

Three Sister's Garden Project

This gardening project may be better suited to elementary-age children. It would be an interesting project for school-age children's summer program. The caretakers of the Three Sister's garden could show the preschool children their project as it grew. It would also be an interesting project to show parents at a fall open house at your facility or childcare home.

Native peoples from different parts of North America have been known to use a technique of interplanting corn, beans, and squash together in a garden – a trio often referred to as the “three sisters.” The seeds are planted together in a mound or a small hill. In a three sister's planting, the three partners benefit one another. The three sisters also complement each other nutritionally.

Corn is the oldest sister. She stands tall in the center and will provide support for beans.

Squash is the next sister. She grows over the mound, protecting her sisters from weeds and shades the soil from the sun with her leaves, keeping it cool and moist.

Beans are the third sister. She climbs through squash and then up corn to bind all together as she reaches for the sun. Beans help keep the soil fertile by converting the sun's energy into nitrogen filled nodules that grow on its roots. As beans grow they use the stored nitrogen as food. (Corn, which requires a lot of nitrogen to grow, benefits most.)



Cultivating these companions in your child care center's garden or family child care garden plot, even if it is just a small patch near a building, can inspire studies of Native American customs, nutrition, and folklore. As students dig in, investigations of plant growth and relationships will also flourish.

CODE: Medium activity level



PROPS:



Garden tools



Seeds: Corn (may be sweet corn or field corn that is fed to squirrels, classroom gerbils, etc.), acorn squash, climbing vine (pole) beans. Choose seed varieties that mature quickly. Consider choosing “heirloom” seeds as opposed to the newer hybrid varieties.

ACTION:

The method described below for planting the Three Sister's Garden is based on the directions given by Buffalo Bird Woman, an expert gardener of the Hidatsa tribe in the mid-to-late 1800s. Buffalo Bird Woman created and tended gardens on the Fort Berthold Reservation near the



Missouri River in North Dakota. More about her - and the gardening methods of the Hidatsa, Arikara and Mandan Native Americans - is chronicled in the book, "Buffalo Bird Woman's Garden," as told to Gilbert Wilson, Minnesota Historical Society, 1987.

1. In mid-spring, clear a sunny garden area, roundish in shape, at least six feet across. Cover the area with a few inches of compost or well rotted manure. Turn the compost in to loosen the ground. Water it well. Check the growing area frequently over the next few weeks to remove any sprouted weeds.
2. In late-spring, guide the children in planting 7-8 corn seeds in the center of the growing circle, in a ring pattern, spaced out several inches from each other. Plant the corn seeds according to package directions, patting the soil down with the palm of your hand. Water the area. The corn will sprout and begin to grow in about two weeks. (Note: You may sprout the corn, squash, or bean seeds indoors before planting to reduce germination time.)
3. After the corn has grown to a height of one finger-length, instruct your young gardeners to thin out the weaker stalks leaving four strong stalks. Then, using a hoe or hand trowel, help them pull/push some soil from around the corn and mound it around the base of the corn stalks covering part of the stalks. The corn should not be buried entirely; its upper half should be above the soil that has been mounded around its stems. The corn will send roots into the mounded soil to hold it steady and upright in the wind.
4. After mounding soil around the base of the corn stalks have the children sow about 10 pole bean seeds in a semi-circle pattern about six inches outside the corn stalks. Place the semi-circle on the south side of the corn. Push the bean seeds about an inch under the soil and firm the ground above them by patting it down with your hand. Water the growing mound well. The beans will usually begin to sprout in about 7-14 days.
5. About a week after planting the beans, plant 6-7 squash seeds in a ring about 12" outside the beans. Push the squash seeds about an inch under the soil and firm the ground above them. The squash seeds will sprout in about a week.
6. As the squash and beans grow, pull out the smaller plants, leaving about 4-5 of the strongest plants.
7. The bean vines will begin to climb the corn stalks. Show your gardeners how to help the new vines by wrapping the bean vines around the corn stalks. On occasion help the squash continue to cover the mound by turning the ends of its vines towards the center of the mound. The squash vines should not climb the corn stalks as they will be too heavy for the corn to support.
8. In a large Hidatsa garden, these mounds or groupings of the three plants would be repeated throughout the garden plot.

