



## Hayes Farm Travelling Garden Tool Kit for Teachers

### Three Sisters Indigenous Gardening module

We also have modules that are adapted for K-2 and Grades 3-5 on:

1. Monarchs and Milkweed
2. Bugs (K-2)/ Insects (3-5)
3. Earthworms
4. Seeds!
5. Maple Syrup

Thanks so much for taking an interest in food, farm and nature education!

Teachers like you help to shape a child's lifelong interest in the natural world.

We look forward to seeing you and your students on the farm!

There has been much indigenous cultural exchange over time and geography, and so there are many versions of traditional stories. We recommend using Mi'kmaq, Wolastoqey or Peskotomahkati resources whenever possible to reflect our most local knowledge. If you know of a version of the Three Sisters that is different from the one we have presented, we would love to hear other local versions. Feel free to email us anytime.

While books and online materials are nice, it is always really wonderful if you can have an indigenous person come in as a guest to tell stories and share knowledge through their own lens. At Hayes Farm, for the last several years we have had Cecilia Brooks support our work on the farm as our Indigenous Knowledge Specialist. In the resources section we will link a story about Cecilia and foraging/ indigenous corn.

## Goals:

1. To help students understand the basics of companion planting.
2. To help students understand that both plants and people have roles in helping the community.
3. To create a sense of respect and engagement with local indigenous cultures and all cultures other than our own.
4. To encourage children to ask questions and explore outdoors.

## Materials:

1. The K-2 presentation is a simplified version of the presentation for grades 3-5.
2. Family learning - there are printable information sheets for parents about the Three Sisters Garden and a soup recipe.
3. You have access to a Three Sisters colouring sheet in PDF and PNG (at the end of this document). [Three Sisters graphic.pdf](#)
4. You can find additional information in the Resources section.

## Activities

### 1. Soup

If you have a culinary tech space or a kitchen you may want to make the Three Sisters Soup recipe together. For grades 3 – 5, you might get them to help with the prep. If you are using dried beans they will need to be soaked for a day before cooking. You can also find a good variety of canned beans.

### 2. Garden

If your school yard has an appropriate space and you would like to make a Three Sisters Garden, we will give you directions on how to get started. Squash in particular requires a good amount of water. It isn't always easy to take care of vegetables over the summer months.

If you want to show students a full Three Sisters garden display/ harvest in the fall, you could think about the following options:

- If you are doing a spring tour at the farm, you may invite the student's homeroom teacher the following fall to do another visit to Hayes Farm to see the Three Sisters Garden in its full glory or,
- do the planting at a community space like a senior's home or community garden where someone else is willing to help with the summer gardening chores or,
- Start seedlings in the classroom for students to take home.

### 3. Seed bags

You can make the bags up together and send them home to parents.

Not every family will have the ability to plant the garden, but the simple act of growing a plant from seed is really empowering and memorable. Even if they grow a bean out in a pot, that would still be a great experience.

## Making Seed Pouches

1. Fold wax paper and staple it together to make a bag to hold seeds
2. Each bags gets:
  - 4 corn seeds
  - 6 bean seeds
  - 2 squash seeds
4. Put a sticker to label seed kit and hold bag shut

## 5. Colouring sheet

Available at the end of the guide to print .

## Resources

Seed library Hosted by both of Fredericton's Public libraries in partnership with NB Community Harvest Gardens

Contents will change each year, but you can view a copy of the seeds you can take home online at [nbchg.org](http://nbchg.org). There are planting instructions with each. Seeds are available at both Carleton Street and Nashwaaksis locations.

It would be an interesting experience for students to save some seeds and share them back to the library in the future. If you are interested in doing this, you can reach out to Carol Muncer at [carol@nbchg.org](mailto:carol@nbchg.org).

## Preparing Space for Your Garden

It is okay if you only have a small space to start with. You can use seeds or seedlings that you start in the classroom to speed the process up.

1. In spring, prepare the soil by weeding, and by adding fish scraps (traditional) or compost to increase fertility. You can cover grass with tarps or cardboard and mulch a few months prior to make this easier.
2. Make a mound of soil about 30 cm high and 125 cm in diameter. Additional mounds can be made at about 1.5 meters from the center of each mound.
3. Plant 3-5 corn seeds in a circle in the center (or sunflowers). When corn is about 10 cm tall, plant 4-6 pole bean seeds around the corn plants.

- Plant 2-3 squash seeds or plants around the edge of the mound, evenly spaced. Train squash to vine away from the corn and beans to fill in all spaces. Squash will need a good amount of heat and water to take off
- <https://www.youtube.com/watch?v=5ULIT9FutP8> simple, short video showing planting of the Three Sisters

### Selecting the best seed types

Corn should be a **tall variety** of sweet or flint corn, not a dwarf type.

- Flint corn (also called dent corn) is the traditional type. Flint corn will be available online from growers who specialise in heirloom, indigenous or permaculture seeds. It may be quite hard to find this type in the seed section of garden centres.
- This type of corn is very hard and will need to be processed in a special way. See resource for *nixtamalization*.

Beans should be a **pole bean type**, not a bush type.

