



Traditional Foodways Education Program (TFEP)



Johns Hopkins University
Center for American Indian Health
White Mountain Apache



FEAST FOR THE
FUTURE



Johns Hopkins
Center for American Indian Health

Introduction

The purpose of this curriculum is to teach White Mountain Apache youth about the deep, traditional Apache relationship with the land by connecting the youth with elders who share their knowledge of traditional Apache foods. In pre-Reservation times, 40-60 percent of the Apache diet consisted of over 200 species of wild plants. Gathering wild foods was and continues to be an important way to get nutrients and energy. Some of these plants include acorns, juniper berries, walnuts, piñon nuts, seeds, and berries. Twenty-five to fifty percent of the pre-Reservation diet consisted of agricultural crops, mainly several strains of corn, pumpkins, and some beans. Twenty to forty percent of the pre-Reservation diet consisted of wild game, including deer, rabbits, squirrels, rats, turkey, quail, and doves. By participating in this program, students will gain an understanding of traditional Apache foods, including where to harvest wild foods, how to grow traditional crops, skills necessary for hunting, and how to prepare all the food.

These lessons were written with the understanding that they will change and transform as the lessons are taught. They are merely an introduction to each food item. The curriculum is organized seasonally according to what is naturally available. The lessons are then organized by food item. Within each food item, there may be one or more lessons. We are hopeful that this curriculum will provide students and youth with real and healthy experiences with Apache foods and plants. We hope that they will learn and develop a connection with their ancestors and what it means to be Apache in modern day society. Kihí ch'ígotahí' nsil he'ate' (Learning is power).

Acknowledgements

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Spring Daa

The spring season begins in April when Nigosdzán (Earth) is waking up after winter. The lessons during this season consist of wild plant food harvesting and preparation, preparing the soil for agriculture, and planting cornfields and other garden spaces.

Introduction Lesson	
Clans and sub clans are the ways that Apaches identify themselves. Certain taboos were followed depending on what clan(s) you are from (i.e. not marrying someone within the same clan). Clan families were also known for certain characteristics and foods including certain colors of corn. The seasons are key to understanding Apache food systems, as certain foods are only available in certain seasons.	
Wild Onions Summary	1 lesson
Ideally, this lesson will be a harvest trip and students will be able to actively participate in finding, harvesting, and eating wild onions.	
Wild Spinach Summary	2 lessons
These leafy greens grow abundantly around the Reservation and are packed with high quality nutrients. These lessons encourage students to pick these valuable native plants and find ways to incorporate them into their diets, whether raw or cooked. There are diverse types of spinach, and the spinach is available for harvesting throughout the growing season.	
Yucca Summary	4 lessons
There are many uses for the yucca plants; these lessons introduce a couple of them. After these lessons, the students should know how to use a plant that they see every day for food, soap, and rope.	
Century Plant/Agave Summary	2-3 lessons
This plant provides daily life with a lot of sweetness. After these lessons, students will understand how and where to harvest, prepare, and preserve both the stalk and root for a treat that will last throughout the year.	
Corn Summary	4 lessons
Traditionally, corn is the most important agricultural crop for the White Mountain Apache. Allowing the students to participate in the cultivation of a cornfield connects them with a centuries-old practice conducted by generations of their ancestors.	
Pumpkin Summary	2 lessons
This is a traditional crop that students will be able to have fun with come Halloween season. Make sure to also make food dishes with pumpkin come harvesting season, and save seeds both for roasting and eating and for next year's planting. Traditionally, planting was a spiritual practice. If appropriate, incorporation of planting prayer and ceremony can be used.	

Introduction Lesson

*Community member with knowledge of clans needed

Overview of Seasons, Clans, & Apache Food Systems

Time

30 minutes –1 hour

Materials

- None

Learning Objectives

1. Students will learn about the Apache clan system and identity.
2. Students will learn about the clan relationships with the land and food.
3. Students will be oriented to the seasons and how they correlate to the Apache food system.

Activity/Lesson

This lesson can be outside if possible and weather permitting. Ask the students to introduce themselves and their clans, including sub clans. Talk about the importance of clans and the relationships among families. Clan stories and places can be discussed with students.

Guiding questions:

1. *Why are clans important?*
2. *What is the connection between clans and the land?*
3. *Do clans relate to food systems? (i.e. some clans planted certain types of corn)*

Discuss the seasons and changes throughout the year.

Guiding questions:

1. *Why are some foods only available certain types of the year?*
2. *When do you know when to go and collect certain foods?*
3. *What will you be learning throughout the school year about foods?*

Teaching Notes

Four Major Clans

- Goshdi'ye-Roadrunner
- Shash-Bear
- Doole- Butterfly
- Itsa-Eagle

Lesson 1

Wild Onions (*Tsitsi*)

Time

3 hours (1 hour drive each way, 1 hour collecting)

Materials

- Transportation
- Trowels
- Long screw drivers

Lesson Overview

Wild onions (called "bluedicks" by White people) are usually one of the first plants to bloom in the spring. They grow the most plentifully on the hillsides south towards the Salt River in April. These sweet-tasting bulbs are peeled, eaten raw, roasted in coals or fire, or boiled. They can be mashed up to a pulp, or eaten alone, with meat, or in other dishes. Children used to eat them raw as a snack while they played.

Learning Objective

Students will learn about wild onions including: harvesting, history, use.

Activity/Lesson

- Have a community member/elder identify where wild onions are growing.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find onions.
- Elder will dig up the plant, discuss the history and story of the onions, and then allow students to dig up their own onions.
- Elder will explain the different wild onions, and which look similar but are poisonous.

Teaching Notes

April is a good time to harvest these onions.

These onions can also be found higher up in the mountains later in the summer.

Wild Spinach*Tñ It'aa, Tanágis It'aa, It'aank'ozhé, It'aa' Dit'ogé/It'aa Dit'odé, and others**Time*

2 –3 hours

Materials

- Transportation
- Collecting baskets/bags/bowls

Lesson Overview

There are many kinds of wild spinach that grow in Cibecue: *Tñ It'aa* grows in springs and slow-moving water, *Tangis It'aa* and *It'aank'ozhé* grow in yards and fields and other disturbed places, and *It'aa Dit'ogé* comes up with the monsoon rains in these same places. There are many other spinaches. A large amount needs to be harvested in order to make a meal. Apache elders say that spinach is one of the first plants to come up each spring because our bodies need its nutrients after a long winter indoors. The spinach helps us regain energy needed to meet the demands of the coming seasons outdoors. Large quantities of young leaves are gathered, sometimes eaten raw, but usually boiled. It is gathered almost every day when in season. Often mescal is added to the cooked greens, and the leaves are sometimes ground up, mixed with water, and eaten as a "green goo." Spinach is also considered a harvest food and is used in food exchange at sunrise dances.

Learning Objectives

Students will learn:

1. The three different types of spinach
2. How and where to harvest spinach
3. The nutritional value of spinach

Activity/Lesson:

- Have a community member/elder identify where wild spinach is growing.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find spinach.
- Elder will harvest the plant, discuss the history and story of the spinach, and then allow students to harvest their own spinach.

Teaching Notes

Late April – early May is a good time to harvest spinach.

One of the types of wild spinach also grows in the late summer, so this lesson could be used for harvesting then also.

Lesson 3

Cooking with Wild Spinach

Time

1 hour

Lesson Overview

See overview for Lesson 2

Materials

- Spinach: Bacon, wild spinach, and salt
- Tortillas: Flour, salt
- Cooking Utensils: Fire, tennis racket, pots, pans, spatulas, etc.

Learning Objectives

1. Students will learn how to cook with wild spinach

Activity/Lesson

- After collecting wild spinach, demonstrate how to properly clean and prepare it for cooking.
- Make tortillas with students on open fire or in oven.
- Cook bacon until nearly done and then add spinach, water, and salt.
- Eat together.

Teaching Notes

The recipe we received did not have instructions, so this is subject to change.

