

Fall Season

Tagw8go

Indigenous NH INHCC Collaborative Collective

new hampshire farm to school

NH Sustainability

The Three Sisters
Wawicakasotijik
(Waa-wee-cak-a-soo-tee-d-zee-ck)

About the Three Sisters



A Three Sisters planting consists of beans, corn and squash. These three crops have been heavily domesticated by humans and are not found in the wild. The crops are planted together within a garden bed and provide a beneficial relationship to each other. Anthropological evidence shows that the Three Sisters companion planting originated in Mesoamerica, spreading north over mutiple generations and eventually becoming commonplace among Native peoples all across North America.

These three crops that are part of the Three Sisters are harvested during the Fall months. Squash is ready to be harvested when the outside rind has hardened, and the squash is deep in color. Harvest squash by cutting it from the vine with a sharp knife.

Sweet corn is ready to be harvested in the "milk stage", when the kernels have a milky liquid inside of them, the silk at the top of the cob has browned, and the outside husk is green. You should be able to twist it from the stalk with little effort. Flint corn varieties are ready to harvest when the outside husk is dry, brown, and papery. After harvesting, flint corn should be hung up so that the kernels can fully dry.



In most countries, corn is referred to as "maize"

Depending on the variety, beans can either be harvested when they are tender or when they are dry. Snap beans are harvested when they are green and before their seeds have fully developed inside the pod. Shell beans (kidney, black, fava, etc.) can be harvested while green, but are usually left on the vine to fully dry. They are ready to harvest when both the pod and the inside beans are completely dry and hard.

Resource:
"The "How" of the Three Sisters: The Origins of Agriculture in Mesoamerica and the Human Niche" by Amanda J. Landon

Nutritional benefits of the Three Sisters

Beans in general have different mineral content and nutritional value depending on the variety of bean. For example, a lentil bean is very high in protein, carbohydrates, potassium and iron.

Squash also has varying levels of nutritional value depending on the type. Pumpkin is a squash that was often cultivated and has high potassium, calcium, magnesium and phosphorous content.

Corn has less nutritional value than either beans or squash; however, it is a good crop when eaten in moderation. Corn is high in carbohydrates and sodium.

The Three Sisters traditionally

The Three Sisters is a very well-known Indigenous planting strategy. Each plant provides the other with aid and protection to foster plant growth in a mutually beneficial relationship. The corn is planted first, and as the corn grows it gives stability for the bean stalks. The squash is planted around both the beans and the corn because it blocks sunlight and acts as a living mulch, preventing weeds from growing and helping to keep the soil moist. Finally, beans are a legume and are extremely useful to other plants because they are able to transform soil nitrogen into a usable form that plants need as an essential nutrient. As mentioned above, the

Three Sisters together provide excellent dietary benefits including complex carbohydrates, healthy fats, and all nine amino acids.

Traditionally, fish fertilizer would have been used to help the plants grow stronger and faster. The significance of the Three Sisters shows the pre-colonial agricultural methods of Indigenous peoples. The Three Sisters would have been harvested during the 10th moon, Skamonkas (the corn harvesting moon).



Basic Three Sisters Recipe

Ingredients (Serves 6-10):

- 1 cup wild or brown rice
- 3 cups chicken or vegetable broth
- 2 cups beans – pinto, kidney, black, white, etc.
- 2 cups corn
- 2 cups squash, cut into 1" cubes
- 1/4 cup vegetable oil or butter
- Salt to taste

Squash plants have prickly hairs that help keep away pests in a Three Sisters planting!

Instructions:

- Heat the broth in a large pot until boiling, and salt to taste.
- Add the rice to the boiling broth, stir, cover, and reduce heat.
- Cook for 20-30 minutes until rice has absorbed most of the broth.
- Stir in the beans, corn, and squash. Cover and continue to cook for another 20-30 minutes.
- When the rice is fully cooked, add the oil or butter. Fluff rice before serving.

Recipe from the Cowasuck Cookbook

Three Sisters Chili





Ingredients (serves 8)

- 2 (15-oz.) cans red kidney beans, drained
- 2 tablespoons olive oil
- 1 medium-size yellow onion, chopped
- 1 red bell pepper, chopped
- 2 jalapeño chiles, seeds removed, chopped
- 3 garlic cloves, minced
- 1 tablespoon chili powder
- 1 tablespoon kosher salt
- 1/2 teaspoon ground cumin
- 1/2 teaspoon smoked paprika
- 2 pounds butternut squash, peeled, seeds removed, chopped into 1/2-inch pieces
- 2 cups fresh corn kernels (about 3 ears)
- 1 (15-oz.) can diced tomatoes
- 4 cups vegetable broth

Instructions

1. Mash 1/2 cup of the red kidney beans and set aside with the remaining whole kidney beans.
2. Heat oil in a large Dutch oven over medium. Add onion, bell pepper, jalapeños, and garlic, and cook, stirring often, 5 minutes. Stir in chili powder, salt, cumin, and paprika, and cook, stirring constantly, 1 minute.
3. Increase heat to high. Stir in squash, corn, tomatoes, broth, whole beans, and 1/2 cup mashed beans, and bring to a boil. Reduce heat to medium-low, and simmer, stirring occasionally, until squash is tender, 30 to 45 minutes.



Recipe by Southern Living

Activities

Planting the Three Sisters

This activity addresses Indigenous strategies to agriculture and allow students to try out the strategies themselves. They can practice making hypotheses on how well their plants will grow and develop observational skills through monitoring plant growth over an extended period. Additionally, students are introduced to co-planting, and see that it is a traditional Indigenous method of planting.

Materials Needed:

- Corn, squash and bean seeds
- Soil (garden or large containers)
- Gardening shovel
- Gardener's Notebook

The Three Sisters is a great opportunity to get students planting and harvesting in their own classrooms. It is a very important aspect of Indigenous agriculture after colonial contact.

