

Three Sisters

Grades 3-5

English Language Arts, Science, Social Studies, Health



Objectives

Students will learn about the American Indian agricultural practice of Three Sisters planting. They will track food choices and make healthier food choices by eating more vegetables.

Vocabulary

domesticate—to grow (a plant) for human use

legume—a type of plant (such as a peas or beans) with seeds that grow in long cases (called pods)

maize—Native American name for corn. Also called Indian corn.

squash—a type of vegetable (such as a pumpkin) that has a usually hard skin and that is eaten cooked

sweet corn—a kind of corn that contains a lot of sugar

symbiotic—the relationship between two different kinds of living things that live together and depend on each other

Background

Native peoples from different parts of North America have used a variety of agricultural practices throughout history. One of the best known is the companion planting of corn, beans, and **squash** – a trio of plants often referred to as the “three sisters.” In a three sisters garden, the three partners have a **symbiotic** relationship that provides support for each other.

- Corn provides support for bean vines.
- Beans, like other **legumes**, have bacteria living on their roots that help them absorb nitrogen from the air and convert it to a form that the bean plants can use. As the roots of bean plants decompose after the crop is harvested, some of the nitrogen becomes available for other crops to use the following year. Corn, which requires a lot of nitrogen, benefits the most from this relationship.
- The large, prickly squash leaves shade the soil, preventing weed growth and help keep animal pests, like racoons, away.

The three sisters also complement each other nutritionally, providing people with sources of starch and protein along with fiber, vitamins and minerals. These crops were considered by many Native peoples to be special gifts from the creator because they played such an important part in agriculture and nutrition. Because of their role in the survival of early Americans, many stories, customs, celebrations, and ceremonies are associated with them.

Genetic ancestors of the beans we eat today grew wild in Argentina 10,000 years ago and in Mexico 7,000 years ago, according to fossil evidence. The earliest proof of **domesticated** beans being grown was about 5,000 years ago in Central America. When Europeans began to visit the Americas, dried beans were a food staple and early manifests indicate beans were traded for goods from the Old World in the 1500's. Unlike squash and corn, archeological evidence seems to indicate that some form of beans were used for food in most parts of the world prior to European colonization. Prior to 1875, when “bush” beans were developed, all bean varieties were vining or “pole” beans which required support to grow well.

Three Sisters (continued)

Most of the corn grown today was derived from a native grass, known as teosinte. While the exact origin is unknown, tiny ears of corn have been discovered at ancient village sites and in tombs of early Americans. Evidence of corn in central Mexico suggests it was grown there as long as 9000 years ago. Most of the early corn was hard and starchy and was likely ground into meal or flour. However, **sweet corn** which is eaten fresh as a vegetable, occurs as a spontaneous mutation in field corn. Once they recognized its superior taste, early farmers saved seed from this mutation and it was grown by several Native American tribes. The Iroquois gave the first recorded sweet corn (called 'Papoon') to European settlers in 1779.

Squash have a long relationship with human civilization in the Western Hemisphere, with seeds dating back 12,000 years ago found in caves of Ecuador. Our word “squash” come from the Massachuset Indian word *askutasquash*, which means “eaten raw or uncooked”. Although there are many varieties of squash, there are three primary species: those that grow slowly and mature in the fall (winter squash), quick growing fruit that is eaten before the rinds and seeds harden (summer squash) and pumpkins. In all but the warmest climates, the squash grown in early Three Sisters gardens were likely winter squash. While many squash varieties grown in home gardens today are “bush” varieties, early varieties all bore fruit on long vines which covered the ground.

When Europeans began to colonize North America, records from the sixteenth century describe an immensely productive agriculture based on maize, bean, and squash established from Florida to Ontario. Iroquois agriculture was one of the first indigenous cropping systems reported by Europeans. French explorer Jacques Cartier made notes on the cultivation of the Three Sisters in fields near present-day Montreal in his voyages up the St. Lawrence Seaway in 1534–1535.

Eating corn, beans and squash together, as the Native peoples did also enhances the nutritional benefits of each. When eaten at the same meal, the complementary amino acids of the Three Sisters form complete proteins, almost eliminating the need for meat in the diet. Dried corn and beans were easy to transport and could be rehydrated and cooked at any time. Winter squash and pumpkins would also keep for many months and their rinds were often dried and used a containers. Their seeds were roasted or toasted and used as a portable, high protein snack.

