



## **FUTUREFIT PROJECT**

### **SEED KEEPERS – NATIVE AMERICAN AGRICULTURE**

#### **HOW TO USE THIS TEACHING GUIDE**

- **Prepare (2-5 minutes):** Short opening activities to start class.
- **Present (5-20 minutes):** Deliver new subject material and project information, and to model instructions or activity
- **Produce (5-30 Minutes):** Use this portion of the lesson to allow students to work independently or in small groups on activities and other project elements.
- **Participate (5-30 Minutes):** Use this portion of the lesson to allow students to share out any project, research or presentation materials.
- **Practice (5-30 minutes):** Use this optional portion of the lesson, if desired, to give students homework activities.

# DAY 1

## PREPARE

5 Minutes

***Pacing/Sequence Note: The quick-dry clay needed to make the seed pots for this lesson requires approximately 3 days of drying time before it can be painted. For this reason, it is suggested that the 5-day version of the lesson be started mid-week, preferably on a Wednesday, to allow for the clay to dry over the weekend.***

Open the 5-day lesson with a discussion of some things Native Americans taught European colonial settlers. If a refresher is needed, use the article “Native American Contributions to American Cultures” for more information. Possible answers may include:

- How to identify toxic vs. edible plants and berries
- Medicinal and culinary herbs
- How to smoke and dry meat and fish
- How to plant the “Three Sisters” (corn, beans, and squash)
- Where to hunt and fish
- How to survive harsh winters
- How to navigate the local waterways
- Popcorn (Not actually at 1st Thanksgiving, see “Popcorn” article)

As an extension, and to build excitement about the lesson, share the “Europeans Meet Popcorn” (USDA.gov) article with students and consider popping corn on the cob in the classroom. Here’s how:

- You will need dried corn cobs such as Sur La Table Farmer’s Popcorn
- Place corn cob in a brown paper bag, fold over top to retain steam
- Microwave cob in bag on the popcorn setting
- [\*\*Native American Contributions to American Culture\*\*](#)
- [\*\*Europeans Meet Popcorn from USDA Special Collection \(USDA.gov\)\*\*](#)

## PRESENT

10 Minutes

Share the “From Nomadism to Farming” (print or project) worksheet handout to reinforce concepts and timelines of how Native Americans transitioned from a hunter-gather/nomadic society to an agricultural society.

- [\*\*From Nomadism to Farming\*\*](#)

## PARTICIPATE

10-15 Minutes

Play the Hunt and Gather or Farm and Feast Survival Game with the class.

- **Hunt and Gather or Farm and Feast? Survival Game**



## PRODUCE

10 Minutes

Ask the students to work independently to answer the Wrap Up Questions.

- **Hunt and Gather or Farm and Feast? Wrap-Up Questions**



## PRACTICE

5 Minutes

Conclude the lesson by discussing the Wrap Up Questions, and discuss why Native Americans began to settle in villages and use farming techniques. Tomorrow the students will learn about the most famous of the Native American farming techniques, companion plantings (The Three Sisters).

## DAY 2

### PREPARE

5 Minutes

- Ask students if they have siblings. If they would like to share, they can discuss how they are similar and different from their brother(s)/sisters(s).
- Explain that today they are going to learn the Three Sisters Legend, and how the sisters represent 3 different seeds that Native Americans planted together (companion farming). Distribute the Three Sisters printable, or project for the class.
- Over the course of the next 5 days, students will come to understand the importance companion farming in Native American culture, and how they can help preserve our Native American culture by protecting heirloom seeds.
- **The Three Sisters**

### PRESENT

5-10 Minutes

- Explain the basic concept of companion farming.
- Show the children a piece of corn (on the cob, Indian corn is preferable), green beans and a yellow squash. If you have access to an actual corn stalk with corn still attached, bean plants with the tendrils attached, and squash that has the vine and flowers, that would be preferable. If not, consider showing photos of each of the plants. Allow children to get up close to the vegetables and/or plants and touch them.
- Explain which vegetable each sister represents in the "Three Sisters Legend."
- Show the video "The Three Sisters Legend."
- **The Three Sisters Legend Video**

### PRODUCE

10 Minutes

Give students coloring pages for beans, squash, and corn and ask the students to color each picture:

- Beans = Green
- Squash = Yellow
- Corn = Brown

Ask the students to label each picture:

- Beans = “Little Sister”
- Squash = “Middle Sister”
- Corn = “Older Sister”

If time, they can cut out their pictures.