Harvesting Yucca*Igaiye and Igaiye Ts'oose**Time*

2-3 hours (depending on how many sites visited to harvest different types)

Materials

- Transportation
- Shovels
- Baskets for collection

Lesson Overview

There are two species of yucca that provide food. In May to July the flowers of *Igaiyé Tsoosé*, called *Nadasgáí*, can be harvested to make Apache cabbage. The stalk can be roasted like agave stalks in times of starvation. Later, in August and September the fruits of *Igaiyé*, called *Gosh'kán* (Apache bananas), can be eaten. In addition, *Igaiyé* has many other uses, including soap, fiber and string, and spoons.

Learning Objectives

1. Different uses of yucca plants
2. Where and how to harvest different types of yucca

Activity/Lesson

- Have a community member/elder identify where yucca is growing and ready for harvest.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children find yucca plants. They will hopefully be able to identify both broad and narrow leafed plants.
- Elder will harvest the flowers, discuss the history and story of the cabbage, and then allow students to harvest their own flowers.

Teaching Notes

These plants grow abundantly around Cibecue.

Harvesting yucca flowers for cabbage can take place from May-July.

Lesson 5

Cooking Yucca Flowers (Apache Cabbage)

Nadasge

Time

3 hours

Materials

- Yucca blooms
- Water
- Stew meat
- Salt
- Bowls
- Pot
- Ladle
- Spoons

Lesson Overview

Apache cabbage is the flower that grows on the center stalk of the narrow leaved yucca. The flower has a bell like shape that looks like white cotton balls. This flower is boiled with meat into a stew like you would make with cabbage from the store. When picked just before opening, the blooms have a sweet taste, but the later in the season it is picked the more bitter it will become. The blooms can also be used as medicine for headaches and problems with the eyes.

Learning Objective

Students will learn how to cook with yucca blooms

Activity/Lesson

- Make sure that flowers are separated from the stalks.
- Soak the flowers and wash three or four times.
- Place in a pot with water.
- Boil for two hours with stew meat and salt.
- Dish up!

Teaching Notes

Because this soups takes two hours to cook, it may be a good idea to have students wash and prepare the flowers right after the harvest trip and then have someone cook the soup and bring it back to the group to share.

Lesson 6

Cooking Yucca Bananas (Apache Bananas)

goshk'án

Time

1 hour (with fruit already harvested)

Materials

- Fire
- Plates
- Utensils
- Spatulas

Lesson Overview

The fruit grows in the middle of the plant and resembles a banana. It is picked when it turns yellow or when the fruit is falling to the ground. This fruit tastes sweet, almost like bananas. It can be eaten raw, roasted, or boiled – the seeds and skin always removed. When picked green, it can be roasted or left in the sun to ripen. It can be roasted or boiled, mashed into a gruel, mash, or soup. It can be pounded with piñon nuts or juniper berries (that have soaked overnight) and eaten after the seeds and heavy pulp have been screened and drained. It can also be dried and stored. The white base of the leaves can be ground with corn, boiled, and eaten. The leaves can also be roasted in fire, cleaned, and eaten.

Learning Objective

1. Students will roast and toast Apache bananas.

Activity/Lesson

- After the fruit has been harvested, prepare a fire, and burn it down to coals.
- Roast the bananas on the open coal fire until it turns a dark brown color.
- Peel the banana and eat the meat.

Teaching Notes

Once harvested, have this lesson soon after so the fruit does not rot.

Lesson 7

Non-edible Uses for Yucca

Time

1 hour

Materials

- Soap: yucca root, warm water, buckets, metate, knife, towels
- Rope: yucca leaves

Lesson Overview

There are multiple uses for the banana yucca plant aside from food. The root, when cut up and ground, makes a soap that is good for many uses. Also, the leaves can be split and the fibers tied into rope.

Learning Objective

Students will learn uses for the Yucca plant besides using it as food.

Activity/Lesson

- Cut up pieces of the root so that students can have the opportunity to grind them on the metate.
- As the pieces are ground, put in a bucket and add warm water.
- Allow students to wash different items: dirty dishes, washcloth, their hair, etc.
- Give students each a yucca leaf and have them separate it into smaller fibers and then tie them together.
- Students can see how long they can get the rope to go, make jump ropes, tie other objects together, etc.

Teaching Notes

This lesson can get wet so make sure to have some towels around.

Lesson 8

Century Plant/Agave
Nadah

Time

3 hours

Materials

- Transportation
- Shovels
- Bar
- Axe or Pulaski
- Gloves
- Buckets
- Knives
- Saws

Lesson Overview

This plant grows on mountain hillsides and can be harvested in May into June for the stalk *ÍikazÓ* and the heart *ÍikéghaashÓ*. There are several types of this plant, the sweetest (and itchiest) is *Nadalchí* (red agave), identified by red coloring at the base of the stalk. Others, such as *Nadalbá* (gray agave), are not as itchy or sweet, and are gathered around Lonely Mountain, Spring Creek, and other places. In pre-Reservation times, *Nadah* was the single most important Apache food by volume.

Learning Objectives

1. Students will learn where and how to harvest agave plants
2. Students will learn the traditional uses of different parts of the plant

Activity/Lesson

- Have a community member/elder identify where agave is growing, and when it is ready to harvest.
- Once a location and suitable time has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find agave.
- Elder will instruct the children how to harvest the plant, discuss the history and story of agave, and then allow students to harvest their own stalks and hearts.

Teaching Notes

The stalk is ready for harvesting just before the blooms develop.
The hearts are usually harvested at the same time as the stalks.

Lesson 9

Roasting Century Plant Stalk

Ikaz Nht'ees

Time

2 hours

Materials

- Stalk
- Axe
- Knife
- Bonfire

Lesson Overview

These stalks are roasted in a small bonfire until the outer skin is charred. When removed from the fire, they are peeled and eaten, or sliced into cookies and sun-dried and stored for future use as a treat or sweetener. They can be ground into a fine powder and added to foods, or soaked in warm water and used in drinks.

Learning Objectives

1. Students will learn how to roast the stalk of the century plant
2. To teach how to store this food for all future use

Activity/Lesson

- Once the stalk has been harvested, an elder will teach how to prepare the stalk for cooking
- The students will build the bonfire, placing the stalks throughout
- After cooking the stalk students will learn how to eat it and prepare it for storage

Teaching Notes

(none)

Century Plant Heart
Ikéghaash

Time

3-5 days

Materials

- Century plant root
- BBQ pit, wood
- Knives
- Metate
- Walnuts

Lesson Overview

This is known as a harvest food. It can be stored for fall and winter and used almost daily and in ceremonies. The heart is pried up, the leaves removed, and steamed for up to 2-3 days in a barbecue pit. When done, it is pounded flat and laid out to dry. It is then stored for later use to make a wide variety of dishes and beverages, and as a sweetener. For a favorite dish take the *ikéghaash* and pound with walnuts into a wet mush on a grinding stone. Add water to make the juice like a broth. People used to dip ash bread into this juice. It has a smoky, walnut taste.

Learning Objective

Students will learn how to prepare and cook the heart of the century plant for eating

Activity/Lesson

- Roasting will take two to three days and, thus, multiple lessons.
- Elder will teach how to prepare the heart for cooking, how to prepare the pit, and then allow students to be part of the process.
- After the heart is cooked students will process the heart.
- Students will learn how to prepare the heart.

Teaching Notes

The process for preparing this food is a long one. Though this is only one lesson, it may need to be divided into 2-3 lessons. Alternatively, parts of the process could be done outside of the classroom setting and then students could help with only certain parts. Another connected lesson could be to make dishes using the juice of the century plant heart after it is cooked. Simply use the juice to knead into the dough instead of water. Traditionally, *nadah* gathering and preparation was governed by many traditional guidelines. If appropriate, prayer and ceremony can be incorporated.

Lesson 11

*Community member(s) with cornfield needed

Visit Farmer's Corn Field

Nadá'

Time

1 hour

Materials

Transportation

Lesson Overview

Corn is the most important Apache agricultural crop. Cornfields have been a part of White Mountain Apache heritage for centuries, and many clans are named for the sites of traditional cornfields. Before the time of grocery stores and commodity food, it was common for Apaches to eat native corn at least once a day. We will collaborate with a community member who has cornfields and arrange several trips for students to participate in field preparation, planting, maintenance, harvest, and food preparation.