- It is difficult to harvest fresh snap beans from such a planting. It is best to use a dry soup type of bean, which will also give the best nutrition.

Squash should be a full-season **winter squash** to harvest after frost.

- Most of the squash that we are familiar with a winter (storage) varieties like butternut, buttercup, or spaghetti work well.
- Summer Squash requires frequent harvesting, and so is less ideal for school gardens
- If you plan to save seeds to use next year - While it may seem fun to plant different varieties of squash, if they are from different families, when they are cross-pollinated *they will make gourds* instead of edible squash in the next generation. This resource can help you make sense of the families/ types that can be planted together. Acorn and spaghetti squashes are good varieties that can be planted together.  
<https://www.erinmiddlebrooks.com/2015/06/squash-pumpkin-cucumber-watermelon.html>

### Finding seed suppliers

For quick reference, here are a few Maritime seed companies that carry traditional/ interesting varieties. These seeds tend to be non-GMO, open-pollinated, with lots of Maritime heirlooms.

- [Rainbow Seeds](#), New Brunswick
- [Revival Seeds](#), Nova Scotia
- [The Incredible Seed Company](#), Nova Scotia
- [Annapolis Seeds](#), Nova Scotia

### Indigenous corn/ seeds

The link below is for a story about someone who helps us on the farm. Cecilia is our Indigenous Knowledge Specialist. She is a Wolastoqey woman, Water Grandmother, foraging and gardening lover.

Cecilia sometimes does presentations at the farm on indigenous corn, foraging, and other topics. If you would like to learn more about programming this year, email our Program Coordinator for our full schedule. Your students may also really enjoy our module on Seeds.

<https://www.cbc.ca/news/canada/new-brunswick/traditional-plants-elder-cecelia-brooks-1.6082674>

Nixtamalization – Learn more about how to process indigenous, dent corn varieties to get them ready to eat.

<https://breadtopia.com/how-to-nixtamalize-corn-for-tortillas-tamales-posole-and-more/>

## **Family Resources – Take Home Information about Three Sisters Garden**

Did you know that corn, beans, and squash are called the “Three Sisters”? Indigenous Communities interplanted this trio because they thrive together, much like three, inseparable sisters. By the time European settlers arrived in what we now call Canada (Turtle Island), Indigenous communities had been growing the Three Sister for hundreds of generations. The vegetable trio sustained the indigenous people both physically and spiritually.

In one version, there was a great drought and the sisters offered themselves to The Creator to save the people. As older sisters often do, the corn offers the beans needed support. The giving sister (beans), takes nitrogen from the air and brings it to the soil for the benefit of all three, in other words she feeds the soil. As the beans grow through the tangle of squash vines and wind their way up the corn stalks into the sunlight, they hold the sisters close together. The large leaves of the sprawling squash protect the all sisters by creating living mulch that shades the soil, keeping it cool and moist and preventing weeds. The prickly squash leaves also keep away raccoons and other pests, which don’t like to step on them. Together, they provide both sustainable soil fertility as well as a healthy diet. Together, the sisters provide a fairly balanced diet from a single planting (it is a complete diet when you add meat or fish).

**If you would like to try a Three Sisters Garden at home this summer, here are some growing tips:**

1. In spring, prepare the soil by weeding, and by adding fish scraps (traditional) or compost to increase fertility. You can cover grass with tarps or cardboard and mulch a few months prior to make this easier.
2. Make a mound of soil about 30 cm high and 125 cm in diameter. Additional mounds can be made at about 1.5 meters from the center of each mound.
3. Plant 3-5 corn seeds in a circle in the center (or sunflowers). When corn is about 10 cm tall, plant 4-6 pole bean seeds around the corn plants.

- Plant 2-3 squash seeds or plants around the edge of the mound, evenly spaced. Train squash to vine away from the corn and beans to fill in all spaces. Squash will need a good amount of heat and water to take off

### Selecting the best seed types:

Corn should be a **tall variety** of sweet or flint corn, not a dwarf type.

Beans should be a **pole bean type**, not a bush type. Use beans that are meant for drying, not fresh eating.

Squash should be a full-season, **winter squash** to harvest after frost. Ex. butternut, buttercup, or spaghetti work well.

### Three Sisters Soup Recipe:

1-2 onion(s), diced small

2 - 4 cloves garlic, minced

1-2 tsp. herbs of choice (oregano, cumin, etc.)

1 cup potatoes, diced evenly

2 cups squash, diced evenly

2 cups vegetable broth

1 - 15 oz can beans drained and rinsed

Or ½ cup dried beans (soak overnight and cook prior to adding to soup if using tomatoes)

1 - 15 oz can corn, drained and rinsed

or equivalent frozen or fresh from cob

1 - 15 oz can diced tomatoes (or fresh)

2 cups of water

In a large pot simmer onion in a small amount of broth until soft, add garlic and simmer.

Add the remainder of broth to pot with all remaining vegetables and additional water, simmer until tender.

Add salt and pepper, garnish with parsley or cilantro if desired.

\*\* Roasting the veggies first in oven drizzled with oil is a good option for additional flavor



Thoughtful consideration has been taken to ensure we pay respect to Indigenous peoples in our resources, with Truth and Reconciliation as our mission.



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