dry and store your seeds in either an envelope or brown paper bag.

The plants below commonly provide you with seed harvesting opportunities:

- Fennel
- Dill
- Cilantro (Coriander)
- Other Herbs
- Sunflowers
- Beans
- Lettuces
- Tomatoes
- Peppers
- Cucumbers or other squashes
- Radishes
- Broccoli

Tips for seed saving success:

- Communicate your intentions to harvest seeds with your Garden Team so no one inadvertently removes the plants you will be collecting from.
- Leaf and root vegetables require more growing time to produce seeds than is typically planned for in the vegetable growing season. Let your radishes, lettuces, and greens "go to seed" by not harvesting their leaves for at least one month prior to your seed collection date. More time may be needed depending on crop.
- Use the seed saving signs in your Learning Garden

Most plants have some type of seed dispersal mechanism or a characteristic that enables the seed to scatter or travel a distance from its parent plant. Seeds may be

dispersed in various ways, which can include water, wind, animals (including humans), burrs, and other mechanical means depending on the plant's habitat.

Introduction

Spend time discussing the following introductory questions:

- Do all plants make seeds?
- How do seeds travel from the parent plant to other locations?
- Can we collect or harvest seeds and help them travel to a new location?

Activity

1. Welcome your students to the Learning Garden and line students up along one side. Stand on the opposite side of the Learning Garden so you can address the entire group.
2. Ask students if they know what they will be doing in the Learning Garden for the day's lesson. Let them know they will be collecting seeds from the Learning Garden that can be planted next year!
3. Invite your students to explore the Learning Garden and to hunt for seeds that can be harvested. Give students 3 to 5 minutes to explore the garden. Once finished, bring students back together and review their findings.
4. Take students on a quick tour of the Learning Garden identifying the seeds that they will be collecting today. Place a seed saving sign at each plant to help the students identify the plants they will be harvesting from. Demonstrate how to properly harvest or collect a seed from each plant.
5. Break up students into groups or let students work individually. Pass out a container or brown paper bag to each student or student group.
6. Once you return inside with your seeds have your students return to their seats and then break them up into station groups.
7. Let students know that they will be visiting each seed at a Seed Quest station and will be making observations about the characteristics of each seed and creating a hypothesis about how each seed is dispersed. Review how to make a successful observation and hypothesis with your students if needed.
8. Pass out the Seed Quest worksheet, each student should have enough sheets to complete one Seed Quest sheet per seed. Review the worksheet with students. Allow students to work through each Seed Quest station for approximately 5 minutes.

Conclusion

Have students share key parts of the day's activity and review the Lesson Outcomes. Students should clean-up the Learning Garden as needed.

Additional Learning Garden Activities

Extend your Learning Garden experience and have your students participate in any of the following Learning Garden activities as appropriate. Activities can include creating seed saving envelopes, planting, watering, weeding, and harvesting.