Learning Objectives

1. Students will be introduced to the cornfield that they will be working in
2. An elder will discuss the significance of corn to the Apache people.

Activity/Lesson

- Allow students to explore the cornfield and introduce concepts of irrigation, planting, etc.
- Give students a history of the significance of corn.

Teaching Notes

It will be important to find someone with a cornfield in advance.

Make sure the field is accessible and safe for students' participation.

Lesson 12

*Community member(s) with cornfield needed

Cornfield Prep

Time

2 hours

Lesson Overview

See lesson 11

Materials

- Hoes
- Shovels
- Tools
- Transportation
- Tractor?

Learning Objective

Students will take part in preparing the field for planting.

Activity/Lesson

This will change depending on who is chosen as our community partner. We will follow their instructions on how to proceed with field preparation.

Teaching Notes

Keep in mind cultural heritage and tradition when organizing preparation. There may be practices important in preparing the land for planting.

Lesson 13

*Community member(s) with cornfield needed

Field Planting

Time

2 hours

Materials

- Seeds
- Digging sticks
- Water
- Any other tools

Lesson Overview

See lesson 11

Learning Objectives

1. Students will take part in the planting of a cornfield.
2. Students will learn the importance of seed saving.

Activity/Lesson

Like the field prep lesson, this is subject to change depending on the needs of the cornfield's owner. It is preferable to use at least partial traditional growing techniques (example: digging sticks).

Teaching Notes

Traditionally, planting was a spiritual practice. If appropriate incorporation of planting prayer and ceremony can be used.

Lesson 14

*Community member(s) with cornfield needed

Field Weeding and Care

Time

1 hour

Lesson Overview

See lesson 11

Materials

- Shovels
- Gloves
- Tools for weeding and maintenance

Learning Objective

Students will gain an understanding and appreciation for the care taken to keep gardens healthy and maintained.

Activity/Lesson

Students will be taught which weeds to pull and which to leave and then given the time to upkeep the cornfield.

Teaching Notes

Students should also have the opportunity to water the corn and understand the practice of irrigation.

Lesson 15

Preparing for Pumpkin Patch

Bilkan Lits'ogi

Time

2 hours

Materials

- Shovels
- Compost/manure
- Soil amendments
- Pick axes
- Other tools

Lesson Overview

Pumpkin is one of the original traditional Apache crops. There are many traditional guidelines and practices associated with pumpkins. Our plan is to grow a pumpkin patch with students.

Learning Objective

Students will dig beds and prepare the soil for a pumpkin patch.

Activity/Lesson

- Give students instructions as to where and how beds should be dug.
- Double-dug lasagna beds will be dug out 2 feet deep and filled with black cinder sand, compost, manure, and soil.

Teaching Notes

Make sure students understand proper use of tools to ensure that all will work safely as they prepare the pumpkin patch.

Choose a location that will be accessible for students from the school in advance.

Lesson 16

Planting Pumpkin Patch

Time

30 minutes – 1 hour

Lesson Overview

See lesson 15

Materials

- Trowels
- Digging sticks
- Seeds
- Water

Learning Objective

Students will plant pumpkin seeds and seedlings.

Activity/Lesson

- Give students information about how to plant seeds: depth, width, etc.
- Possibly prepare grid for pumpkin planting, this way there is structure in the planting.
- Allow students to plant the seeds and teach them how to gently irrigate.

Teaching Notes

It may be a good idea to start seedlings for pumpkins a week after the last frost. Have students plant seedlings also, or have seedlings ready for students to plant. You should get Apache pumpkin seeds from Tribal members or Native Seeds/S.E.A.R.C.H.

Summer *Shii*

Summer begins in June and is the primary growing season. This is the time to be outside gathering, traveling, working the land and farming. The lessons during this season include wild harvesting, caring for cornfields, and preserving summer foods for use until the following summer.

Sumac Berries	2 lessons
This sweet and sour berry provides a refreshing summer drink that is easy to prepare. After students learn how to identify these berries and make the drink, they will be able to make themselves a tasty summer treat.	
Acorn	2 lessons
This nutrient dense food has been an important staple in the Apache diet. It provides many healthy minerals and proteins. These lessons will provide students with the knowledge of how to access a traditional food. Traditionally, acorn gathering was a spiritual practice. If appropriate, incorporation of prayer and ceremony can be used.	
Mesquite	2 lessons
Mesquite is still used commonly in San Carlos, Bylas, and Camp Verde. It has many health benefits and is very tasty. Because it is a long trip to mesquite trees, it might be possible to simply acquire mesquite meal and bake something with it.	
Prickly Pear Fruit	1 lesson
This fruit is something students have probably seen frequently in their lives, but may never have tasted. Students will learn about fruits that grow native to this region that they would probably not find in the grocery store.	
Wild Grapes and Strawberries	2 lessons
The students are sure to enjoy these delicious summer treats. They will learn about more fruits that are native to the area (such as blackberries, raspberries, manzanita berries, gooseberries, hackberries, serviceberries, graythorn berries, mulberries, etc.) that they can harvest from the wild and may even be able to transplant and grow from home.	
Wild Sugar Cane	2 lessons
Sugar cane is another sweet treat that can be used throughout the year. In addition to learning about sugar cane in these lessons, students will learn an important practice for preserving food that was used by their ancestors.	
Cornfield Care	1 lesson
Students will work with each other to maintain the cornfield.	
Harvesting from Local Fruit Trees	1 lesson
There are many old fruit trees planted around the reservation. This lesson is designed to inspire students to take advantage of this resource around their community.	
Preserving Potatoes	1 lesson
This crop, introduced by soldiers, was grown as an additional crop. Because potatoes store well, they were frequently preserved for use throughout the winter. This lesson teaches storage techniques.	

Lesson 1

*Elder needed

Harvesting Sumac Berries
Chinkoozhe

Time

2 hours

Materials

- Transportation
- Mixing bowls
- Flour sacks
- Gloves
- Water

Lesson Overview

The sumac berry (also known as squawberry or skunkbush) grows abundantly in many places near Cibecue and elsewhere on the Reservation. It is best to pick the fruit when they are a deep shade of red turning orange, which is from the end of May to early July. The berries should be picked immediately when they are sticky and ripe. It is an important plant for a variety of technological, food, and ceremonial uses.

Learning Objective

Students will learn how and where to harvest sumac berries.

Activity/Lesson

- Have a community member/elder identify where sumac berries are growing abundantly.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find the berries.
- Elder will harvest the plant, discuss the history and story of sumac berries, and then allow students to harvest their own fruit.
- Also allow students to taste and try the sumac berries.
- Gather enough berries to use for a later lesson making juice with them.

Teaching Notes

Harvest season is from late May – early July.

Lesson 2

Sumac Berry Drink

Time

2 hours

Lesson Overview

See lesson 1

Materials

- Sumac berries
- Water
- Sugar (mescal juice)
- Metate
- Strainer, ice
- Cups/containers for mixing

Learning Objectives

Students will learn how to prepare, and will get to taste, a sumac berry drink also known as Apache Kool-Aid.

Activity/Lesson

- Wash the fruit thoroughly to remove dirt and particles. After washing, remove all the leaves and sticks.
- Once clean, you can make the juice, or the berries can be stored in any container (a 25lb flour sack will work).
- To make the juice, grind the berries with a grinding stone, or an iron grinder if the grinding stone is not available.
- Combine the ground product with a gallon of water and mix well.
- Pour the mixed liquid through a strainer several times to remove the seeds and skin of the fruit.
- Mix a cup of sugar (or mescal juice) into the drink.
- Serve chilled.

Teaching Notes

If time allows and a location is very nearby, it may be possible to combine these two lessons into both a harvest and preparation lesson. Most people call this "Apache Kool-Aid."

Harvesting Acorn

Chich'il

Time

8+ hours
(depending on
distance to
harvesting site)

Materials

- Buckets
- Sacks
- Gloves
- Transportation

Lesson Overview

This acorn grows on Emory oak trees and can be picked in different areas throughout the Reservation and traditional Apache country. It is one of the most important traditional foods. The season starts around late June and can go through mid-August in the mountains. The acorn is picked, dried, and then shelled. After it is dried well, the meat of the nut is ground into a fine powder and stored for later use in cooking. It is used in soups and stews, especially those with meat. It is often kept in a bowl in most households, and sprinkled liberally in many foods as more than seasoning, or eaten plain with bread. Ground acorn is mixed with a variety of seeds and foods. The nut can also be eaten fresh out of the shell. Acorn is an important ceremonial tree and food.