Prior to planting, explain how exactly the Three Sisters need to be planted. Explain their co-dependence and how each crop helps protect and strengthen the other.

This planting can be done in the classroom, or in the school garden as the crops tend to grow large. Students can pair into groups and each group is given corn, squash and bean seeds to plant. Students can begin planting their seeds in the way that the Three Sisters would be planted (the corn and beans planted in the middle and the squash planted around the outer rim). Follow the planting directions on the seed packages for planting depth and technique.

Here are some discussion questions to guide the activity:

- How do you think this strategy will help the crops grow stronger than if we planted them separately?
- What other types of squash, beans or corn could be planted?

- What does it mean to co-plant?
- Why do you think the Abenaki chose to plant these crops in this way?

Once finished, be sure to monitor the growth and development of the crops as time goes on, including germination date, seedling height over time, and other measures. Students can record this in their gardener's notebook.

Resource:

"Three Sisters Garden" by NH Agriculture in the Classroom

Three Sisters Matching Game

This activity is a fun and easy way to introduce different names of the vegetables and to introduce the Abenaki language in the classroom. Students can become more comfortable identifying the different variety of vegetables that can be used in the Three Sisters.

Materials Needed (provided on next pages)

- Images of Vegetables printed out
- Names of Vegetables printed out

The Three Sisters are comprised of squash, beans and corn but there are many different varieties of each of these vegetables. This activity will help students become more familiar with the different types of these crops and become more adept at identifying them.

Each student will get pictures of varying vegetables and the names that correspond to each vegetable. The goal is to have the student correctly match the image with the name of the vegetable. Each vegetable will have the Abenaki translation that corresponds with it- although the same word is used for almost all squash, bean and corn types.

Students can discuss with their group/table mates about why they made the decisions they made.

Additional Resources:

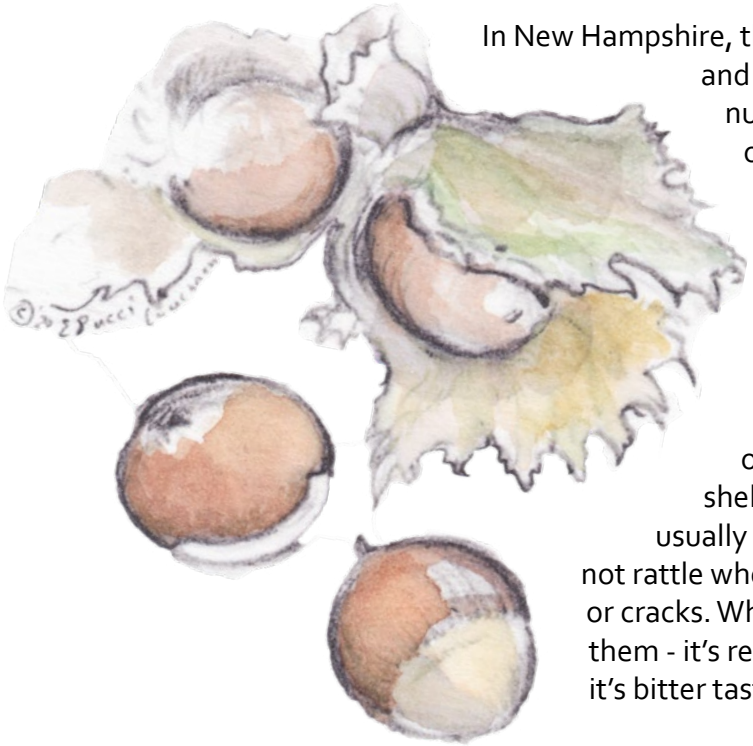
"How Do The Three Sister Plants Work Together?" by Farrah Fatemi

"'The Three Sisters' Legends and Facts" by Angela Judd

Three Examples of Three Sisters Stories

Hazelnuts
Bag8nizal (Bag-ohn-nee-zall)

About hazelnuts



In New Hampshire, the native species of hazelnut are the beaked hazelnut and the American hazelnut. Hazelnuts are unique among nuts in that they grow on shrubs. The nuts are found on the bottom half of the shrub, while the shrub itself can grow to almost eight feet tall. You can usually find hazelnuts along the edges of forests, small streams, and on the sides of roads or railroad tracks. The hazelnut prefers well-drained soils but can tolerate shade and wet conditions.

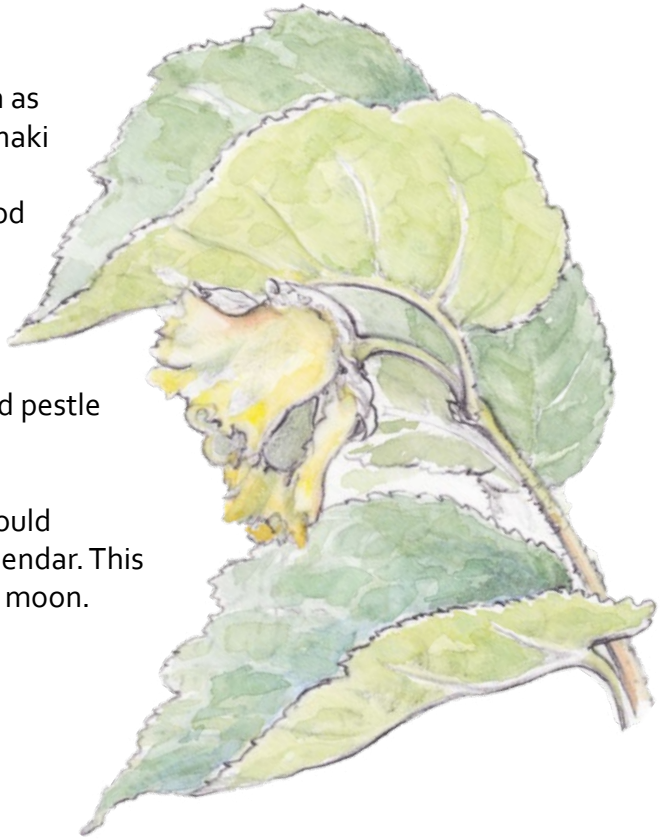
Hazelnuts are ready to be harvested when the leaves of the shrub begin to change color and the outer shell of the nut starts pulling back. This ripening process usually happens in September or October. Hazelnuts should not rattle when shaken, and should be clean with no sign of holes or cracks. Whole hazelnuts have a brown, papery skin covering them - it's recommended to remove the skin before eating due to it's bitter taste.