Additional Reading

Baker, Sandy, *Three Sisters Garden*, Black Garnet Press, 2014

Caduto, Michael J., *Native American Gardening: Stories, Projects and Recipes*, Fulcrum Publishing, 1996

“*The Three Sisters – Exploring an Iroquois Garden*,” Cornell Cooperative Extension, 1997

Websites

https://kidsgardening.wpengine.com/wp-content/uploads/2016/10/KG_lessonplans-threesistersgarden.pdf

<https://www.smithsonianmag.com/smart-news/rethinking-corny-history-maize-180971038/>

<http://nativetech.org/cornhusk/cornhusk.html>

<https://aggie-horticulture.tamu.edu/plantanswers/publications/vegetabletravelers/squash.html>

<https://aggie-horticulture.tamu.edu/plantanswers/publications/vegetabletravelers/corn.html>

<https://www.loc.gov/everyday-mysteries/item/how-did-squash-get-its-name/#:~:text=Squashes%20are%20one%20of%20the,both%20South%20and%20North%20America.>

<https://www.futurity.org/genome-beans/>

<https://www.thoughtco.com/domestication-of-the-common-bean-170080>

Three Sisters

Activity 1

Grades 3-5 Teacher Resources and Standards

Activity 1: History/Legend of Three Sisters, (ELA, SS) 1-2 50 minute class periods

Students will learn about the history of the Three Sisters in agriculture and read the Legend of the Three Sisters.

Oklahoma Academic Standards

Activity 1: History/Legend of the Three Sisters (ELA, SS)

- 3.2.R.1 Students will distinguish how key details support the main idea of a passage.
- 4.2.R.1
- 3.3.R.5 Students will distinguish fact from opinion in a text and investigate facts for accuracy.
- 4.3.R.5
- 5.3.R.7 Students will compare and contrast texts and ideas within and between texts.
- 3.2.2SS Examine the interaction of the environment and the peoples of Oklahoma.
- 5.1.8SS Explain how American Indian agricultural practices, such as the Three Sisters, contributed to the early survival of the colonists

Materials:

- Activity 1 Reading Page 1 “**History of Three Sisters**”
- Activity 1 Reading Page 2 “**Legend of the Three Sisters**”
- Activity 1 Worksheet 1 “**The Facts Behind the Legend**”
- Activity 1 Worksheet 2 “**Comparing History and Legends**”

Procedures

1. Read and discuss the reading page “**History of Three Sisters.**” *This reading page might need to be read aloud together as a class.*
2. Discuss what a legend is and explain the Cherokee version of the **Legend of the Three Sisters** (included) was told on the Trail of Tears to keep the practice of planting the three sisters (corn, squash, and beans) alive.
3. Distribute Activity 1 Worksheet 1 “**The Facts Behind the Legend.**” Allow students to work together or independently to pull the main ideas out of the “**History of Three Sisters**” reading page.
4. Hand out Activity 1 Reading Page 2 “**Legend of the Three Sisters**” and allow students to read the legend.
5. Discuss the differences and similarities between the “**History of Three Sisters**” and “**Legend of the Three Sisters**” reading passages.
6. Complete the Activity 1 Worksheet 2 “**Comparing History and Legends**”
7. Have students find versions of the story from other indigenous groups to compare them. In some versions, corn, beans and squash begin as humans but become plants.



Throughout history, native people from North America have used many kinds of farming practices. One of the best known is the planting of corn, squash, and beans together. This trio of plants is often called the “Three Sisters.”

These crops were thought of as special gifts from the Creator. They played an important role in the survival of early Americans. Many stories, or legends, have been told to keep the practice of planting these three crops together alive.

Native Americans shared their tribe’s version of the legend with European settlers. We now call this “Three Sisters” gardening. The planting of corn, squash (or pumpkins), and beans together helps each plant while it is growing. Corn has a strong stalk. This gives the beans something to wrap around and climb. The beans take nitrogen from the air and change it into a form plants can use to grow. Corn and squash need a lot of nitrogen to grow. The squash spreads along the ground. As it grows, it blocks the sunlight to keep weeds out. The squash leaves also act as a “living mulch.” Mulch helps keep moisture in the soil. The spiny leaves help protect the corn from pests, like racoons.

These plants were important to early Americans diets. Corn provides carbohydrates and fiber. Beans provides protein. Squash (or pumpkins) provide vitamin A.

The Cherokee version of this story involves three women who helped each other stay fed, hydrated, and strong on the Trail of Tears. The Cherokee used this lesson when planting their crops after they arrived in the Oklahoma Territory.

The Three Sisters planting method is featured on the reverse of the 2009 US Sacagawea Native American dollar coin.



Adapted from: Dr. Karen Carr, Associate Professor Emerita, Department of History, Portland State University.

Three Sisters

Activity 1 Worksheet 1: The Facts Behind the Legend



Name: _____ Date: _____

In the drawing below, write the name of the plant each line points to. In the box below each line, list three facts about each plant from the **History of the Three Sisters** reading page.