Learning Objective

Students will learn how and where to harvest acorns.

Activity/Lesson

- Have a community member/elder identify where acorns are growing and ready.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find acorns.
- Elder will harvest the plant, discuss the history and story of the acorn, and then allow students to harvest their nuts.
- Wash and prepare the acorns for drying.

Teaching Notes

A good harvest time for acorns is early August.

There are a great many traditional guidelines governing all aspects of acorn gathering and preparation. The elder can instruct the students about these during the trip.

Lesson 4

Grinding Acorn Meal

Time

2 hours to 2 days

Lesson Overview

See Lesson 3

Materials

- Dried acorns
- Grinding stone or mill
- Storage vessels

Learning Objectives

1. Students will learn the labor required to grind acorns.
2. Students will learn about food preservation.

Activity/Lesson

- Once all of the harvested acorns are dried, it is time to grind them into acorn flour for later use.
- Teach students how to use whatever grinding devices we have available and then have them grind all of the acorns that they gathered, and winnow.
- Make sure to have storage vessels like large jars available for the storage of the flour.

Teaching Notes

Make sure the acorns have enough time to dry thoroughly between harvesting and grinding.

It is a good idea to have a dish available for students to eat the ground acorn or to allow them to eat the raw nuts like peanuts.

Harvesting Mesquite

Iyah

Time

5 hours
(depending on drive)

Materials

- Transportation
- Buckets
- Gloves

Lesson Overview

The bean pods of mesquite have been an important food, especially for San Carlos and Camp Verde people. This harvest food is less common for Cibecue people. It is gathered during summer months and stored for later use. The bean can be boiled and the juice drunk. The bean pod can also be chewed and the chewed pod spat out. Pods are ground into a flour, which is used as a condiment, mush, beverage, or gruel, and can also be made into sun-dried cakes. The sweetest pods have a dark red-streaked color.

Learning Objective

Students will learn about how and where to harvest mesquite pods.

Activity/Lesson

- Have a community member/elder identify where mesquite is growing.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find bean pods.
- Elder will harvest the plant, discuss the history and story of the mesquite, and then allow students to harvest their own mesquite.
- Also allow student to chew on the pods, but make sure they don't eat it whole.

Teaching Notes

Harvest time for this food is July –August.

Lesson 6

Grinding Mesquite

Time

2 hours

Lesson Overview

See lesson 5

Materials

- Flour mill
- Metate
- Mesquite bean pods
- Flour sacks

Learning Objectives

1. Students will learn how to use a flour mill or metate
2. Students will learn about the nutritional value of mesquite

Activity/Lesson

- Teach the students how to separate the pods from the seeds. Discard seeds. Discuss the traditional uses and nutritional value of mesquite.
- Have students use the flourmill or metate to grind the mesquite into a powder like form for storage.

Teaching Notes

Bake something with the mesquite.

It is known that mesquite flour is good for individuals with diabetes because it helps to stabilize blood sugar levels. Mesquite is a high-protein, highly nutritious food, rich in iron, lysine, manganese, potassium, and zinc. Two tablespoons of mesquite meal or flour contains about 30 calories, 6 grams carbohydrate, 3 grams fiber, and 1 gram protein.

Prickly Pear Fruit*Hosh Bi'Nastaa', Hosh Nteele', Hoshcho**Time*

3-4 hours
(depending on
travel time)

Materials

- Transportation
- Heavy-duty gloves
- Tongs
- Buckets
- Knives

Lesson Overview

This fruit grows on the prickly pear cactus. It grows abundantly throughout Apache country. The fruit typically ripens during late summer or early fall. When ripe, the fruit will be a dark reddish, purple color. The fruit has a tart, but delicious taste. The fruit is de-spined with a brush, sometimes peeled, and eaten raw or dried, with or without seeds. The pulp can be pounded (with or without its seeds) into a paste, and the fruits can be pounded into sheets or cakes, dried, and eaten later, or as travelling food. The fruit can be mixed with Yucca bananas, roasted in the ground, or roasted in with packrats. Because of its rich color it has also been used as a dye.

Learning Objectives

1. Students will learn how and where to harvest prickly pear fruit
2. Students will learn the different uses of the fruit
3. Students will be able to taste the fruit.

Activity/Lesson

- Have a community member/elder identify where prickly pears are growing.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find prickly pear fruit.
- Elder will harvest the plant, discuss the history and story of the prickly pear, and then allow students to harvest their own stalks.
- Make sure that students have good gloves because the fruit will have small stickers which can be hard to remove.
- Also allow student to taste the prickly pear fruit.
- It is also an option to either add more time to this lesson to make prickly pear juice or to have another lesson where the juice is prepared and drunk.

Teaching Notes

Be careful, this juice is a detoxifier and if consumed in large quantities can make one sick.

Harvest season is late summer and early fall.

It is also possible to make juice, jelly, or even dye from the harvested fruit in another lesson.

Wild Grapes*Dasts'áá'**Time*

3 hours

Materials

- Transportation
- Water
- Gloves
- If making juice: Sugar, water, pitchers, mashers, etc.

Lesson Overview

This lesson can consist of a harvest trip where students are able to eat the grapes raw. Other activities, like making juice, can be added. These plants grow abundantly near water. They can be picked in late summer. The leaves can be used to apply to skin affected by poison ivy.

Learning Objectives

1. Students will learn how and where to harvest wild grapes
2. They will also be given the opportunity to eat and learn about the nutritional value and medicinal uses of this berry.

Activity/Lesson

- Have a community member/elder identify where grapes are growing, and when they are ready to harvest.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find grapes.
- Elder will harvest the plant, discuss the history and story of the grapes, and then allow students to harvest their own.
- Also allow students to taste the grapes.
- If there is time, also have students learn about the medicinal use of grapes for poison ivy. Perhaps even try the application.

Teaching Notes

Because these grapes frequently grow along water, it may be that students get wet while harvesting.

Wild Strawberries*Dasts'áá Lichíí**Time*

3-4 hours
(depending on travel)

Materials

- Transportation
- Gloves
- Shovels
- Containers to store plants

Lesson Overview

You'll have to compete with the birds for these tasty treats. This lesson can be a gathering trip and we can also show students how to dig up their own plants to bring them home and try to plant them in their yards.

Learning Objectives

1. Students will learn how and where to harvest strawberries
2. Students will also learn how to split strawberry plants and plant them at their own homes

Activity/Lesson

- Have a community member/elder investigate where strawberries are growing and when they are ripe.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find strawberries.
- Elder will harvest the plant, discuss the history and story of the strawberries, and then allow students to harvest their own berries.
- Also allow student to taste strawberries.
- Have students split a strawberry plant and teach them how to plant them in their own yards.
- Show the students how to dry the berries for future use.

Teaching Notes

Harvest time for strawberries is in June. They grow most abundantly in the mountains.

Harvesting Sugar Cane

Ikaz nt'áne

Time

3 hours

Materials

- Transportation
- Knives
- Gathering baskets/bags

Lesson Overview

Wild sugar cane grows abundantly near water. Skinny wild sugar cane grows south of the Salt River near Globe. It is a treat that is commonly eaten during the winter, but the preservation is done after harvest time in the summer. Sugar cane can be chewed raw, right after harvesting. It can also be roasted, or buried in a pit for preservation.

Learning Objective

Students will learn where and how to harvest wild sugar cane.

Activity/Lesson

- Have a community member/elder investigate where sugar cane is growing.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children try to find sugar cane.
- Elder will harvest the plant, discuss the history and story of the sugar cane, and then allow students to harvest their own stalks.
- Also allow students to taste the sugar cane.

Teaching Notes

Make sure students know how to use knives if they are allowed to harvest cane.

