

LESSON TWELVE: Plants as Food

Time 45 minutes

Trunk Resources

Graphic

#10 Cheyenne women with a travois

Worksheet

#7 Gathering Foods to Eat

Teacher Resources

Photocopy worksheet #7 for each student. Celery sticks for each student, paper, colored water, pitcher, clear plastic cups. Beans, paper, jars, water (optional). Mustard seeds, watercress seeds, water, paper plates, paper towels (optional).

Objectives

1. Students will distinguish between different foods.
2. Students will monitor the growth of various plants.

Historical background

Plains Indians could not survive on buffalo meat alone. As well as hunting other animals and growing crops, many tribes gathered wild fruits, berries, and other foods from the Plains.

Many different kinds of berries were picked from short bushes growing among the thick Plains grass. Delicacies included tiny strawberries and juicy wild plums. Some of these fruits were eaten fresh, but most were carefully sorted and spread out in the sun to dry. The dried fruits would provide vitamins and sweetness through the cold winter months. Herbs, including peppermint, also were picked and dried. Peppermint was mixed with pounded meat to keep the meat fresh.

In addition to gardening, Pawnees gathered wild plants for food. When the buffalo and corn failed, gathering foods sustained the tribal economy for short but critical periods. Most of the Pawnees' gathering was integrated into the seasonal journeys to and from the short grass Plains hunting grounds, but the gathering cycle usually began in the early spring at the villages.

Potatoes were an important wild food resource for many Indians. "Hundreds of bushels" were gathered from March to May. Roots were also dug in summer and late fall. Pawnees eagerly sought water chestnuts (chinquapin) in the marshes, using both its seeds and tubers. They collected wild onions and cucumbers to eat, and gathered wild plums and chokecherries, which they dried and preserved along with other wild fruit.

Sources: W.W. Newcomb, *The Indians of Texas*; Fiona MacDonald, *The Plains Indians*.

Vocabulary

Chinquapin – A small chestnut tree.

Cultivate – To prepare and raise crops.

Gather – To collect food from the wild.

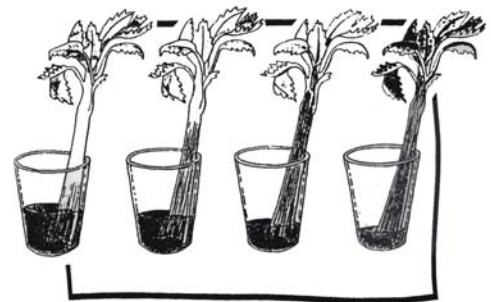
Root – Underground plant part. It can be fleshy and edible.

Activities

1. Ask students where they usually get their food (grocery stores, restaurants). Ask students where they would get food if there were no grocery stores or restaurants. (They could grow it, buy it from other people, hunt.) Lead students towards “finding foods in the wild” – berries, fruits, roots, herbs.

Show students graphic #10 Cheyenne women with a travois. Explain that the women are digging roots in this photograph.

2. Ask students if they have ever seen wild flowers or bushes with berries or fruits on them. Ask students if they have ever tasted any of these foods. What did they taste like? What were they? Explain that many Native American tribes gathered these foods to add to their diet of meat and cultivated vegetables. Students should be warned that some berries are poisonous.
3. Show students worksheet #7. Ask them if they can identify the different foods shown.
 - a. Using the worksheet provided, ask students to match the correct names to each of the wild plants.
 - b. Ask students to point out which are fruits and which are vegetables.
 - c. Have students complete the remainder of the worksheet individually.
4. Celery stick exercise. This exercise shows how plants use water to feed.
 - a. Provide each student with a clear plastic cup and a celery stick.
 - b. Using a pitcher of colored water (red works well), allow each student to half fill the cup.
 - c. Have each student place his or her celery stick in the water and record the results on a piece of paper.
 - d. They should note that the amount of

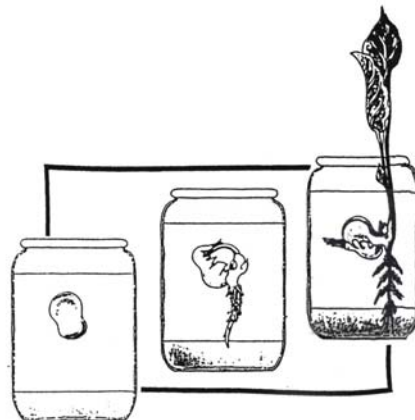


water decreases and the celery stick changes color.

5. Grow your own plants. There are numerous ways to show students how to grow plants in the classroom, outside, or at home. Here are two examples.

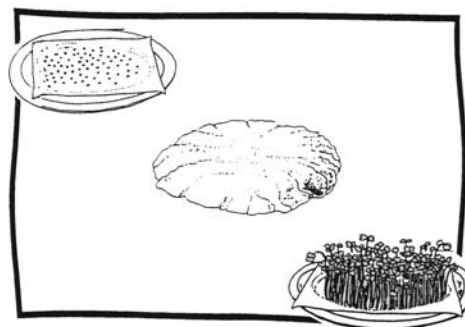
Beans

- a. Provide each student with a bean, water, glass jar, and a piece of paper.
- b. Have students pour about an inch of water into their jars.
- c. Have students roll a piece of paper and put it into each jar.
- d. Have students insert a bean between the paper and the side of each jar.
- e. Have student put their jars in a dark place until roots appear.
- f. Once the roots appear, have students put the jars in a sunny place.
- g. Have students measure their plants each day. Students should compare their measurements to see which plants grow the quickest and the tallest.



Watercress and Mustard.

- a. Provide each student with a paper plate, two paper towels, mustard seeds, and watercress seeds.
- b. Have students dampen one of the paper towels and place it on a paper plate.
- c. Have students put mustard seeds and watercress seeds on the wet paper towel.
- d. Cover with the second paper towel.
- e. When shoots appear, students can remove the top paper towel and put the plate in a sunny place.
- f. When the plants are big enough they can be cut and used to make watercress and mustard sandwiches.



Extended Activities:

1. Research Project

- a. Have students research the nutritional value of strawberries, plums, potatoes, onions, and peppermint. Have them compare their results.

- b. Have students make a list of these plants uses. (Different foods, recipes, medicine, etc.)

2. Plant Identification.

- a. Have students identify certain types of wild plants near their school or homes, while traveling, or on a field trip. Have students make a log book or journal of wild plants, flowers, berries, and fruits.

3. Plant Collage.

Teacher Resources

Paper, glue, catalogs, magazines, construction paper

Activity

- a. Have students make a collage. Give each group of students a list of ten wild plants, flowers, fruits, or berries. Ask them to collect these and bring them to class. If the students cannot find them, they should find pictures and bring those, or make them out of any materials they have available. With all these materials have the students make a collage for the classroom.