1. _____

2. _____

3. _____

1. _____

2. _____

3. _____

Three Sisters

Activity 1 Worksheet 1: The Facts Behind the Legend

ANSWER KEY



Name: _____ Date: _____

In the drawing below, write the name of the plant each line points to. In the box below each line, list three facts about each plant

ANSWERS MAY VARY BUT COULD INCLUDE:

Corn

1. Stalk provides structure for beans to climb
2. Needs a lot of nitrogen to grow
3. Provides fiber and carbohydrates

Beans

1. Makes nitrogen in the air available as food
2. Good Source of Protein
3. Needs a frame to climb - plant cannot support itself.

Squash

1. Shades the soil to provide a living mulch
2. Rough leaves help keep pests away
3. Rich in Vitamin A

Once upon a time there were three sisters. The first sister was very tall and strong. Her name was Corn Girl. She wore a pale green dress and had long yellow hair that blew in the wind. Corn Girl liked to stand straight and tall, but the hot sun burned her feet and hurt her. The longer she stood in her field, the hungrier she got. Weeds were growing up around her and choking her.

The second sister, Bean Girl, was thin and quick. But Bean Girl was not very strong. She couldn't stand up. She was good at making food, but she was always dirty and wet because she had to lie on the ground.

The third sister, Squash Girl, was short and wide. She wore a yellow dress. She was hungry, too.

For a long time, the sisters didn't get along. They each wanted to be independent and free. So Corn Girl stood there with her sunburned feet and got hungrier and hungrier. And Bean Girl lay there on the ground and got dirtier and wetter. And the little short sister, Squash Girl, was hungry, too.

One day Bean Girl asked Corn Girl, "What if I feed you some good food, and you can hold me up so I don't have to lie on the ground?" Then little Squash Girl called up to her tall sister, "What if I lie on your feet and shade them so you won't get sunburned?"

So the Three Sisters learned to work together, so that everyone would be healthier and happier. Corn Girl helped Bean Girl stand up. Bean Girl fed Corn Girl and Squash Girl good food. And Squash Girl shaded Corn Girl's feet and kept the weeds from growing up around them.



Source:
Dr. Karen Carr, Associate Professor Emerita,
Department of History, Portland State University.