Lesson 11

Preserving Sugar Cane

Time

2 hours

Lesson Overview

See lesson 10

Materials

- Harvested sugar cane
- Shovels
- River sand
- Sugar cane leaves
- Structure above pit to keep dry

Learning Objectives

1. Students will learn how to dig a traditional cache pit for storage of harvest food.
2. Students will learn about the importance of food preservation to survive the season

Activity/Lesson

- Have a site ready to dig a long rectangular pit about a foot and a half deep.
- Have students dig pit.
- Layer the bottom of the pit with river sand because it stays loose and won't clump.
- Place sugar cane chopped to a foot and a half on the bed of sand in a row.
- Once finished, top with sugar cane leaves, cover with more sand and top it off with the dirt that was dug up.
- These pits were traditionally dug in the wickiup to keep the ground dry, so make sure to have some sort of roof over the pit.
- This sugar cane can be dug up in the winter so students can taste it.

Teaching Notes

Because of safety hazards, it may not be possible to dig this pit on school campus, but ideally the students would be able to have it in a location that they are familiar with.

Lesson 12

Cornfield Care

Nada'

Time

2 hours

Materials

- Transportation
- Gloves
- Water
- Weeding Tools

Lesson Overview

Students will work with each other to maintain the cornfield

Learning Objective

1. Students will continue to assist in the maintenance of the cornfield

Activity/Lesson

Bring students to cornfield to perform needed maintenance including watering and weeding.

Teaching Notes

This lesson can be turned into as many as is necessary to properly care for the cornfield that students will be working with.

Lesson 13

Harvesting from Local Fruit Trees

Tsjint'aani

Time

1 hour

Materials

- Gloves
- Buckets
- Picking tools

Lesson Overview

There are many old fruit trees planted around the reservation. This lesson is designed to inspire students to take advantage of this resource around their community.

Learning Objectives

1. Students will learn that there are fruit trees producing fruit in their region that they typically buy at the grocery store
2. Students will understand how to harvest and dry fruit.

Activity/Lesson

- Bring students to trees in the area that are providing ample amounts of fruit.
- Teach students how to harvest fruit and allow them to harvest the fruit themselves.
- Teach students how to prepare, dry, and store fruit.

Teaching Notes

You may also teach students the basics of how to care for fruit trees since so many are neglected in the area. This could include: watering, mulching, and pruning.

Lesson 14

Preserving Potatoes
Gábas

Time

2 hours

Materials

- Shovels
- Potatoes
- Covered area
- Sand

Lesson Overview

Preservation of summer foods was crucial to survival in fall and winter months. In this lesson, students will learn how to dig a cache for the preservation of potatoes.

Learning Objectives

1. Students will learn about the history of food preservation.
2. Students will dig a cache.

Activity/Lesson

- Have harvested sugar cane and potatoes ready to bury.
- Dig a long rectangular-shaped pit about a foot and a half deep.
- Layer the bottom with sand (preferably river sand so it stays loose and doesn't clump), then put in the potatoes. Give them space because if you put them close together they will rot.
- Once layered, cover with corn stalks and sugar cane leaves. Cover again with sand and top off with the dug-up dirt.
- The potatoes will be dug up in the winter to be used then.
- Make sure the cache is dug underneath a covered area so that the ground stays dry preventing spoilage.

Teaching Notes

Because of safety hazards, it may not be possible to dig this pit on school campus, but ideally the students would be able to have it in a location that they are familiar with.

Fall
Ak'ee

Fall is a time of harvest and preparation for the coming winter season. Beginning in late August, it is time for many wild harvests along with gathering crops from cornfields and gardens. Some of these vegetables and fruits are prepared fresh and some are preserved for use during the winter season. During late fall, hunters begin their season as deer prepare for the winter. Many foods gathered and hunted at this time were used throughout the year until the following fall harvest.

Black Walnuts	2 lessons
These nuts were an important part of the traditional Apache diet and continue to be used for meals, snacks, and ceremonies. They are a healthy source of protein and fat.	
Pinon	2 lessons
These healthy and nutritious nuts were another staple for Apache people, and an important ceremonial tree and food. Piñon trees grow abundantly throughout the Reservation. After these lessons, students should be able to identify piñon trees, harvest pine nuts, and understand how to incorporate these nuts into their diets.	
Juniper Berries	2 lessons
Juniper tree has played an important role in Apache life for food, medicine, ceremony and other day-to-day uses. There are four kinds of junipers growing commonly on the Reservation and throughout traditional Apache country. After these lessons, the students should have a better understanding of how to use it in their lives.	
Greasewood or Creosote Bush	1 lesson
Though this plant does not grow nearby, it was valued traditionally for its medicinal uses. Through this lesson, students can learn about how different plants were harvested historically as Apache people moved around, and how trading influenced the lives of their ancestors.	
Corn	5 lessons
It is clear from the many uses of corn to make different food items that it has held a significant place in the lives of White Mountain Apache people historically. At the end of the season, students will have been a part of an entire cycle of the life and use of corn agriculturally.	
Hunting	2 lessons
Before the introduction of cows, hunting provided all of the meat that Apache people ate. This important practice will be shared with the students and the lessons will teach the rituals and skills necessary to continue hunting.	
Wild Tea	1 lesson
Apache people frequently drank tea for a good-tasting and healthy beverage. These teas were usually also used medicinally. These lessons will teach students how to identify some of these teas.	

Harvesting Black Walnuts

Ch'ildiye

Time

2 hours

Materials

- Transportation
- Gunnysacks
- Gloves
- Harvesting tools

Lesson Overview

Black walnut is both an important traditional Apache food. It is also an important ceremonial tree and food. Walnuts are cracked open and eaten raw, or ground (shells and all), and eaten by the pinch. Sometimes they are parched with corn. However, the nuts are usually ground (usually shells and all), and mixed with agave, sometimes into a dry mix to eat alone, or - more often - made into a beverage or gruel. This is drunk or eaten alone, or used as a sauce/syrup poured over bread or other foods. The meat of the nut is rich in fat (nearly 75% is oil). Because the shells are black, hands will be stained black when preparing these nuts. Before rubber gloves, if someone had black fingertips the community members would know that they had been harvesting black walnuts.

Learning Objective

Students will learn when, how, and where to harvest black walnuts.

Activity/Lesson

- Have a community member/elder identify where black walnuts are growing abundantly, and are ready to be harvested.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children find black walnuts.
- Elder will harvest the plant, discuss the history and story of the walnuts, and then allow students to harvest their own nuts.
- Have students put harvested nuts into a gunnysack so they can be beaten with a heavy stick during the next lesson.

Teaching Notes

Because the nuts will turn students' hands black it is a good idea for them to wear gloves while harvesting.

This lesson will be followed up by a lesson where the students will prepare the nuts by removing them from their shells.

Another method for removing the shells is to soak the nuts for several days in a gunnysack and then place the bag on small rocks and step all over the bag. After this process they would need to dry in the sun for one week. This alternative method can be used, but it requires more time and possibly another lesson.

Harvest time is August for these nuts.

Lesson 2

Shelling Black Walnuts

Time

1 hour

Lesson Overview

See lesson 1

Materials

- Rocks
- Buckets
- Heavy Sticks
- Gloves
- Gunnysacks
- Black Walnuts

Learning Objective

Students will learn how to shell and eat black walnuts.

Activity/Lesson

- Have gunnysack(s) of walnuts ready for students to beat with a heavy stick (a broom end or shovel would work).
- Make sure that the sacks are tied closed tightly and have students take turns beating the sacks to peel the walnuts dried outer skin off.
- After the shells are peeled off, wash the walnuts and let them dry.
- Give students the opportunity to taste the raw walnut and teach them about other ways of eating and using the nut.

Teaching Notes

Another preparation option is to make the walnuts into a traditional Apache drink. Apaches also used the juice of walnut hulls like "sheep-dip" to rid horses and cattle of lice and other parasites. The same juice was good for cleaning maggots from wounds and a small amount was given to dogs that had worms.

The hulls were also used to make a long-lasting dark brown dye that was rubbed on gray hairs to make them dark again. It would be possible to make dye with this juice and have students dye paper or other fibers.

Childiye' t'ets'eg is a drink that was made with black walnuts. Few know how to make this still, if possible find an elder that can do this.

