

Garden Task

Seed Saving

Seed saving is a critical task in the garden that connects to the complete life cycle of plants. Gardeners make many decisions as they plan for seeds saving, select which seeds to collect, and process/store the seeds.



Connections to Science Content

What do we need to know in order to do the garden task?

Plant Life Cycle: Observe different plant cycles over time in order to notice when plants are preparing to go to seed. Plants can be annual, biennial or perennial.

- For example, I need to know that lettuce bolts in warm weather and is a signal the plant is going to seed.

Seed Patterns, Shapes and Structure: Identifying the parts of a seed may help us know when the seed is ready. Noticing similarities and differences between seeds can help to determine appropriate collection methods (tomatoes vs bean). Knowing about the seed structure can help us learn how the plant survives and grows.

- For example, in the garden you may notice properties of seeds that help them move from one place to another (tomatoes, dandelion, maple seeds, blackberry) with the help from animals, wind, etc. Identifying these dispersal properties may help us know that the seed is ready to collect.

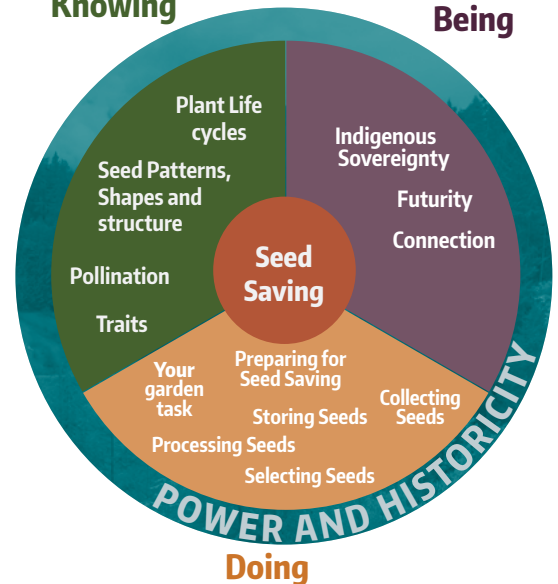
Pollination: When selecting seeds it is important to know the types of pollination (self-, open-, cross-pollinated) and if the plant is a hybrid or heirloom variety.

- For example, I save seeds from a self-pollinating bean but not from the hybrid squash. (Hybrid seeds typically aren't saved because they are more variable and yield less.)

Traits: Selecting seeds promotes certain traits over time (color of flower or fruit yield). It is important to collect seeds from a diversity of plants ensures more genetic diversity in the future—so collect seeds from earlier bloomers as well as late ones, for example.

Knowing

Being



Doing

Garden Methods

What are methods we use to do this garden task?

Preparing for Seed Saving:

- Control for cross-pollination (netting, planting strategies, knowing what plants are in the surrounding neighborhood, ect)
- Plant heirloom, organic and open-pollinated seeds
- Promote good growing conditions for health of the plant

Selecting Seeds:

- Important seeds to our families/communities
- Traits (healthy plants, color of flower, disease resistance)
- Ease of saving. For example: selecting open pollinated or self-pollinated annuals like tomatoes or beans.

Collecting Seeds:

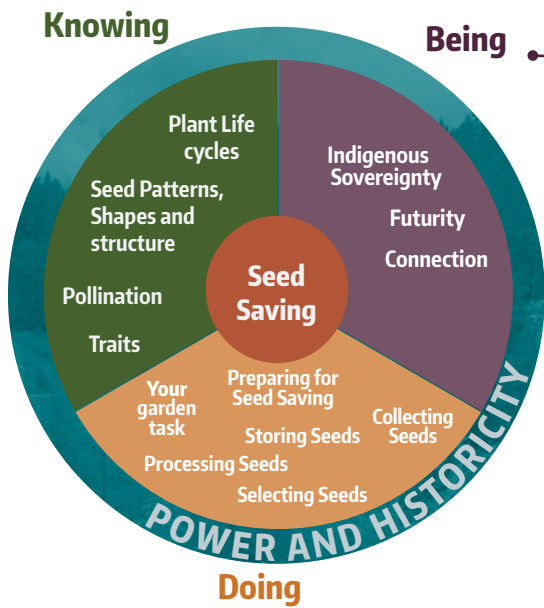
- Clipping seed heads
- Gathering from a diversity of plants to ensure more genetic diversity.
- Collect in baskets, buckets, and/or paper bags
- Different factors impact seed saving and timing of when to collect seeds: temperature, presence of pollinators, rain/watering, length of day.
- Identify and anticipate weather patterns (harvesting seeds before rain)
- Don't take the last one.