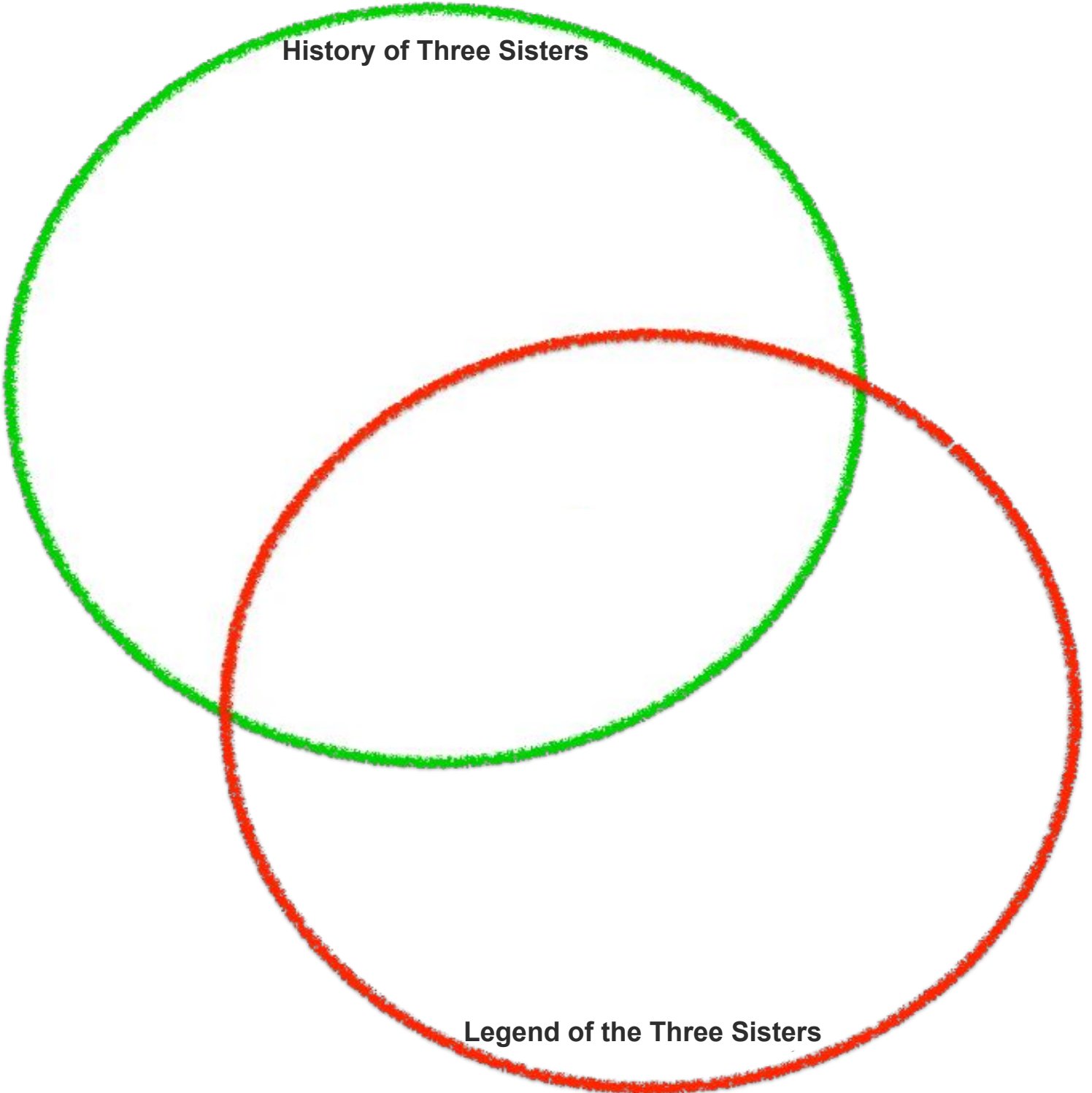
Three Sisters

Activity 1 Worksheet 2: Comparing History and Legends



Name: _____ Date: _____

Compare the information you read in the “**History of Three Sisters**” and “**Legend of the Three Sisters**” reading pages. Use the top circle for information found only in the “**History of Three Sisters**” and the bottom circle for information found only in the “**Legend of the Three Sisters.**” Include information found in both passages in the center circle.