Harvesting Pinon Nuts

Obeh

Time

2 hours –2 days

Materials

- Transportation
- Gunnysacks
- Harvesting tools

Lesson Overview

Piñon nuts are a traditional Apache staple food. Cones (which hold the nuts) are shaken or knocked from the trees (ob4ts8n), and gathered from the ground, or burned in a pile to release the nuts. The nuts are hulled, eaten raw or roasted, but almost always roasted. They can be parched and ground with corn, and mixed with other foods or eaten by the pinch. A butter is made out of the mashed nuts. The nuts can be ground to a flour and put into soups or made into cakes. Piñon pitch is used as chewing gum. The nuts are either eaten raw or roasted, sometimes parched with corn and ground into flour. Butter can also be made of mashed, hulled seeds.

Learning Objectives

Students will learn when, where, and how to harvest pine nuts.

Activity/Lesson

- Have a community member/elder identify where piñon nuts are growing abundantly.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children find pine cones.
- Elder will harvest the plant, discuss the history and story of the pine nuts, and then allow students to harvest their own nuts.
- Have students put harvested cones into a gunnysack so they can be placed in the sun and pop out of their cones, then build a cone fire to release the nuts.

Teaching Notes

These nuts can be eaten raw and roasted during the next lesson. Have students try both options.

Between this lesson and the next lesson have all piñon nuts in gunnysacks and placed somewhere where they will be in the hot sun, or have a site ready for a cone fire.

They will “pop” like popcorn out of their shells.

Piñon nuts can be harvested in October.

Lesson 4

Roasting Pine Nuts

Time

1 hour

Lesson Overview

See lesson 3

Materials

- Pan/trays
- Fiver/stove/oven
- Salt

Learning Objective

Students will learn how to roast pine nuts.

Activity/Lesson

- There are many ways to roast pine nuts. Traditionally, these nuts were roasted over an open fire. You may choose to roast them this way using a skillet, cast iron, etc. Toast the nuts with a little salt, stirring as needed.
- Another way to toast these nuts is to use an oven or stove. Nuts can be toasted in a skillet on a stove or placed on a tray in the oven at 350 degrees for about 10 minutes.

Teaching Notes

This is a very messy process, and students should be prepared to get hands and clothes covered with *j̣ẹ* (pitch). This pitch is highly flammable, so great care must be taken if building a fire or cooking.

Lesson 5

Harvesting Juniper Berries

*Elder needed

Gad, Diltai Lichi'i

Time

2 hours

Materials

- Baskets
- Gloves
- Transportation

Lesson Overview

Juniper berries were an important food. The best tasting is *Diltalé Lichi'i* (alligator juniper), while *Gad* (Utah juniper) is good as well. Gathering season is from October until December. The berries are picked from the tree when fully ripe or gathered from the ground after they have fallen and dried. There are many uses of parts of the juniper tree, including the berries, branches, bark, and ash. The meat of the juniper berry was eaten, not the seeds. The berries can be eaten raw or boiled whole as is, or ground raw and eaten. They can be partly dried, boiled until soft, ground to a pulp, seeds removed, and made into a ball or made into cakes and stored. The berries can be soaked overnight, pounded and mixed with banana yucca fruit, mixed with agave, or alone as a beverage. There are many medicinal and ceremonial uses of juniper.

Learning Objective

Students will learn where and how to harvest Juniper berries.

Activity/Lesson

- Have a community member/elder identify where juniper berries are growing abundantly, and when they are ripe.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children find juniper berries.
- Elder will harvest the plant, discuss the history, uses, and story of the juniper berries, and then allow students to harvest their own nuts.
- Have students put harvested berries into baskets to be used during the preparation lesson.

Teaching Notes

Medicinally, juniper branches were heated and placed in a protective wrap to prevent burn and then applied to the backs of patients who had pneumonia.

Torches were made of dried juniper bark. The bark was rubbed between the hands until the fibers were separated. Twisting the fibers together produced a thick strand. This was then wrapped from top to bottom and tied with yucca string. The torch made a light like a small campfire and would last 4-5 hours.

Lesson 6

Preparing and Cooking with Juniper

Time

2 hours

Lesson Overview

See lesson 5

Materials

- Berries
- Metate
- Pot
- Fire/stove

Learning Objectives

Students will learn how to prepare juniper berries for eating and will have the opportunity to try juniper berries.

Activity/Lesson

- Have juniper berries ready from the harvesting lesson or available from elsewhere.
- Boil the berries until they are soft.
- Have students take turns using a metate to grind the berries into a pulp. Remove seeds. This pulp can be eaten unseasoned or seasoned. It can also be stored for later use.

Teaching Notes

It is a good idea to do some more research on ways to prepare these foods. There are many ways mentioned, but without specific details.

Some other ideas:

- Make corn mush with juniper ash.
- Make drink out of juniper berries. The berries are soaked overnight then pounded with gosh'kán. After mixing with water, the seeds and pulp were screened out.
- Make a drink out of juniper berries and ikéghaash.

Gathering Chaparral

Ch'il Jig

Time

3 hours
(depending on whether a field trip is involved)

Materials

- Transportation
- Harvesting tools

Lesson Overview

Ch'il Jig (greasewood or creosote bush) grows in the low desert area. It is an olive green bush with a strong smell due to leaves covered with a resin, which is sticky to the touch. When in bloom, it has a yellow flower that looks like a fuzzy cotton ball. This flower is boiled in tea with leaves and stems and is used medicinally by Apaches to treat colds, flu, diarrhea, diabetes, and many other conditions. It also helps heal open sores and scrapes that are infected. It has also been used for arthritis, tuberculosis, venereal diseases, and even cancer. It is used ceremonially, and the pitch is used as an adhesive.

Learning Objectives

1. Students will learn how and where to harvest greasewood
2. Students will learn about the value of this plant medicinally.

Activity/Lesson

- Have a community member/elder identify where greasewood is growing abundantly.
- Once a location has been identified, organize a field trip with the elder accompanying the group.
- Drive to the site and have children find greasewood.
- Elder will harvest the plant, discuss the history and story of the greasewood, and then allow students to harvest their own.
- Have students collect the flowers, leaves, and stems and put them in bundles to be used as tea later.
- Focus this lesson on the medicinal uses of plants.

Teaching Notes

The medicinal use of plants can be culturally sensitive material so make sure that care is taken in teaching methods. This lesson can also be done without a harvest trip if an elder brings in greasewood and shows students how to identify the plant.

Other medicinal plants could also be brought in and shown to students.

Lesson 8

Harvest at the Corn Field

Nada'

Time

3 hours

Materials

- Baskets
- Harvesting tools
- Gloves
- Transportation

Lesson Overview

Fall is the season for corn harvest, corn eating, and corn preserving. There is much to be done to keep corn throughout the year.

Learning Objective

Students will learn how to harvest corn and understand the work required to eat this important Apache food.

Activity/Lesson

- A field trip to the cornfield will be organized when the field is ready to be harvested.
- Teach students how to harvest corn and send them on their way through the field.
- Have students collect corn in baskets or buckets.

Teaching Notes

Depending on field, give order to how students harvest to minimize chaos.

Lesson 9

Dig Traditional Cooking Pit

Time

4 hours

Lesson Overview

See lesson 8

Materials

- Shovels
- Location
- Pick axe
- Gloves

Learning Objectives

1. Students will dig a traditional cooking pit to understand ways that food (especially corn) has been prepared.

Activity/Lesson

- Identify a location where a cooking pit could be dug either on school property or nearby where students could be easily transported.
- Dig a pit about 8 ft. deep. Have students take turns shoveling and have adults do the pick axing.

Teaching Notes

It is possible to investigate whether there is already a pit dug somewhere in the community that could be used.

Lesson 10

Barbecue Corn in Pit

Nada' Beeshbezh

Time

2 hours (plus overnight)

Materials

- Barbecue pit
- Rocks and sand
- Corn and corn stalks
- Gunnysacks
- Wood
- Water
- Pipe

Lesson Overview

See lesson 8

Learning Objectives

Students will learn how to barbecue corn and will have the opportunity to experience how corn has been cooked traditionally by the White Mountain Apache community.

