

1st Grade planting 3 Sisters Garden – companion planting

1st Grade- Spring Seed Planting – 3 Sisters Garden

Date: May

Objective: Students are introduced to the Native American tradition of planting a three sister's garden. Students learn to plant seeds and starts. Students are introduced to companion planting and symbiotic relationships.

Background:

The Three Sisters are the three main agricultural crops of some Native American tribes: squash, maize (corn), and climbing beans. This method of planting has been used by the Iroquois in the northeast all the way to tribes in the southwest. It has been passed through many generations in a story form.

In this technique known as companion planting, the three crops are planted close together because they grow well together. Companion planting is a method used by organic growers.

It's hardly surprising that these crops -- considered by many to be special gifts from the creator -- played such an important role in the agriculture and nutrition of most of the Native people of the Americas. Because of the sisters' central role as "sustainers of life," a host of stories, customs, celebrations, and ceremonies are associated with them.

Preparation:

- Gather – bean and winter squash seed packets, corn starts, and trowels, colorful yarn to size the 3-sisters mound in the garden. Watering can to water seeds and starts in.
- Gather (optional) Native American music, pictures of a planted 3 sisters garden, a gold Native American coin (or picture) showing a Native American woman planting, individual pictures of corn, beans and squash.
- Gather two different Native American stories about 3 sisters. Cherokee and Iroquois stories provided.

Action: Discussion as a whole class:

1. Have Native American music playing and ask students which culture they think the music comes from. Once it is identified ask students to tell some things they know about Native Americans. (Emphasize that they lived here for many years before the pilgrims came.)
2. Native Americans had to farm and raise all their own food – they could not go to the grocery store to get food. They figured out that 3 of their most important crops grew better and produced more when they were planted together. Can anyone guess what these 3 very important foods were? Put up a picture of the individual foods as they are identified.
3. Show picture of the 3 sisters' garden growing together. Explain to students that these plants have a symbiotic relationship which means each plant is providing something to the other plants to help them grow.
4. It is called companion planting when farmers plant crops near each other because they grow well together. Kind of like being with your friends, these plants do better when they are together.
5. Discuss the different plant forms. Corn is a tall stalk, beans are a vine that likes to climb up, and squash are also a vine with big leaves that grows along the ground. How do you think these three plants help each other grow? Beans are able to take nitrogen from the air and bring it into the soil for

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plant food with the help of nitrogen fixing bacteria. Bean vines like something to climb. Which of the three sister's plants provides something to climb? *Corn*.

6. How does the squash plant help the other plants? The big leaves shade the ground to prevent the ground from drying out in the hot summer. The prickly leaves also help prevent creatures from eating the fruits.
7. Break the class into 3 or 4 small groups. 3 Groups 1) measure and build the mound; 2) plant the corn starts; 3) plant the squash and bean seeds. With 4 groups, split the last one to have one group plant squash and one group plant bean seeds.
8. The students that remain inside can listen to a Cherokee and an Iroquois story about 3 sisters or color a picture of the 3 sisters garden.

Action: Garden Time – with small groups - each class can build one mound and plant the 3 sisters.

1. The Native American tradition is to build a mound to plant into. The first group will have 3 students hold hands in a circle to determine the size of the mound. Measure a piece of yarn the size of the group. Lay the yarn in the 3-sisters bed of the garden in a circle. Use trowels to scoop dirt from around the outside of the circle to the inside to build the mound.
2. Next group will plant 4-5 corn starts. Explain to the students that they will be planting starts (one start/pair of students). What do they think will be the first step to transplanting the start into the garden? One student in the pair can dig a hole where you want to plant. This should happen near the top of the mound, but give the corn enough space. The other student will gently remove the start from the container, hold the roots and place the plant into the hole. They both can cover the roots. How is the corn a friend to the other plants? Corn provides a stalk for the beans to climb.
3. Next group will plant 2 bean seeds near each corn start, about half way down the mound. How do the beans help the other two sisters? (if 3 groups, add next action to this one)
4. If there are 4 groups, the last group will plant four squash seeds at the bottom of the mound. Half of the small group will plant a seed. Those who don't plant a seed can help water the plants and seeds in the mound.

Wrap Up :

What surprised you about today's garden lesson? Did you learn something new?

What plants are in the 3 sisters garden?

How do each of these plants help the other plants? They are good companions. When 2 organisms help each other grow they are in a symbiotic relationship.

Don't forget to stop by the garden to check to see how your plants are growing.