Three Sisters

Activity 1 Worksheet 2: Comparing History and Legends

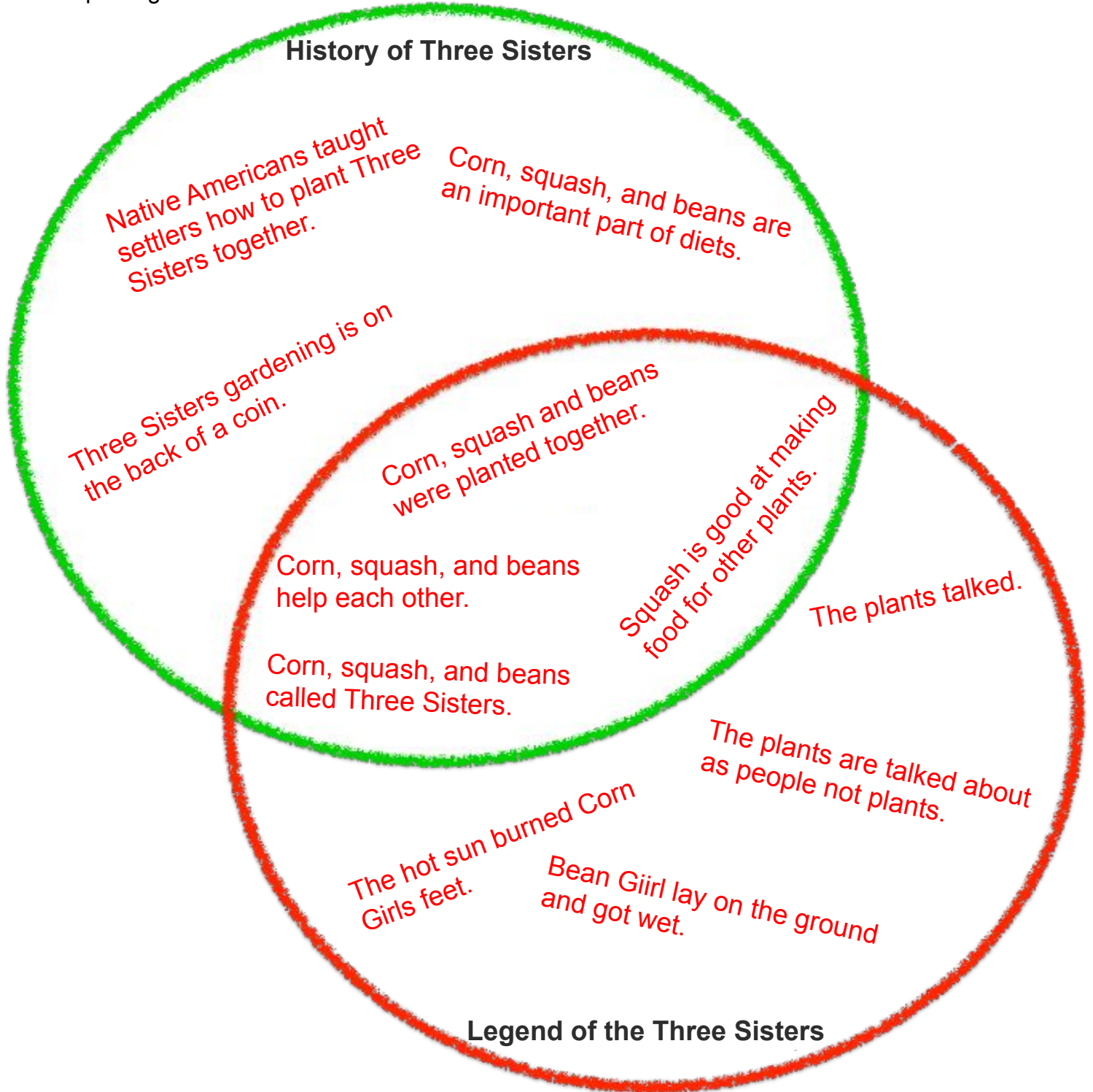
ANSWER KEY



Name: _____ Date: _____

Compare the information you read in the “History of Three Sisters” and “Legend of the Three Sisters” reading pages. Use the top circle for information found only in the “History of Three Sisters” and the bottom circle for information found only in the “Legend of the Three Sisters.” Include information found in both passages in the center circle.

ANSWERS WILL VARY BUT MAY INCLUDE:



Three Sisters

Activity 2

Grades 3-5 Teacher Resources and Standards

Activity 2: Three Sisters Planting, (Science)

1-2 50 minute class periods

Students will apply the knowledge of the Three Sisters by planting a container garden. They will predict if each seedling will be a monocot or dicot.

Oklahoma Academic Standards

Activity 2: Three Sisters Planting (Science)

- 3.LS.3.2 Use evidence to support the explanation that traits can be influenced by the environment.
- 4.LS.1.1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior and reproduction
- 5.LS.1.1 Support an argument that plants get the materials they need for growth chiefly from air and water.

Materials:

- Activity 2 Worksheet 1 “**Plant a Three Sisters Garden**”
- Activity 2 Worksheet 2 “**Monocot or Dicot**”
- Large container/pot with holes in bottom
- Topsoil to fill container
- Tray to put under container
- Seed for corn, pole beans and squash

Procedures

1. Plant a Three Sisters container garden in the classroom. Instructions are on Activity 2 Worksheet 1 “**Plant a Three Sisters Garden.**” See the notes on the next page to help ensure a successful gardening experience.
2. Students will read about monocot and dicot plants on Activity 2 Worksheet 2 “**Monocot or Dicot.**” They will look at images of the plants and predict if the corn, squash, and beans will be monocots or dicots. When they plants sprout, they will check to see if their predictions were correct.

Three Sisters

Activity 2

Grades 3-5 Teacher Resources and Standards

Container Garden Growing Tips

Keep the pot in a sunny window or use a lamp with a full spectrum (package shows both CRI and Kelvin ratings) LED bulb during the school day. Once the danger of frost has passed, the pot can be moved outdoors to a location that gets at least 6-8 hours of sunlight each day.

In Oklahoma, there are generally several sunny winter days when the temperature is warm enough to take the pot outside for a few hours. If there is a protected area on the south side of the building and the temperature is above 50°F between 11am and 3pm, the pot can be moved back and forth from the classroom on a wagon or cart. Be sure to bring the pot back inside before the end of the day because all of these plants are sensitive to near-freezing temperatures.

By planting seeds indoors immediately after winter break and maximizing sun exposure on warm days, it may be possible to see the plants begin to develop fruit before the end of the school year. Most squash and bean varieties will begin to produce in about 2 months. Most corn varieties will take at least 3 months - Indian Corn takes even longer.

If your school or your Agriculture Education program has a greenhouse, it would probably be the best location for the developing plants if you want your students to see the end result.

While Native Americans planted pumpkins or winter squash like butternut, if you want vegetables by the end of the school year, consider using summer squash or mini pumpkins for their shorter maturity time.

The Cherokee Nation has a seed bank in Tahlequah, Oklahoma. Their seeds are carefully bred, catalogued and protected to ensure the continuation of their native seed stock. Citizens of the Cherokee Nation can request seeds, as well as educators who provide services to Cherokee Citizens. If you want to plant a more authentic Three Sisters garden, consider contacting the Seed Bank. Contact information is on the Seed Bank website:

<https://secure.cherokee.org/SeedBank/Home/Contact>

Because corn and squash require a pollinator (usually bees) unless your container garden is outdoors once corn tassels and squash blooms, it may be necessary to hand pollinate those plants. Most beans are self-fertile. The websites below provide instructions, if needed.