Activity/Lesson

- Place rocks at the bottom of the cooking pit and build a large fire on top of them. Once the fire has died down, spread out the ashes and coals.
- Put corn into gunnysacks (about 20 ears per sack).
- Put sand in the pit and then cover with cornhusks.
- Put gunnysacks filled with corn into pit and cover with more cornstalks.
- Once covered, place a pole into the hole and fill the hole in with sand and the rest of the dirt.
- When hole is all filled in, pour water into the pole.
- Allow the corn to boil overnight and then dig it up and let it dry.

Teaching Notes

It is a good idea to have several community members who know what they are doing there to help with this process.

Another good thing to do is teach students how to dry corn by roasting it over the fire until golden brown.

Apache Corn Bread
Nada 'ban

Time

1 ½ hours

Lesson Overview

See lesson 8

Materials

- Fresh corn
- Metate
- Flour
- Salt
- Eggs
- Vegetable oil
- Skillet
- Fire/stove
- Spatulas
- Plates/forks
- Large bowls

Learning Objective

Students will learn how to make Apache Cornbread.

Activity/Lesson

- Beginning with fresh corn on the cob, corn is sliced off the cob with a knife. This should be done over large bowls to catch all of the corn.
- Once all of the corn has been removed from the cob, have students grind the corn down on a metate or with a metal grinder. Add a little salt and optional flour. Some people also add eggs.
- Spread the corn mixture onto a lightly greased frying pan. Fry over low heat until golden and crispy. It is flipped over like pancakes and the fried again.
- The cornbread is done when the moist mixture has a dry consistency inside.

Teaching Notes

Bernice Caddo was mentioned as an elder who could do this lesson.

Lesson 12

Tamales
Itiyizcho

Time

90 minutes

Lesson Overview

See lesson 8

Materials

- Fresh corn/corn husks
- Salt
- Plates/forks
- Pot
- Water
- Large bowls

Learning Objectives

Students will learn how to make Apache corn Tamales.

Activity/Lesson

- Begin with fresh corn and cut away corn from the cob. Do this over large bowls to collect the corn.
- Once cut, grind the corn on a metate or with a hand grinder. Check the consistency. If it is too wet, add flour or try to squeeze out the extra moisture.
- Form a round, oval-shaped piece and place it on a cornhusk. Then roll this and tie it into bundles.
- Boil the bundles for about an hour. Remove and unwrap.
- Place the cooked masa back into the water you used for boiling and add ground acorn.

Teaching Notes

This is considered an apache harvest food and is used in various ceremonies.

Lesson 13

*Hunter needed

Hunting Skills Walk
Naljig

Time

1 hour

Materials

Walking shoes

Lesson Overview

Fall is the season when deer are hunted. The deer is a sacred animal to the Apache people and is treated with great respect, and prepared according to traditional guidelines. Deer can be boiled, fried in a pan, roasted over open coals, or made into jerky.

Learning Objective

Students will learn about the protocol of hunting: skills necessary to scout animals, handling of a kill, and ways to prepare meat.

Activity/Lesson

- Invite an experienced hunter to bring students on a walk to discuss necessary skills for hunting.
- Have the hunter discuss respect of animals and nature, the values of hunting, legends, and history of hunting.

Teaching Notes

The teacher could bring different tools (not guns) and perhaps antlers or hides to show students.

Lesson 14

*Hunter needed

Venison or Elk Meat

Time

1 hour

Lesson Overview

See lesson 13

Materials

Deer meat prepared before class

Learning Objectives

1. Students will be able to try deer meat.
2. Students will learn about how to handle and prepare meat.

Activity/Lesson

- Bring deer meat prepared before class so students can do a taste test.
- Have the hunter come again and discuss more carefully the ways to prepare and handle meat.

Teaching Notes

If possible have students make jerky with deer meat.

Harvesting and Tasting Wild Teas*Dé**Time*

2 hours with harvest,
20 minutes without

Materials

- Prepared teas
- Transportation
- Sugar
- Small cups
- Harvesting tools

Lesson Overview

Late summer and early fall are great times to harvest different plants to make into teas. During this lesson, teach students where to find different teas and give them the opportunity to try them.

Learning Objectives

1. Students will learn how and where to harvest wild teas.
2. Students will have the opportunity to try different teas.
3. Students will also learn the benefits of drinking tea.

Activity/Lesson

- Have a community member/elder determine harvesting areas.
- Organize a field trip to the location and teach students how to harvest the tea.
- Bring different kinds of tea for tasting. These could include:
 - a. Apache tea *Íizee tsqoséÓ*
 - b. Sycamore bark (*k'ashdla'á bikagéÓ*)
 - c. Oak leaves *Íchích'ilibayé bit'aa'Ó*
 - d. Mormon tea *Ích'iltádecháÓ*

Teaching Notes

If it is not possible to do a harvesting trip, simply bring the teas in to taste and talk about the traditional uses of each one.

The Apache tea is usually ready for harvesting in late August – early September.

Winter *Hai*

The winter season is a time of rest for the Earth, plants, animals, and people. Because there are not many plants fruiting or producing, it is important to have preserved and stored food for the winter season. During the winter lessons, we will cover ways that stored foods were prepared throughout the winter. This is also the season for storytelling, so stories should be incorporated into lessons.

Acorn	2 lessons
These lessons are a follow up to the summer harvest and grinding of acorn nuts. Acorn is a food that was used throughout the winter because it stores well and is nutrient dense. Here, students will learn some of the traditional ways that this food was prepared.	
Corn	4 lessons
After preparing these dishes, students will understand the relationship of Apache people to corn throughout the year. They will have planted, cared for, harvested, preserved, and prepared meals using corn. Corn was another crop that was integral to survival through the winter. The dishes in these lessons were traditionally eaten throughout the winter.	
Bread	1 lesson
After the introduction of flour, bread became a staple food for Apache people and continues to play a huge part of daily diets. This lesson shows students ways that bread has been prepared over the years.	
Mesquite	1 lesson
Ideally, the mesquite used in this lesson would have been harvested and ground by students. If this is not available, it is possible to buy mesquite meal from many health food stores, coops, and Native Seeds/S.E.A.R.C.H. This food is a nutritious wheat alternative for baking.	
Yucca	1 lesson
During the spring, students learned how to prepare food with the Yucca plant and also learned how to make ropes from the fibers of the leaves of this plant. This lesson expands on that knowledge and shows students how the fibers have been used to make essential tools for living, like shoes.	
Food Storage Preservation	2 lessons
Food storage and preservation were key to the survival of White Mountain Apache people during the winter and early spring seasons when wild foods and crops were not growing abundantly. Students will learn these practices and gain an understanding of why they were used.	

Lesson 1

Acorn Dumplings

Time

1- 1 ½ hours

Materials

- Ground acorn
- Meat
- Flour
- Salt
- Bowls
- Spoons
- Pot
- Ladle

Lesson Overview

Acorn is harvested during the summer, and the nutrient-dense acorn flour is eaten year-round.

Learning Objectives

Students will learn how to prepare acorn dumplings.

Activity/Lesson

- Boil meat of choice (elk, deer, or beef) in a soup pot. Frequently, people use ground beef and fry this before adding to the soup rather than boiling it. Before soup is done, take flour and mix it with salt and knead it into dough.
- Take the dough and roll into balls.
- Once complete, take the ball of dough and stretch out. Either tear or cut into pieces and throw into the pot of soup.
- Let this boil until the dough rises and floats (about 15 minutes).
- Once done, add ground acorn to flavor.

Teaching Notes

You can either boil or fry the meat used in this soup.

Lesson 2

Acorn Stew
Chitzek

Time

1 hour

Lesson Overview

See lesson 1

Materials

- Stew meat
- Ground acorn
- Water
- Pot

Learning Objectives

Students will learn how to make acorn stew.

Activity/Lesson

- Boil stew meat until soft. Remove from liquid, but save the liquid.
- Shred the meat and sprinkle ground acorn over stew meat in desired amount; about $\frac{3}{4}$ cup.
- Add reserved liquid to make moist.
- This bread is usually eaten with ash bread or puff bread so students can make bread or have it available for eating.

Teaching Notes

Try to use ground acorn that the students harvested and ground themselves.

