



HARVEST OF THE MONTH

February: Butternut Squash

Nutrition News—

Butternut squash has more potassium than bananas! They also are a great source for vitamins and minerals like vitamin A, vitamin C, calcium, iron, and magnesium. To pick the best butternut, choose one with a thick neck and small, round base.



Did you know?

You can roast and eat butternut squash seeds just like pumpkin seeds.





GROWING THE THREE SISTERS

Standards of Learning:

Social Studies: 2.3, 2.7, VS.2, US 1.3

Science: K.7, 1.4, 2.4

Objectives:

Students will be able to—

- Identify the “Three Sisters” and describe their role in Native American life
- Investigate seed germination

Materials:

- Three Sisters handout, attached
- Crayons/coloring pencils
- Scissors
- Jewelry bags
- Corn, bean, and squash seeds
- Cotton balls
- Tape



Background Knowledge:

Native Americans adapted to their environment and used a variety of agricultural techniques to grow food. Three principal crops of the Eastern Woodlands Native Americans were corn, beans, and squash. These “Three Sisters” were planted together because of the ways in which they benefit each other. The corn stalk serves as the pole for the beans. In turn, the beans help add nitrogen back to the soil; this is very helpful to corn, which requires a lot of nitrogen. The squash provide ground cover that helps the soil retain moisture and prevent weed growth. Thus, the Native Americans, who recognized the relationship between the plants, used the natural harmony between them to feed their communities. It is not surprising that many legends and Native American folktales reference the Three Sisters.

Modern agriculture still utilizes these same principles. A typical crop rotation in Virginia is corn, soybeans, and wheat. Crop rotation allows farmers to maintain and improve soil fertility. It can also help with pest/weed management.

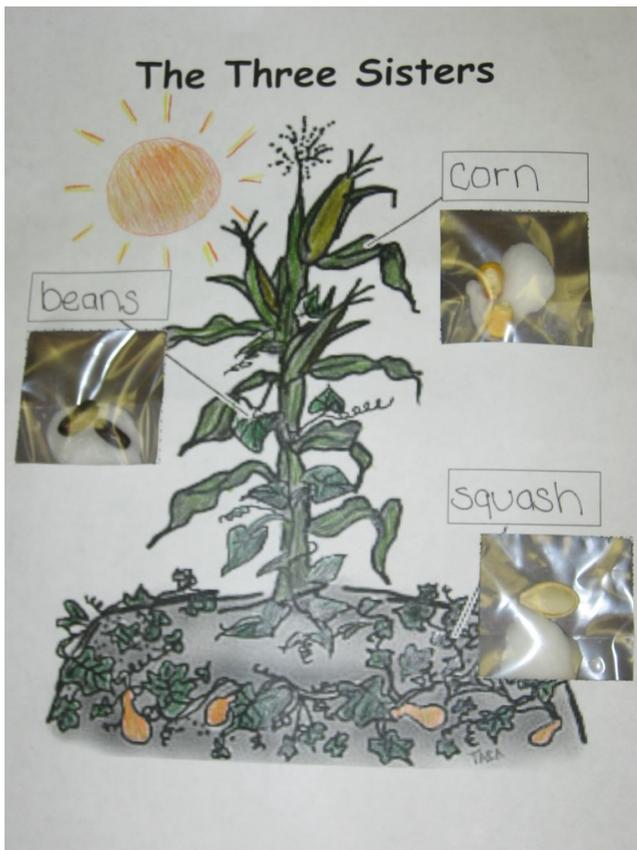
Procedure:

1. Begin the lesson by asking students to imagine what life would be like with no grocery stores, malls, etc. Where would they get food and clothing? Remind them that this is what life was like long ago. The Native Americans had to rely on and adapt to their environment to supply them with food, clothing, and shelter. Tell them that the three staple crops of the Eastern Woodlands Indians were corn, beans, and squash. These were harvested in the summer. The Native Americans recognized that when grown together these crops helped and assisted each other.

2. Pass out the Three Sisters handout. Have students label the rectangles with the correct "sister". Point out that the beans are using the corn as a trellis, while the squash is spread out over the ground giving it shade and preventing erosion.
3. Have students cut out the squares with the dashed lines, to make "windows."
4. Give each student 3 jewelry bags, 3 cotton balls, and one of each type of seed.
5. Place small cups with water around the room so that students can share.
6. Review the conditions necessary for seed germination: water, oxygen, and warmth.
7. Instruct students to dip their cotton balls in the water then place one in each bag.
8. Next, place a seed in each bag and close them.
9. Match the seeds with the correct labels and tape them behind the "windows."
10. Lastly, students may color the picture.
11. You may choose to hang the sheets in the window so that seeds receive the warmth of the sun. Have students observe the seed germination over the next few days.

Extension:

Students observe and record data related to the seed germination. Which seed germinated first? How long did each seed take to germinate? Measure the growth of each plant after one week. Graph the results.



The Three Sisters