Nutritional benefits of hazelnuts

According to the USDA Food Composition Database, hazelnuts are high in protein (5 grams of protein per 1/4 cup!) and healthy fats to help with brain function. They also have high levels of calcium, vitamin E, and manganese. Hazelnuts have also been indicated in some studies suggesting they can reduce harmful cholesterol levels if eaten regularly.

Hazelnuts traditonally

Hazelnuts were traditionally harvested during the Fall season as this was when there was the most abundant supply. The Abenaki would most likely eat the hazelnuts by roasting them in oil derived from animal fat. As hunter-gatherers, the primary food sources of the Abenaki were easily foraged. This included many different varieties of nuts and berries. Hazelnuts are located all over New Hampshire and are a common find for foragers even today. Hazelnuts were eaten roasted, but they were also ground into flours or pastes using a mortar and pestle to act as additional cooking ingredients.



Hazelnuts were primarily harvested in the Fall season; this would correspond most likely to the ninth moon in the 13 moons calendar. This moon Temez8was is also called the gathering and harvesting moon.

Turkey produces about 75% of the world's supply of hazelnuts. In the US, Oregon is the largest producer (99%)

Resources:

"Wild Nuts: Autumn Bounty, Holiday Treat" by Michael J. Caduto

"Hazelnuts: Foraging for American and beaked hazelnuts" by Janet Pesaturo

"Hazelnuts" by Precision Nutrition Encylopedia of Food



Recipes

Hazelnut Cakes

**This recipe is pulled from the Cowasuck Cookbook and has been adapted from traditional cooking methods.*

Ingredients (Makes 12-14 cakes)

- ½ pound hazelnuts
- 2 cups water
- 1/3 cup corn meal
- ½ cup cooking oil
- 1 teaspoon salt

Instructions

1. Use a food processor to grind or puree the hazelnuts.
2. Boil the water and add the ground-up hazelnuts. Boil for 15-30 minutes, stirring occasionally until the mixture is like an oily paste.
3. Mix in the corn meal and salt. Let the mixture stand, until thickened, about 10-15 minutes.
4. Heat the oil in a large skillet until hot. Drop a tablespoon of the nut mixture into the hot oil. Brown well on one side, then turn it over and flatten with a fork or spatula to form a mini-cake. Brown evenly on both sides. Serve hot or cold.

Recipe from Indigenous Foods and Recipes by Indigenous NH Collaborative Collective

Roasted Hazelnuts

Ingredients (Serves 8)

- 2 cups hazelnuts (10 ounces)
- 2 tablespoons fresh thyme leaves
- 2 tablespoons extra-virgin olive oil
- Coarse sea salt to taste

Instructions

1. Preheat oven to 450°F with rack in middle.
2. Roast nuts in 1 layer in a shallow baking pan in oven until nuts have a toasted aroma and skins are very dark, about 8 minutes. Remove from oven and let stand 30 minutes, then, if desired, rub in a kitchen towel to remove any loose skins.
3. Heat nuts with thyme in oil in a large heavy skillet over medium heat, shaking skillet, just until hot. Transfer to a bowl and sprinkle with sea salt.

Recipe by Holly Smith on Epicurious

Activities

Hazelnut Trail Mix

This activity is a great way to introduce the idea of foraging into a classroom. What types of foods are usually foraged and how are they eaten? These questions are applicable to Abenaki tradition and can be counted for social studies content and the students are able to work on measurement skills by making the actual recipe.



Materials Needed:

- Ingredients for trail mix
- Mixing spoon
- Mixing bowl
- Storage container for trail mix
- Plates/cups for serving

This is a very simple recipe to do with students. Prior to this activity define "foraging" with the students and identify how Abenaki would forage for most of their food resources.

Here are some foraging foods to identify with students:

- Nuts such as hazelnuts, acorns, and hickory nuts
- Berries such as raspberries, blueberries, and strawberries
- Vegetables such as milkweed and sunchokes

Gather the following ingredients:

- ½ cup almonds
- ½ cup walnuts
- ½ cup pistachios
- ½ cup hazelnuts
- 1/3 cup pumpkin seeds
- 1/3 cup sunflower seeds
- ¼ cup dried cranberries
- ¼ cup dried blueberries
- ¼ cup dried cherries



Once all the ingredients are gathered and measured out, mix them all together in one bowl and serve to students. Ask them to discuss their opinions and if they like the recipe.

Recipe by Deborah Duncan on The Harvest Kitchen

Making Hazelnut Flour

This activity allows students to see the difference between traditional and modern methods of food preparation by comparing the use of a mortar and pestle and a food processor. It teaches about adaptation and modernization. It also allows students to see how the Abenaki made food versatile and made cooking ingredients out of whole foods.

Materials Needed:

- Food processor or blender
- 2 cups of hazelnuts
- Storage container
- Mortar and pestle

This was a way that hazelnuts were used by the Abenaki and is a great hands-on activity for students to do. Prior to starting the activity, detail that it is adapted and that traditionally grinding nuts, seeds, and corn was done with a mortar and pestle. If available, allow the students to use a mortar and pestle to grind some of the hazelnuts to be able to see what it feels like and the time it takes.