Lesson 3

**Corn Mush
Nada'**

Time

1-1½ hours

Materials

- Dry corn
- Jerk
- Lard
- Salt
- Bowls/spoons

Lesson Overview

Corn crops were essential to survival through the long cold winters without fresh food. The lessons in the winter will be using dried corn from the summer's harvest.

Learning Objectives

Students will learn how to prepare corn mush.

Activity/Lesson

- Use dried corn from the summer harvest. When the corn is dried on the stalk, remove the dried kernels from the cob. Allow the corn to dry again. When it is ready to be used, wipe the corn clean with a slightly damp cloth, pat dry.
- Toast the corn in a frying pan over embers, or on low heat on a stove. Toast between 5-15 minutes depending on desired consistency.
- Grind toasted corn into a fine powdery consistency on a grinding stone.
- Sift powder through a sifter to remove hard particles.
- Put on a pot of water and let it boil. Add a teaspoon of lard. Add ground jerky for flavor.
- When jerky is tender, put the ground corn in a bowl and mix with water to make a corn paste. Then slowly pour the mix into the pot of jerky water.
- Stir so that the corn does not become lumpy. Do not stir vigorously. Let it sit to thicken, then serve.

Teaching Notes

This is considered a harvest food and is used in some ceremonies. It would be nice to use corn and corn flour that students helped to grow and harvest. Corn mush was an everyday commodity in the Apache diet. It was usually carried around for emergencies.

Lesson 4

Corn Nuts

Time

1 hour

Lesson Overview

See lesson 3

Materials

- White corn kernels
- Frying pan
- Salt
- Lard/butter/oil

Learning Objectives

Students will learn how to make corn nuts.

Activity/Lesson

- White corn kernels are first removed from the cob.
- Then, toast the corn kernels over a fire until they turns a nice golden brown. Make sure not to burn them by continuing to stir.
- Once done toasting, place in a bowl. You can oil with butter or lard while it is still hot. Use just enough to help salt stick to the corn nuts.

Teaching Notes

Eat this in moderation. It can cause digestive discomfort and problems with bowel movements.

Lesson 5

*Elder needed

BBQ Corn with Pinto Beans

Dijeezhi

Time

1 hour

Lesson Overview

See lesson 3

Materials

- BBQ corn
- Beans
- Water
- Meat
- Small fry breads
- Bowls/spoons
- Pot

Learning Objectives

1. Students will learn how to make BBQ corn and will have the opportunity to eat it.
2. Students will discuss techniques to harvest, dry, and store corn.

Activity/Lesson

- Because this dish takes a long time to cook, it may be best to have community member/elder prepare the dish in advance and then explain to students how it was made.
- To prepare, boil a pot with dried BBQ corn and pinto beans. If desired, you may add your choice of meat. Bacon, salted pork, short ribs, or ham hock would work well. Let this boil for 3 hours.
- Most people eat this soup with fry bread, so it would be nice to have small fry breads available.

Teaching Notes

This lesson is a follow up of the lessons already done to prepare BBQ corn. It will be neat to have students understand how the work they did in the fall to prepare the BBQ corn helped it be able to be stored until winter time.

Lesson 6

Apache Trail Mix

Lil nasdisgeed

Time

1-1 1/2 hours

Lesson Overview

See lesson 3

Materials

- Dry corn
- Acorns
- Black walnuts
- Ziploc bags

Learning Objective

Students will learn how to prepare Apache Trail Mix.

Activity/Lesson

- This is a food that is harvested in the summer and eaten later on in the winter. It can be a meal, but is sometimes considered a treat or snack.
- First, have white corn kernels dried from the summer harvest. These should have been toasted in a frying pan with oil, butter, and salt.
- Grind acorns on a grinding stone. Place acorn in a pan and toss in the air to let the wind separate shells from the meat. Use hands to get the big shells out and repeat until all are gone.
- Mix the black walnuts, acorn, and corn.

Teaching Notes

You can use the corn nuts made in the corn nut lesson for the trail mix.

Lesson 7

Making Different Types of Apache Bread

Bán

Time

1 –1 1/2 hours

Materials

- Flour
- Baking powder
- Salt
- Mixing bowls
- Warm water
- Utensils for baking bread
- Plates/napkins

Lesson Overview

After the introduction of flour, bread became a staple food for Apache people and continues to play a huge part of daily diets. This lessons shows students ways that bread has been prepared over the years.

Learning Objective

Students will learn how to make different kinds of Apache breads, e.g., tennis bread *Íbán ditánéÓ*, ash bread *Ítst'ahÓ*, tortilla *Íts'igis ts'iiÓ*, and oven bread *Íbán okaaniÓ*.

Activity/Lesson

- Start a fire in the adobe oven an hour before class starts so that it is down to coals for cooking.
- Show students how to make the dough, mixing flour, baking powder, and water in the mixing bowls.
- Divide the dough into small balls.
- Give each student a ball of dough and demonstrate how to pat it into bread. As they stretch out their bread be prepared to cook it over the coals in the stove on a tennis racket.

Teaching Notes

If you cannot make all of the different types of breads with students, explain what the difference is between the types of bread.

It may also be good to mention that Westerners introduced flour to Apache people.

Lesson 8

Making Mesquite Mush

Iyah

Time

1- 1 ½ hours

Materials

- Bean flour
- Mesquite pods for display
- Pot
- Bowls
- Spoons

Lesson Overview

Mesquite pods are harvested in the summer and ground into a powder that can be kept throughout the winter season.

Learning Objectives

1. Students will learn how to use the mesquite flour that they ground earlier in the season.
2. Students will make mesquite bean mush.

Activity/Lesson

- Boil a pot of water.
- Place ground mesquite powder in a bowl and add water to make a paste.
- Slowly pour the paste into the boiling water. Stir continually so that it does not become lumpy.
- Let it cool and it will settle like cream of wheat.

Teaching Notes

This was a food for the elderly because it had a lot of nutrients, but was easy to chew. A drink can also be made from mesquite bean powder. It is made basically the same way as the mush, but is more liquefied. It can be sweetened with sugar or agave.

Lesson 9

*Elder/Community member needed

Making Sandals with Yucca Fiber

Time

2 hours

Materials

Yucca Fibers

Lesson Overview

Yucca leaves can be harvested for fiber for a variety of uses any time of the year. During the winter season, a more advanced lesson would be to have someone come and make sandals with the yucca fiber with the students.

Learning Objective

Students will learn further how to use the fibers from the yucca plant.

Activity/Lesson

- Elder/Community member will lead the activity.

Teaching Notes

The art teacher from the high school knows how to make these so he would be a good contact or teacher for this lesson.

Lesson 10

Making Jerky
Itsi'isga'

Time

1 hour

Materials

- Meat
- Apache salt
- Knives
- Drying rack

Lesson Overview

Traditionally, food storage and preservation was absolutely essential for Apache people's survival through the winter. During these lessons, students will learn a little about the art of saving food and making it last throughout the year.

Learning Objectives

1. Students will learn how to make jerky
2. Students will learn about the importance of preserving food.

Activity/Lesson

- Choose whether you will be using beef or elk.
- Cut the meat into very thin pieces and sprinkle with Apache salt.
- Hang the meat outside and separate it with sticks so it dries for two weeks.
You can also put it on a sheet to dry in the sun.
- Each night bring the meat inside so animals do not eat it.

Teaching Notes

Make sure that students don't use too much salt!
Porter Mountain sells good beef for jerky making.

Lesson 11

Eat Preserved Foods

Time

30 minutes to 1 hour

Lesson Overview

See lesson 10

Materials

- Shovels
- Pot
- water

Learning Objective

Students will eat the foods that they preserved over the summer in order to see the benefits of storing food for winter.

Activity/Lesson

- If students were able to bury potatoes and sugar cane over the summer provide shovels to dig out the caches and harvest the goods. Sugar cane would be able to be chewed without more preparation. Potatoes could be boiled and mashed.
- The century plant stalk that was dried over the summer could be eaten today also.

Teaching Notes

This lesson will work if during the summer students were able to dig caches for sugar cane and potatoes and to preserve the century plant stalk. Otherwise, there will be no preserved foods to eat, but the lesson can still happen to discuss the importance of preserving food.