- [Bean Coloring Page](#)
- [Squash Coloring Page](#)
- [Corn Coloring Page](#)

## PARTICIPATE

15 Minutes

Give each student a copy of “The Three Sisters Color Coded” legend. The story is color-coded to help them, but you may wish to use the story that is not color coded for older children.

- Each time the students hear the story mention the little sister, they should hold up the picture of the beans.
- Each time they hear the story mention the middle sister, they should hold up the picture of the squash.
- Each time they hear the story mention the older sister, they should hold up the picture of the corn

Show the students the video “Three Sisters Garden.”

- [The Three Sisters - Color Coded](#)
- [The Three Sisters Legend Worksheet](#)
- [Three Sisters Garden Video](#)

## PRACTICE

5 Minutes

Give students a copy of the Triple Venn Diagram graphic organizer.

- Ask students to label the 3 circles: beans, squash, corn.
- Students should complete the Venn Diagram by writing one fact in each section (if your students have never completed a Venn Diagram, they will need some coaching).
- [Triple Venn Diagram](#)

## DAY 3

### PREPARE

5 Minutes

Ask the students: Would you eat food grown from a seed that is 800 years old?

Show the students the video “800 Year Old Squash,” which mentions that the seeds from which this squash originated were found in a clay pot, along with other seeds.

Today, students will:

- Learn how Native Americans preserved their seeds to be planted in the spring
- Make their own seed pot to store The Three Sisters seeds
- **800 Year Old Squash Video**

### PRESENT

10 Minutes

Discuss the use of Native American pottery:

- It dates back 2000 years.
- Native Americans started making pottery when they changed from a nomadic lifestyle to a farming Lifestyle.
- The shape of pottery was dependent on its purpose:
  - i. At first the pottery was created for practical uses and not as decorative, pieces were plain and unsymmetrical.
  - ii. Later they began to decorate pottery with symbols, animals, birds, humans and gods.
- Pottery was made slowly by hand using the method of coiling and pinching.

Discuss the use of seed pots:

- Native Americans used them to store their seeds.
- They were designed to protect the seeds for the next year’s planting (protection against rodents and insects).
- They were created with only a tiny hole that would allow one seed to be dropped in at a time.

Show students a photo of a seed pot (you may want to make the photo available as a reference for making their own seed pot).

Consider showing the video “Earth and Fire: Anasazi Style Pottery.”

- **Seed Pot**
- **Earth and Fire: Anasazi Style Pottery**



## PRODUCE

20-25 Minutes

Guide the students through the process of making a coiled pot using the “Make a Coiled Pot” printable. Have students continue the coiling method until they have just a small opening at the top, no larger than one finger, if possible. Tips from the author:

- I recommend that you practice making a pot or two before the students make their pots so you can give some experienced guidance. You may also want to demonstrate ahead of time.
- Have students make their base very small, only slightly larger than a quarter
- These pots need to stay small, about 3-4 inches high and 2 inches in diameter. Otherwise they will collapse on themselves.
- It’s helpful to make the pot on something that can be spun on the table, such as an aluminum pie plate or thin plastic place mat.
- I recommend using Crayola Air-Dry-Clay. A 2.5 lb container should be enough for at least 6 or 7 students.
- You may want to give each student a portion of clay to use so they are restricted on the size of their pots.
- This may be difficult and frustrating for some students. They may want to start over a few times before they get the hang of it. Remind them that these pots serve a purpose and were not meant to be “pretty.” Early pots were lopsided.
- It takes approximately 3 days for the pots to dry. If the pots are made on a Friday, they will be ready to decorate on Monday.