To make homemade hazelnut flour, start with 2 cups of raw hazelnuts and put into a food processor or blender. Blend on high for about 12 seconds, until the hazelnuts have the texture of a coursely ground meal. The hazelnut flour can be use immediately or stored for later use.

Once the flour has been made, propose some discussion questions about the activity:

- How did it feel to grind up the hazelnuts by hand?
- What do you think we could use hazelnut flour for?
- How does it smell? Look? Taste?

Resource:

"What Is It? Wednesday: Hazelnut Meal/Flour" by Cassidy Stockton

Sunchokes
Wiz8watawal (Wee-zohn-waa-ta-wal)

About sunchokes



Sunchokes (also known as Jerusalem artichokes) are a root vegetable and the plant itself is a green bush that sprouts yellow flowers. Sunchokes are native to North America, growing all across the east coast. The plant often grows in the wild around woodland areas or in grassy fields. The sunchoke, as it's name suggests, is part of the same family as the sunflower and producers similar looking flowers.

Sunchokes are a very fast spreading and growing plant that grow prolifically. They can choke out other species of crop, and are considered a nuisance plant by some farmers. This plant does best once the cooler Fall air has come. It can take anywhere for 3-5 months for a sunchoke to fully ripen.

Although the sunchoke is considered a "root" vegetable, it is actually a type of underground stem called a rhizome.

Sunchokes are harvested after the first frost when all flowers have died. The edible part of the sunchoke is the tuber, it's underground stem. Harvest the tuber by carefully digging it out of the soil with a spade. Any tubers left will overwinter and bloom again next year. Sunchokes dry out very quickly – to store them, keep them in the fridge or store in a root cellar underneath clean soil.

Resource:

"How to Grow Sunchokes for Perpetual Harvests" by Joybilee Farm



Nutritional benefits of sunchokes

Sunchokes are a root vegetable which means that they have an extremely high carbohydrate content. In addition to the high levels of carbohydrates, sunchokes are also a good source of fiber, Vitamin C and calcium.

While sunchokes are high in carbohydrates, it's important to note that they do not store the carbohydrates as starch or simple sugars. Sunchokes are instead high in inulin, a type of soluble fiber that offers prebiotic benefits and also has less of an effect on blood sugar.

Resource:

"Jerusalem artichoke" by Precision Nutrition

Sunchokes traditionally

The sunchokes are considered to be a very rich plant that was harvested often by Abenaki in the Northern Woodlands. The vegetable itself is a fast growing and starchy root vegetable. The sunchokes were typically harvested in the Fall season but could continue to grow and be harvested into the start of Winter. During the Winter, the plants remained dormant, and if still healthy this would be an ideal time for Abenaki to harvest the sunchokes as it is during this time that the plants had their highest nutritional value. (also other food sources would be dying down this time of year)

Cooked sunchokes taste a bit like a smoother, sweeter potato. Raw sunchokes are crispy like radishes.

The Abenaki refer to these plants as sunchokes as the plant is related to the sunflower; however, they are also referred to as Jerusalem artichokes.

In reference to the 13 Moons calendar, the harvesting of sunchokes would have happened between the 2nd moon (Pia8dagos) and the 9th moon (Temez8was).

Resource:

"Indigenous Crop: The Jerusalem Artichoke" by Nicola Wong

Recipes

Mashed Sunchokes with Thyme

Ingredients (Makes 12-14 cakes)

- 1 lb sunchokes, peeled and cut into 1" pieces
- 1 tsp fresh thyme, chopped
- 1/2 tbsp unsalted butter
- 1 1/2 tbsp Greek yogurt (optional)
- Salt

Instructions

1. Cover sunchokes with cold water with a pinch of salt in a deep sauce pot. Bring to a boil.
2. Cook until fork tender, about 7-10 minutes Drain.
3. Put sunchokes back in hot pot, and add in thyme, butter, yogurt if you got it and a good pinch of salt. Mash until smooth, and serve.

Recipe by Sara at Nomad with Cookies

Roasted Sunchokes

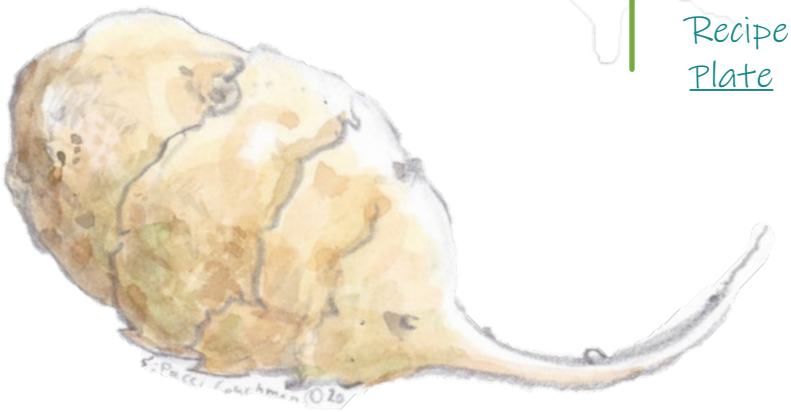
Ingredients (Serves 4)

- 1 lb sunchokes, cut into ½" slices
- 1 ½ tablespoons extra virgin olive oil
- ½ teaspoon kosher salt
- Freshly ground black pepper
- 1-2 sprigs thyme, finely chopped

Instructions

1. Preheat the oven to 425 degrees and in a medium bowl, toss sunchokes with olive oil, salt and pepper until well coated.
2. Place sunchokes flat on a sheet pan and leave space between the slices to allow for equal cooking.
3. Roast in oven for 18-22 minutes, flipping the pieces halfway through to evenly cook.
4. Once finished cooking, toss gently with thyme and salt.
5. Serve hot!