<https://www.gardeningknowhow.com/edible/vegetables/squash/pollinate-squash-by-hand.htm>

<https://www.gardeningknowhow.com/edible/vegetables/corn/corn-pollination-how-to-hand-pollinate-corn.htm>

<https://cdn.shopify.com/s/files/1/0157/0808/files/HowtoGrowa3sistersGardenrev2018.pdf?7670357866254188242>

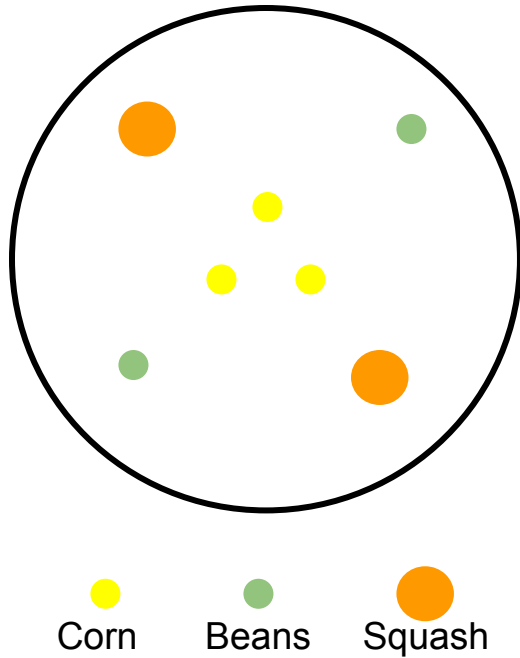
Three Sisters

Activity 2 Worksheet 1: Plant a Three Sisters Garden



Name: _____ Date: _____

In companion plantings, like the corn, beans and squash in a Three Sisters garden, each plant provides something at least one of the other plants needs.



Three Sisters in the Classroom

1. Use a large container (about 18 inches in diameter) with holes in the bottom
2. Soak three corn seeds in water overnight and plant about 1 ½ inches deep in a small triangle in the center of the pot. Keep soil moist (not wet) until corn come up.
3. In a few weeks, after corn is at least 4 inches high and has a strong stem, remove all but one plant. This will allow the plant to have room to grow and not have to compete for space with the other plants. Soak and then plant two pole bean seeds about 1 inch deep about six inches from the corn.
4. At the same time, soak and plant 2 squash or mini pumpkin seeds 1 inch deep and opposite the beans. When beans and squash have 4-6 leaves, thin to one plant of each, keeping the strongest plant.
5. Moisten soil after planting. To know when to water, insert your finger up to the first knuckle. If the soil feels dry, water the soil until water drips out of the holes in the bottom of the pot. If the soil feels moist, do not water that day.

Critical thinking

- 1) Why is corn planted two weeks before the beans and squash?

- 2) In your own words, explain why some of the plants are removed or thinned from the garden when they are small?

Three Sisters

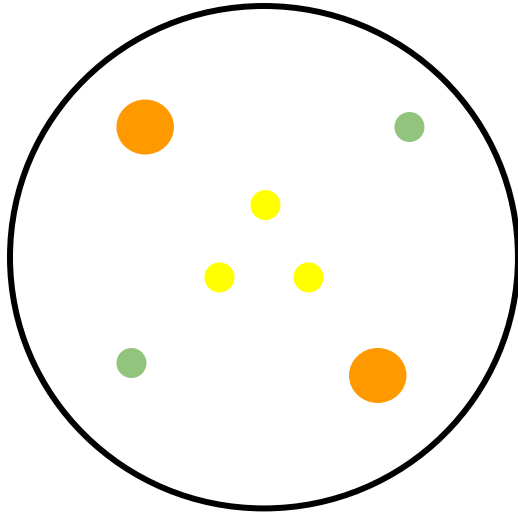
Activity 2 Worksheet 1: Plant a Three Sisters Garden

ANSWER KEY



Name: _____ Date: _____

In companion plantings, like the corn, beans and squash in a Three Sisters garden, each plant provides something at least one of the other plants needs.



 Corn  Beans  Squash

Three Sisters in the Classroom

1. Use a large container (about 18 inches in diameter) with holes in the bottom
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4. At the same time, soak and plant 2 squash or mini pumpkin seeds 1 inch deep and opposite the beans. When beans and squash have 4-6 leaves, thin to one plant of each, keeping the strongest plant.
5. Moisten soil after planting. To know when to water, insert your finger up to the first knuckle. If the soil feels dry, water the soil until water drips out of the holes in the bottom of the pot. If the soil feels moist, do not water that day.