As students are making their coiled pots, make a slightly larger “classroom” pot in which to preserve the classroom seeds. Be careful, if you make it too large, it may collapse on itself.

- **[Make a Coiled Pot](#)**



## PRACTICE

5-15 Minutes

Give students a copy of the “Indian Symbols and Meanings” worksheet and ask them to complete it for homework.

- **[Indian Symbols and Meanings](#)**



## DAY 4

### PREPARE

5 Minutes

Show students different forms of Native American symbols, and allow them to share the messages they created.

### PRESENT

10 Minutes

Discuss the importance of symbols in Native American pottery:

- Most early pottery was not decorated or symmetrical.
- Decorative pottery appeared later.
- Many scholars have tried to find meaning in the artwork but most Native Americans have been reluctant to explain the meanings to people outside their tribe.
- Many symbols came from the environment – nature, artwork, animals, humans, gods.

Show the video “Native American Pottery.” Explain that students will be decorating their pottery with symbols.

- [Native American Pottery Video](#)



## PRODUCE

20-30 Minutes

Ask students to use the “Native American Symbols and Meanings” printable to plan a design for their seed pot.

Provide students with Sharpies (or paint pens). You may want to protect the work surface, and allow them to decorate their seed pots.

As students are decorating their own seed pots, add a decoration to the classroom seed pot as your contribution.

- **Indian Symbols and Meanings**



## PARTICIPATE

5 Minutes

Have students get into groups of 2-3 and share their design and any message they meant to convey. As students are discussing, allow each student to have a turn adding a symbol to the classroom seed pot.



## PRACTICE

5 Minutes

Ask students to talk to a parent, aunt/uncle, grandparent or other adult about a special family heirloom and its importance to his or her family.



## DAY 5

### PREPARE

5 Minutes

Ask students what an “heirloom” is and discuss the importance of passing down family treasures. Link this discussion to our responsibility as global citizens in saving our genetic diversity and heritage, leading into heirloom seeds and plants.



### PRESENT

15 Minutes

Discuss with the students the importance of heirloom seeds in preserving our agricultural heritage:

- Heirloom seeds are seeds that have been saved by multiple generations, of a variety that is generally older than 50 years old.
- Heirloom seeds have been passed down from generation to generation.
- Heirloom plants produce better tasting fruits/vegetables, are more nutritious and less expensive.
- Planting and saving heirloom seeds is an important part of preserving the genetic diversity of plants.
- Tell the students that they will be entrusted with heirloom seeds to grow their own Three Sisters garden in the spring.
- Ask students to think about what this means to them, personally.

### PRODUCE

5 Minutes

Give the students several heirloom seeds of each kind (beans, corn, squash), and help them identify which is which. Have the students drop several of each seed into their seed pots.

- Explain that traditionally, the Native Americans would smash the seed pots to get the seeds out (like a piggy bank). Since they probably won't want to do that in the spring, give them baggies to label and put another set of seeds in to plant in the spring.

Give students a copy of the instructions for planting a Three Sisters Garden.

- Explain that traditionally the Native Americans planted a dead fish in the mound (fertilized as it decayed) and sprinkled the soil with tobacco dust (natural insect repellent)
- **Planting the Three Sisters Garden**



## PARTICIPATE

10 Minutes

Set aside a special time to have each student add the “Three Sisters” seeds while the rest of the students watch. You could call the student up individually to add their seeds while some soft music is playing. Encourage students to be quiet and think about their role as global citizens in preserving our agricultural heritage.

- Ask any willing students to share what this means to them.



## PRACTICE

5 Minutes

Ask students to reflect on how they can help preserve our nation’s agricultural heritage by writing a short paragraph for homework.