Recipe by Laura Davidson on A Beautiful Plate





Crispy Sunchoke Patties

Ingredients (Serves 6)

- 2 cups sunchokes, grated
- 2 cloves garlic, finely minced
- 1 tbsp fresh rosemary needles, minced
- 2 tbps olive oil, plus more for drizzling
- 1/2 cup chickpea flour
- 1/2 tsp sea salt

Instructions

1. Preheat your oven to 350 degrees Fahrenheit.
2. In a large bowl, combine grated Jerusalem artichoke, garlic, rosemary, and olive oil. Stir to combine.
3. In another small bowl, mix together chickpea flour and salt.
4. Add flour mixture to Jerusalem artichoke mixture and stir until a pasty batter is formed.
5. Using clean hands, shape six little patties with the batter. Place them on a parchment paper lined baking tray. Drizzle the patties with a little bit of olive oil.
6. Put the tray in the oven, and bake for 25 minutes. Remove from the oven, flip, drizzle with a little more olive oil, and bake for another 15-20 minutes.
7. Patties are done when they are crisp and golden on the outside. Allow to cool before eating.

Recipe by Precision Nutrition

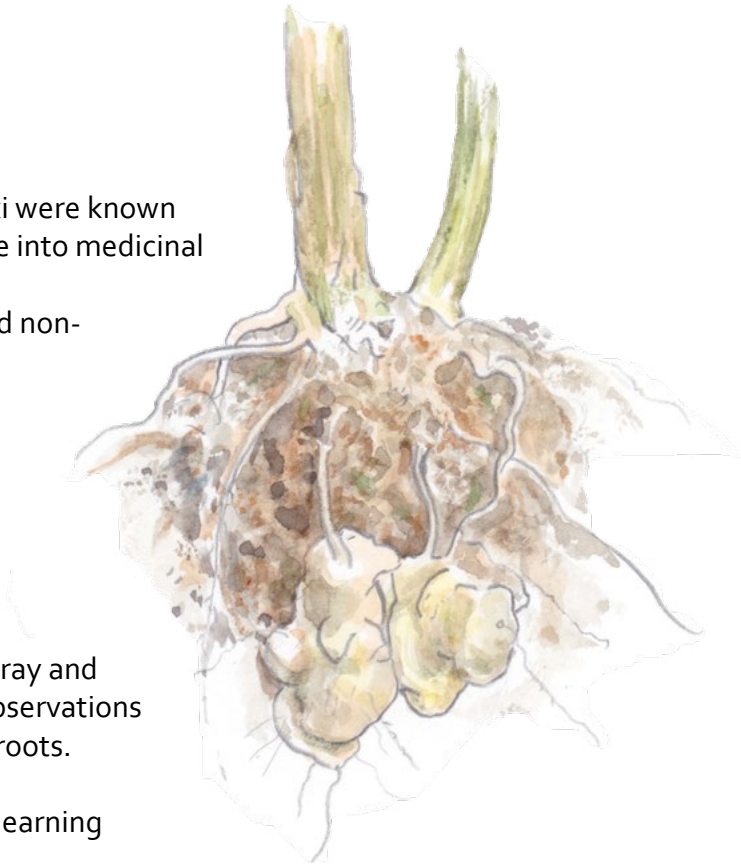
Activities

Learning About Roots!

This activity is based on inquiry. It allows students to begin to understand the functions of roots and different parts of plants. By asking the students to observe, they are able to be part of the inquiry process and use some prior knowledge of Indigenous culture to think about the ways roots could have been utilized both as edible foods and as medicinal aids.

Materials Needed:

- Various types of roots
- Observation trays or sheet pans
- Note paper for making observations



The sunchoke is considered a root vegetable and the Abenaki were known to have used roots of many other plants to either eat or make into medicinal tonics and pastes.
Prior to the activity gather different varieties (both edible and non-edible) of roots like:

- Potatoes
- Sunchokes
- Carrots
- Flower Roots
- Grass Roots
- Milkweed roots

Whichever roots that were gathered, place them on a small tray and give each group of students a tray. The students can make observations with each other about the differences and similarities of the roots.

Ask some of the following discussion questions to guide the learning process:



- Which roots do you think are edible? How do those look different from the ones that are not?
- What do you think a healthy root looks like?
- What could the size of the root mean? The color?
- What are some of the roots that the Abenaki used?
  - » Milkweed, sunchoke, wild onion (these can be introduced prior to starting the activity as roots used by Abenaki)

Once the students have made their observations, come back together as a group to discuss! Direct the discussion towards what observations were made by the students but here are some potential discussion topics:

- Purpose of roots
- Different parts of a plant
- Use of roots (Indigenous use and colonial use)

Making Mashed Sunchokes

This is another activity to help get students comfortable with cooking skills and food. It introduces literacy skills by reading the recipe, social studies through discussing tradition versus modernization and it allows students to practice using their senses to observe.

Materials Needed:

- Masher
- Pot
- Ingredients
- Hot Plate/Stove

This activity uses the recipe above for mashed sunchokes. Identify the source of the sunchoke: where it comes from, what it looks like in the wild, what part of the plant do we eat.

Print out the recipe and follow the recipe for mashed sunchokes with the students. Ask questions along the way for example:

- What step is next in the recipe?
- How do you think the sunchokes were mashed traditionally?
- What do you think they'll taste like? What do they smell like?

Prepare the food and once the food has been cooked, serve with the students and ask their opinions and observations.



Acorns
Wacilal (Wah-cee-l-all)

About acorns

Acorns are the seeds dropped by oak trees and can be found widespread throughout the state in most locations including wooded areas, parks, and even your own school grounds. Acorns are common and easy to identify from their hard shell, brown color, and "cap" at the top of the acorn. There are many different species of oak, and therefore many different types of acorns, but all are edible! The tree itself has a light ash grey color and the leaves are dark green. The acorns can be found usually fallen at the base of the tree and are only on older trees.