ANSWERS WILL VARY BUT COULD INCLUDE

Critical thinking

- 1) Why is corn planted two weeks before the beans and squash?

Corns job in a Three Sisters Garden is to provide a structure for the beans to climb. In order to do that, the corn needs to be ahead of the beans in development to be stronger.

- 2) In your own words, explain why some of the plants are removed or thinned from the garden when they are small?

Plants need space and room to grow so they are able to get enough sunlight and water. In a container garden, the soil will only support a small number of plants.

Three Sisters

Activity 2 Worksheet 2: Monocot or Dicot



Name: _____ Date: _____

Plants are divided into two groups: Monocots and Dicots. Usually, when monocots begin to grow, a single leaf will break through the soil. Monocot plants are known for having parallel veins and thin, strap-like leaves. Dicot plants usually break through the soil with more than one leaf and the leaves have veins that form a net-like pattern across the leaves.

- 1) Based on this description, determine if the seedlings below are monocots or dicots. Circle your answer.



MONOCOT

DICOT



MONOCOT

DICOT



Critical thinking

- 1) Based on what you read above and the pictures of the plants, make a prediction for what type of plant you think each of the Three Sisters will be. Circle your answer. When the plants begin to grow, check to see if you were correct.

CORN

MONOCOT

DICOT

SQUASH

MONOCOT

DICOT

BEANS

MONOCOT

DICOT

Three Sisters

Activity 2 Worksheet 2: Monocot or Dicot

ANSWER KEY



Name: _____ Date: _____

Plants are divided into two groups: Monocots and Dicots. Usually, when monocots begin to grow, a single leaf will break through the soil. Monocot plants are known for having parallel veins and thin, strap-like leaves. Dicot plants usually break through the soil with more than one leaf and the leaves have veins that form a net-like pattern across the leaves.

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MONOCOT

DICOT



MONOCOT

DICOT



Critical thinking

- 1) Based on what you read above and the pictures of the plants, make a prediction for what type of plant you think each of the Three Sisters will be. Circle your answer. When the plants begin to grow, check to see if you were correct.

CORN

MONOCOT

DICOT

SQUASH

MONOCOT

DICOT

BEANS

MONOCOT

DICOT

Three Sisters

Activity 3

Grades 3-5 Teacher Resources and Standards

Activity 3: Three Sisters Cooking, (Health) 1-2 50 minute class periods

Students will track their food choices and make healthier food choices by eating more vegetables.

Oklahoma Academic Standards

Activity 3: Three Sisters Cooking (Health)

- 5.5.5 Choose a healthy option when making a decision.
- 6.5.1 Identify a personal health goal and track progress towards its achievement.
- 7.5.2 Demonstrate a variety of healthy practices and behaviors to maintain or improve personal health.

Materials:

Activity 3 Recipe Page “Cooking with Three Sisters”

Activity 3 Worksheet 1 “Goals for Eating Healthy”

Procedures

1. Discuss healthy food choices with your class. Ask them to complete the “Goals for Eating Healthy” worksheet.
2. Discuss ways they can choose to eat more vegetables in their diets to be healthier.
3. As a class, make one or both of the recipes in this lesson using Three Sisters ingredients.
—The Chickasaw recipe could be part of an Oklahoma History unit.
—There are also two recipes for toasting squash or pumpkin seed - with a toaster oven or an electric skillet, either of these should be an easy cooking activity.
4. Encourage students to try each recipe and record their opinions on the worksheet.
5. Challenge them to keep track of their food choices for one week and try to eat more vegetables during this time.
6. At the end of the week, discuss what foods they tried and if they liked them.

Three Sisters

Activity 3 Worksheet 1: Goals for Eating Healthy



Name: _____ Date: _____

It is important to eat a healthy diet. This should include a variety of fresh fruits and vegetables, protein, and whole grains. Track your food choices for one week and plan to choose foods that are healthy!

Step 1: Make a Plan- What can you do to add more fruits and vegetables to your diet?

How can you add more protein to your diet?

How can you add more whole grains to your diet?

Step 2: Track Your Food- Use the chart to keep track of what you eat. Remember for each meal half of your plate should be fruits and vegetables.

What fruits and vegetables do you like to eat?

What NEW fruits and vegetables will you try to eat this week?

If you try a new recipe, write its name and your opinion of it below.

Three Sisters

Activity 3 Worksheet 1: Goals for Eating Healthy



Name: _____ Date: _____

Track your food for one week. Each time you eat a serving of fruit, grain, protein, milk, veggies or sweets (pop, candy, dessert- anything high in sugar) check the correct box. Try to increase your healthy foods and decrease your sweets. Try to fill half of your plate with fruits and veggies, eat whole grains, and eat lean protein.