Processing Seeds:

- Wet method: soak seeds, remove floating debris and dry seeds
- Dry method; hang plants to dry then thresh seeds (remove seeds from their covering)
- Fermentation (ferment seeds in water for a couple days then dry seeds thoroughly)

Storing Seeds

- Gathering materials: Envelopes, containers
- Freezing seeds
- Record information on labels
- Listen to, tell, and share seed stories



Importance/Intent

Why does it matter to me/my family/our broader community to do this garden task? How does this garden task affect people outside of my community?

Our garden decisions are driven by the values of our communities and families:

Indigenous Sovereignty:

How is the way you are gardening supporting Indigenous livelihoods and rights? Whose land are we on? What is our ethical responsibility to Indigenous peoples and relationships to this land?

- *Who has access to the seeds you save? Who has saved the seeds in order for you to have them, and who has the right to grow them?*

Futurity:

Cultivating diverse seeds connect us to ecologically thriving, resilient and biodiverse futures. Seed saving allows gardeners to select traits for a changing climate or disease or pests resistance.

- *What are the future impacts of introducing cultivars into the ecosystem to the Indigenous cultivated heirloom crops?*

Connection

Seed stories connect us to histories of resilience and resistance and thereby reclaim relationships to seeds, land, & each other. Community connections through seed swaps, familial and cultural legacies grow and preserve communities in relation with plants.

- *For example: Medicinal plants allow for traditional healing in Indigenous communities and restores ways of being, knowing and doing that were taken away due to settler colonialism.*



CONNECTING TO OTHER GARDEN PRACTICES

- **Supporting Healthy Ecosystems:** who else needs this seed?, selecting seeds from plants that are pest and disease free, presence of pollinators to ensure fertilized seeds, animals and wind help with seed dispersal.
- **Plant Growth and Development:** Selecting seeds from healthy plants that exhibit certain traits (like fruit yield or taste–harvesting) and community needs (both human communities and more-than-human).
- **Seeding & Transplanting:** storing seeds for future planting and documenting how plants change across generations.

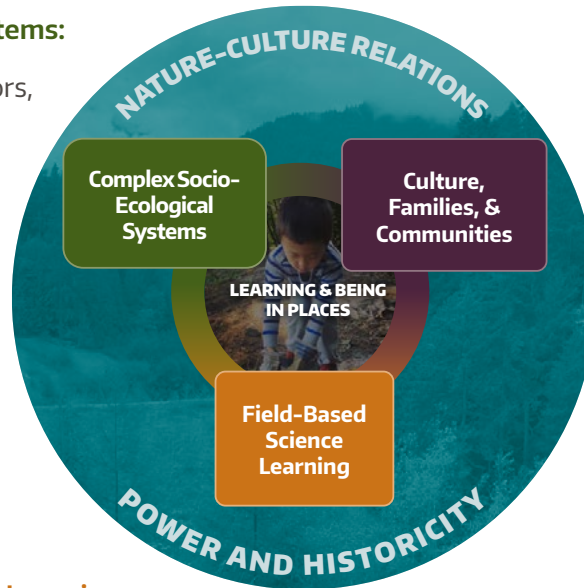
Engaging the Learning in Places Rhizome with Practice

Power and Historicity; Nature-Culture Relations:

- Who is allowed to save seeds? Why are there patented seeds?
- How have seeds moved globally over time?
- How/ why have some varieties dominated gardens over time?
- How does shrinking seed diversity affect our health and ability to resist changing environmental conditions?
- How should we conserve seeds? (seed vault versus farms/natural parks) What seeds should we conserve?
- How do we decide whether to harvest a plant for human consumption or let it go to seed?

Complex Socio-Ecological Systems:

- Who needs seeds? (pollinators, animals that eat seeds, etc)
- How does the built environment and changing climate impact seed dispersal?
- How does the built environment create microclimates that require us to adapt our planting/ seed selection practices?



Culture, Families, and Communities:

- What seeds have nourished families and communities?
- How do our families and communities share seeds and seed stories?
- How can I collaborate with my neighbors to save seeds?

Field-Based Science Learning:

- Data & Modeling: How can we observe and monitor plants in the garden to help us determine what types of seeds we should save?
- Decision Making & Making Change: How do we decide what plants (and how many seeds) to harvest from the garden? What about in the future?

Storyline Examples for Seed Saving

LE 2: Common “Should We” questions

- » When should we save seeds?
- » From which plants should we select to save seeds?
- » Should we prioritize saving certain seeds?
- » What should we do with the saved seed? (keep, give, share, swap, sell)
- » How many seeds should we leave for food for other species?

LE 4: Garden Methods

- » How to harvest different seeds (wet and dry methods)
- » How to test for seed germination.

LE 6: Data Collection Connections

- » Readiness for harvesting seed
- » Connections to pollination
- » Testing seed viability
- » Observing and documenting plant heredity - inheritance and variation of traits

LE 6: Sample Investigation questions

- » What species (birds, bugs, etc) interact with seeds?

Helpful materials

- » Paper bags, envelopes, small boxes, baskets