Acorns are ready to be harvested when they turn brown and drop from the trees, normally in late September into October. Most acorns fall during the fall months, when the leaves on the trees are both changing color and starting to fall. Generally, trees that produce quality acorns are between 50 and 100 years old. Simply gather fallen acorns from the ground to use. When harvesting acorns be sure to gather only those with no holes, discoloring, or broken shells.

Acorns from white oak trees are lower in tannins, tasting less bitter than black or red oaks.

Resource:
"Foraging for Acorns: Identification, Processing + Acorn Recipes" by Colleen Codekas

Nutritional benefits of acorns

According to the USDA Food Composition Database, acorns are high in both phosphorus and magnesium. In addition to these minerals, they are also a quality source of protein and healthy fats.

Acorns traditionally



Acorns were an extremely beneficial food source for the Abenaki. They were not eaten whole as we eat peanuts or almonds today, but were most often dried then ground into flour to use for cooking. Prior to colonial contact, the Abenaki were hunter-gatherers and acorns were a plentiful food source, especially during the Fall seasons. The white oak acorn specifically was known as being more desirable as it had a nuttier taste when ground into flour. It is possible that the Abenaki cleared land to plant white oak trees and harvest the acorns because they were such a good food resource. Like many other things gathered and harvested by the Abenaki, acorns were most likely kept in storage for the off-season - whole acorns dried in the shell may last for years!

Acorns were also a common traditional food in many other areas of the world, including Greece, Italy, Spain, North Africa, and throughout Asia.

According to the 13 Moons calendar, acorns would have likely been harvested during the 2nd moon, Pia8dagos (Falling branch moon) which is during the time period where leaves have changed color and branches are becoming bare.

Resource:

"The Age of Acorns: Sustaining Life for Generations" by Lee Allen



Recipes

Acorn Soup

Ingredients (Serves 6)

- 2 to 3 cups acorn bits
- 1 carrot, peeled and chopped
- 2 celery stalks, chopped
- 1 medium onion, chopped
- 3 tablespoons butter
- 1 ounce dried porcini, soaked in 2 cups of hot water
- 2 bay leaves
- 1/3 cup brandy or bourbon (or substitute maple syrup)
- 1 quart chicken, beef, mushroom or vegetable stock
- Salt

Acorns are one of the most important and widespread foods eaten by wildlife all over the globe.

Instructions

1. Soak the dried mushrooms in the hot water for an hour before starting. Squeeze the moisture from the mushrooms and chop coarsely. Save the water, straining it if there is a lot of debris.
2. Heat the butter in a soup pot over medium-high heat and saute the carrot, celery and onion until they are soft, but not browned, about 5 minutes. Add the chopped mushrooms and acorn bits and stir to combine. Saute another 2 minutes or so.
3. Add the brandy and boil it until it is almost gone. If using maple syrup, don't cook it down. Add the bay leaves, 2 cups of mushroom soaking water and the stock. Bring to a simmer, taste for salt and add if needed. Cover and simmer gently for 1 hour.
4. Puree the soup in a blender (or use an immersion blender). If the soup is too thin, simmer it until you get a soup the consistency of melted ice cream. if it's too thick, add water or stock.
5. Serve with a drizzle of creme fraiche or sour cream. Add some chopped parsley.

Recipe by Hank Shaw at Hunter Angler Gardener Cook

Gluten-Free Acorn Bread



Ingredients (Makes 1 loaf)

- 2 cups acorn flour
- 1½ tablespoons butter or margarine
- ½ cup granulated sugar
- 2 teaspoons baking powder
- Pinch of salt
- 1 egg
- 1 cup milk or milk alternative

Instructions

1. Preheat oven to 177°C (350°F).
2. Combine all ingredients in a bowl, and mix together thoroughly. Place in a small greased bread pan or muffin pan.
3. Bake until a toothpick inserted into the center of the bread is dry when removed, 15 to 20 minutes.

Recipe by Steven Golieb at The Cook's Cook

Activities

Making Acorn Flour

This activity helps to show students traditional foods as they were prepared in traditional manners. It also allows students to see the foods associated with foraging and understand the process of making flour. This activity requires a lot of responsibility as it involves hammers and smashing which is an important responsibility to be introduced to students, especially while cooking.

Materials Needed:

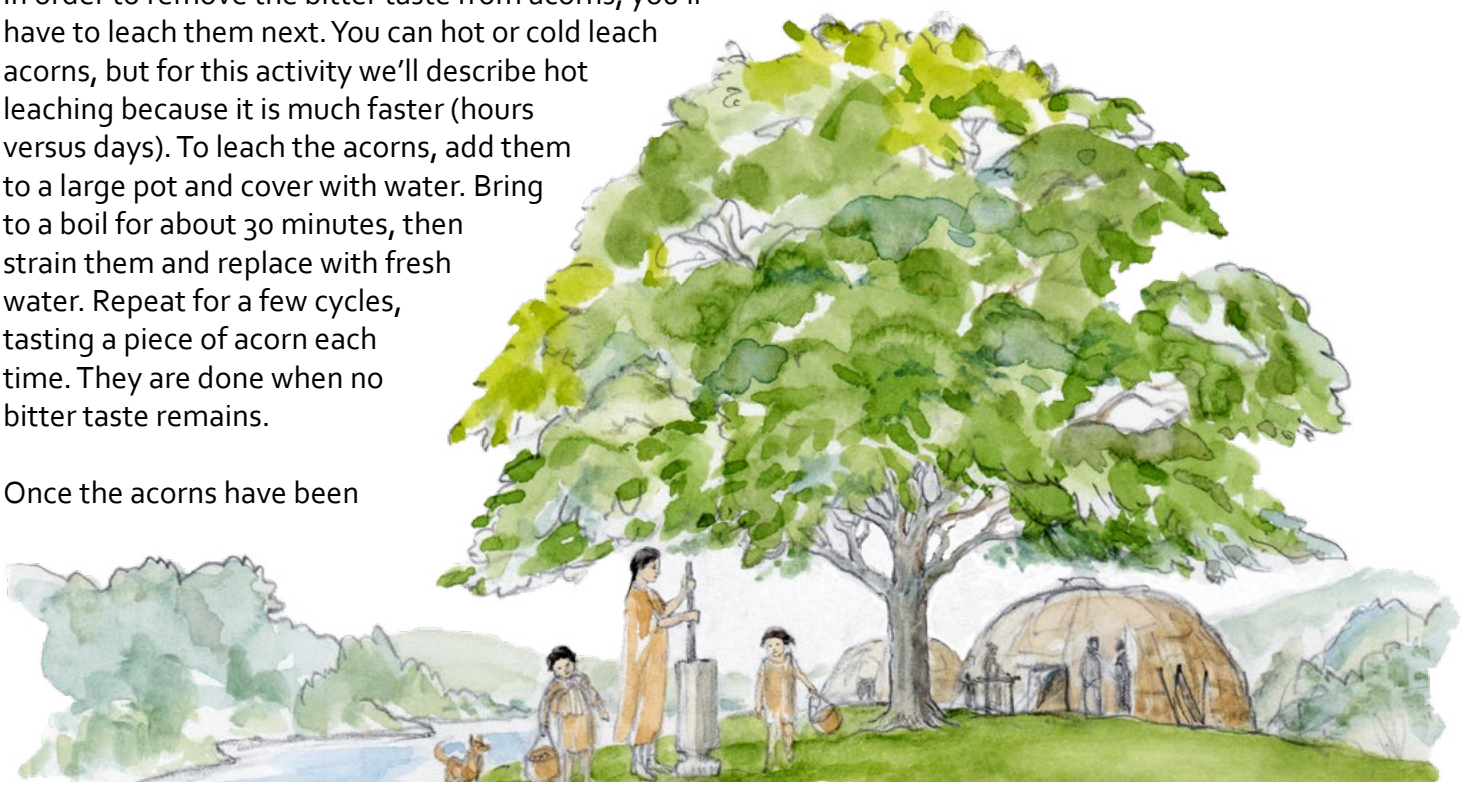
- At least 1 gallon of acorns
- Food processor
- Hammer/mallet
- Towel
- Baking sheets
- Bowl
- Colander/Strainer
- Large pot
- Eye goggles
- Oven or dehydrator

Acorn flour was the primary way that Abenaki used acorns as a food resource. Students can do this activity either in groups or as a whole class.

Gather up all the materials and start the process; making sure each student gets a turn at one of the steps. First, take the acorns (and identify where they came from and what type of acorns they are) and put them over a towel. Using a hammer or mallet smash the acorn bits- this should be done on a steady and hard surface and goggles may be a good choice to avoid shells in the eye. Make sure any rotten or infested acorns are discarded.

Next, take the cracked acorns and dry them in the sun. This will cause the acorns to shrink and the skin to separate from the nutmeat. Once dried, rub the nuts in between your hands to remove leftover skin and shells (discard these).

In order to remove the bitter taste from acorns, you'll have to leach them next. You can hot or cold leach acorns, but for this activity we'll describe hot leaching because it is much faster (hours versus days). To leach the acorns, add them to a large pot and cover with water. Bring to a boil for about 30 minutes, then strain them and replace with fresh water. Repeat for a few cycles, tasting a piece of acorn each time. They are done when no bitter taste remains.



Once the acorns have been

leached, put into a food processor with some water and blend to a fine pulp. Spoon the acorn pulp onto baking sheets and dehydrate the pulp in the oven, using the lowest possible temperature setting. If you have a dehydrator, that could also be used. Dry the acorn pulp as much as possible before it is made into flour, to prevent spoilage.

When the acorn pulp has completely dried out, place batches of it into a food processor and grind it on the highest setting possible for 1-2 minutes. Stir and repeat until completely pulverized. Pour your acorn flour into a colander or sieve, and sift to remove any small chunks of acorn left behind.

Once the flour has been made ask the student how they would like to use it! Ask some follow up questions about the process such as:

- Was it difficult to grind up the acorns? What tools may have been used traditionally?
- Did you know that acorns were edible? What could we cook with their flour?
- Why do you think Abenaki foraged for acorns so much?

After the discussion, decide what to do with the acorn flour.

Resource:
"DIY: How to Make Acorn Flour" by Aaron & Susan von Frank

Acorn Gathering & Sorting

Categorization is a great way for students to practice observation and data collection. Through foraging for the acorns themselves they get an opportunity to understand what it could have been like to actually look for acorns as a food source. It also gets students out of the classroom and uses hands-on experiences to relate to Indigenous tradition.

Materials Needed:

- Buckets for collecting acorns
- Poster Paper and coloring/writing utensils

During the Fall, acorns can be found all over the place. They fall from trees by the handfuls and are very easy to locate around wooded areas.



Take the students out for a walk around the school grounds and find as many acorns as possible. In addition to finding the acorns, look for the corresponding trees. After the walk, return to the classroom and analyze the acorns collected! Divide the acorns amongst groups of students. The acorns can be identified, labeled, counted and sorted!

Each group can make a poster stating their observations and categorization of the acorns. Once each group has done this, come together as a class to discuss the different categories and observations of each group's acorns.