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
BREAKFAST	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	
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SUPPER	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets	<input type="checkbox"/> Fruit <input type="checkbox"/> Protein <input type="checkbox"/> Veggies <input type="checkbox"/> Grain <input type="checkbox"/> Milk <input type="checkbox"/> Sweets

Cooking with Three Sisters

Chickasaw Three Sisters Stew

- 2 cups onions, diced
- 6 cups water
- 2 cans diced tomatoes, no salt added (14.5-oz. can)
- 6 cups red skinned potatoes, cubed
- 1 can tomato sauce, no salt added (15-oz. can)
- 1 cup corn, fresh or frozen
- 1 cup yellow squash, diced
- 1 can light red kidney beans, drained and rinsed (15.5-oz. can)
- 1 can black-eyed peas, drained and rinsed (15.5-oz. can)
- ½ can quick cooking barley
- 4 garlic cloves, minced
- 1 ½ teaspoon black pepper

In a large stockpot, add all ingredients. Bring to a boil, then lower heat and simmer for 30-45 minutes until the potatoes are soft. Serve immediately.



Three Sisters Butternut Squash Chili

The Navajo influence makes this a spicier "Three Sisters" dish. Adjust peppers and spices to suit taste.

- ¼ cup butter or oil
- 1 large sweet onion, peeled and chopped
- 2 poblano peppers, seeded and chopped
- 5-6 cloves garlic, minced
- 1 whole butternut squash, peeled, seeded, and chopped into 1/2 inch cubes
- 3 – 15 ounce cans red kidney beans, drained and rinsed
- 28 ounce can crushed fire roasted tomatoes
- 3 cups vegetable or chicken broth
- 13.5 ounce canned chopped green chiles, mild or medium
- 10 ounces frozen corn, or fresh
- 1 tablespoon ground cumin
- 1 teaspoon dried oregano
- 1 bay leaf
- ½ cup chopped cilantro
- Salt and pepper



Instructions

1. Set a large dutch oven over medium heat and melt butter. Add the chopped onions, chopped poblano peppers, and minced garlic. Cook and stir for 5 minutes.
2. Add in the cubed butternut squash, beans, tomatoes, broth, green chiles in juices, corn, and all spices except cilantro and 1 teaspoon of salt.
3. Cover and simmer for 15-20 minutes, stirring occasionally. Then uncover and simmer another 5 minutes to thicken. Once the squash is fork-tender, remove the bay leaf. Taste, then add salt and pepper as needed. Stir in the cilantro and serve.

This recipe can also be made in a slow cooker. Saute onions, peppers and garlic in a skillet before adding to slow-cooker with other ingredients. Cook on high for 2-4 hours or low for 5-7 hours.

Cooking with Three Sisters

Roasted Squash Seed

Native people used every part of their winter squash and pumpkins. In addition to cooking with the flesh, they dried the hard rind or skin to use as containers and they roasted the seeds over a fire for a portable high protein snack. Roasted squash or pumpkin seed will keep at room temperature for about 3 months.

- 1 cup squash seeds (Acorn, Butternut, Spaghetti, Hubbard, Cushaw, Pumpkin, etc.)
- 2 teaspoons olive oil
- 1/2 teaspoon garlic salt



Instructions

- Preheat oven to 325°F.
- Transfer seeds to a colander and remove as much of the pulp and strings as possible.
- Rinse with cool water and continue to pick through the seeds to remove any remaining pulp.
- Drain off as much water as possible and pat the seeds lightly with paper towels to blot the excess water.
- Transfer the seeds to a 13" x 9" rimmed baking sheet.
- Drizzle the olive oil over the seeds and sprinkle with garlic salt, to taste. Stir the seeds with a spatula until all of the seeds are coated with oil.
- Transfer the baking sheet to the preheated oven and bake for 15 to 20 minutes, or until the seeds are golden brown. Stir the seeds with a spatula once or twice during the cooking time, Continue to roast until the seeds are golden brown.
- Remove from the oven. Allow the seeds to cool and then transfer them to an airtight container.



Skillet Toasted Pumpkin or Squash Seed

- 1 ½ cups pumpkin or squash seeds
- 1 teaspoon olive oil
- 1 teaspoon unsalted butter
- 1/2 teaspoon sea salt

Instructions

- Rinse seeds under cold water to remove pulp; drain well in a colander.
- Place a kitchen towel on a work surface and spread seeds in a single layer. Top with a second towel and rub to dry (seeds will still feel slightly wet).
- Heat the oil and butter in a large nonstick skillet over medium heat (or electric skillet) until the butter melts. Add the seeds and cook, stirring frequently, until golden brown and slightly puffed, 15-18 minutes.
- Stir in the salt and cook 30 seconds longer. Transfer to a bowl and cool before serving.