Resource:

"White Black Red Oak Acorn Identification" by Mark Brownlee

Additional Resources:

"Is Reintroducing Acorns into the Human Diet a Nutty Idea?" by Dawn Starin

"Cooking with Acorns" by Redhawk's Lodge

"The Mechanics of Eating Acorns" by Hank Shaw

"Acorns, A Traditional Food of Many Tribes" Lesson Plan by Lessons of Our Land



Grouse
Pakesso (Pah-ka-sooz)

About Grouse

Male ruffed grouse display for mates by beating their wings to create a drumming noise.

(Video here)

Grouse (often misnamed as partridge) is a game bird that is usually found in wooded areas. There are 10 different species of grouse - Ruffed Grouse is the most widely distributed game bird in the United States but is most commonly found in the Northeast. The Ruffed Grouse is able to thrive during harsh winters unlike many other birds, and eat primarily dormant flower buds. Grouse are solitary birds - male Ruffed Grouse are known to be very territorial.

Grouse is usually caught during the Fall season when hunting game is easiest. Some species of grouse are easier to hunt than others. For example, the Ruffed Grouse is elusive and considered difficult to hunt, whereas the Spruce Grouse is easier.

Nutritional benefits of grouse

Liked other meats, grouse is an excellent source of protein with a plentiful source of minerals and nutrients. The meat contains high levels of phosphorus, magnesium and potassium. Ruffed Grouse also contains a lot of Vitamin A, Vitamin B12, and Niacin. Grouse is relatively lean like other poultry.

Resources:

"Grouse Facts" by the Ruffed Grouse Society

"Ruffed Grouse" by the Cornell Lab of Ornithology

Grouse traditionally



The Ruffed Grouse, Spruce Grouse, and Heath Hen were all grouse species hunted in New England for food. Grouse is still hunted very often today in the Northeast, however, the Heath Hen went extinct in 1932 due how easily it was caught and eaten. Grouse were considered to be coastal birds which meant that they were good game for the Abenaki who were in close proximity to the coast. These birds were most likely hunted using trap systems or spears. Ruffed grouse have excellent camoflauge and like to hide in thick brush. Spruce grouse are not easily startled by humans and were easy catches with pole snares.

Grouse were often hunted during Fall and even through Winter as they were prevelant during these seasons when other game was becoming scarce. Grouse were often boiled in stews after hunting, and sometimes dried and preserved in birch baskets for later use. Ruffed grouse are more mild tasting than Spruce Grouse, which have notes of juniper berries.

Grouse chicks are precocial - they are ready to leave the nest as soon as they are born!

In accordance with the Abenaki 13 Moons calendar, the partridge or grouse would have been hunted during the 11th moon, Penibagos (the Leaf falling moon). This is what would correspond with the late Fall on the Gregorian calendar.

Resource:

"Grouse" by the Centre for Indigenous People's Nutrition and Environment



Recipes

Roasted Grouse

Ingredients (Serves 2)

- 2 whole grouse (or chickens)
- 2 tsp butter
- 1 tsp juniper berries, crushed
- 4 sprigs of thyme
- Salt & pepper
- 4 pieces of bacon

Instructions

1. Preheat the oven to 400°F
2. Season each bird inside and out, put the juniper berries inside the cavities of the birds, and tuck a sprig of thyme under each leg. Lay two slices of bacon over the breast of each grouse.
3. Heat the butter in an oven-proof pan. Sear the birds on their backs and on each side and the breast until golden brown. Then turn them again onto their backs.
4. Roast for between 16 and 20 minutes, depending on size.
5. Leave to rest before serving.

Recipe by The Wild Meat Company

Pan-Roasted Ruffed Grouse

Ingredients (Serves 2)

- 2 Tbsp butter
- 1 Tbsp olive oil
- 1 ruffed grouse, quartered (or chicken)
- salt and pepper to taste
- 2 small onions, quartered
- 3 cloves garlic, slivered
- 2 carrots, julienne
- 4-5 mushrooms
- 1 Tbsp mustard
- 1 tsp thyme
- 1 cup chicken broth, reduced by half
- ¼ cup tomato, quarters (optional)

Instructions

1. Preheat the oven to 425° F. In a separate pan, simmer the 1 cup of broth until it reduces to ½ cup. Season the quartered grouse with salt and pepper.
2. Melt the butter and oil over medium-high heat in an 8-inch skillet. Brown the grouse on all sides, remove the browned pieces from the pan, and set to the side. Add the onion, garlic, mushroom, and carrot to the pan and saute for 3 minutes.
3. Stir the mustard and thyme into the vegetables in the pan and add the tomato. Toss to mix everything evenly. Lay the grouse on the top of the vegetables and pour the reduced stock over the top.
4. Roast the pan in the oven for about 10 minutes until the grouse breast is fully cooked.

Recipe by Nils Hoyum on How to Cook Meat

Activities

Creating Pictographs

This activity allows students to use their creativity skills and their spatial perception skills. Through looking at land and representing it through a pictograph, they are practicing spatial understanding and image representation. Additionally, this introduces a key strategy of hunting used by the Abenaki and by trying the strategy themselves, students can develop a deeper understanding of Indigenous tradition and culture.

Materials Needed:

- Clipboards
- Paper
- Writing Utensils

Partridge and grouse were a very popular bird to hunt. One of the ways that Abenaki hunted was to travel the lands and find the animals by using pictographs as reference. A pictograph is a picture that represents a word phrase, and are our earliest forms of writing. It is this method that Abenaki were able to determine where the birds would most likely be and how to get there. This activity allows students to do the same thing and create their own pictographs.

Have students grab paper, clipboards and writing utensils and go out into the school field, playground, woods etc.. and let them draw pictographs as a means to map out the playground. Be sure to have them include landmarks, animals seen, trees or plants and any other objects that could help them identify where they are on their pictograph.

Once the students have had enough time to create their pictographs, return to the classroom and share the creations as a group. Ask why the students made the choices they did and ask them to explain any symbols they may have used.