
Up Close and Personal

Activity Overview

Students research a plant and create an information sheet about it. Students compile these information sheets to make a class book.

Objectives

Students will:

- Understand plant structure and become familiar with key identification features
- Explore cultural and historical uses of plants as food and medicine
- Conduct research from a diversity of resources
- Identify unique characteristics of plants in an ecosystem

Subjects Covered

Science, Language Arts, and Social Studies

Grades

3 through 12

Activity Time

1½ hours

Season

Any

Materials

Reference books (*see resources below*), Plant Information Sheets, prairie nursery catalogues, art supplies as desired

State Standards

Science:

Use scientific sources & resources (B.4.1)

Select multiple information sources (C.4.3)

Discover how organisms meet their needs (F.4.1)

Investigate how organisms respond to internal/external cues (F.4.2)

Understand an organism's behavioral adaptations (E.8.7)

Background

A first encounter with an ecosystem includes observing, exploring and interaction. Identification generally comes later. Too often we can get bogged down in identification and fail to open our eyes to other things going on.

However, often a time comes when students would like to know the plants or animals in more detail. At the point when they are interested to know, identification becomes a tool to further engage them with other organisms. A student can feel a great sense of accomplishment in successfully identifying a plant or animal. Plant identification can be approached in many ways, such as through a tour with a knowledgeable tour guide, a good field book with a key, a biodiversity sampling study (see Earth Partnership for Schools activity, "What's Green and Grows all Over?"), flashcards, studying plant families (see Earth Partnership for Schools activity, "Plant Families").

Many students are better able to learn names for plants if, while they are learning the name, they learn more information about the plant such as historical importance, medicinal uses, habitat and growth form. In this activity, each student (or pairs of students) researches a plant and creates an information sheet about it. Sheets from all students can then be compiled into a comprehensive classroom book. For the "picture" section of the information sheet, students can paste a photograph from a prairie nursery catalogue. Prairie nurseries will often donate old seed catalogues to classrooms. Alternatively students can draw or sketch their plant.

Activity Description

Working singly or in pairs, go out to your restoration or natural site and choose the plant you wish to research. Key out the plant using a field guide such as *Newcomb's Wildflower Guide*. On a blank sheet of paper, draw or sketch the plant. Alternatively you may wish to do a technical drawing of key identification features of the plant, create a solar graphic, or do a rubbing of the leaves, flowers or entire plant.

Upon returning to the classroom, use available book resources to fill out a Plant Information Sheet. Record information that is specific and distinguishes your plant from others. If you did not sketch or draw a picture of the entire plant in the field, you can do so in the picture section of the Plant Information Sheet. Instead of a sketch, you can paste a photograph from a prairie nursery catalogue. Investigate what special qualities your plant has, such as medicinal uses, bloom time, seed dispersal, among others.

Extensions

- In small groups or individually, draw an "advertisement" for a native plant that you have researched. Include a catchy phrase to describe

Up Close and Personal (cont.)

Language Arts:

Read & discuss texts to understand human experience (A.4.3, 8.3, 12.3)

Read to acquire information (A.4.4, 8.4, 12.4)

Use effective reading strategies (A.8.1, 12.1)

Read, interpret, and critically analyze literature (A.8.2, 12.2)

Create or produce writing (B.4.1, 8.1, 12.1)

Plan, revise, edit, & publish writing (B.4.2, 8.2, 12.2)

Conduct then communicate research (F.4.1, 8.1, 12.1)

Social Studies:

Map physical, natural, or human features (A.4.2)

Describe examples of land use, communities, shelters (A.4.4)

Use atlases, aerial photos, satellite images, databases (A.4.5)

Describe interactions with physical environment (A.8.8)

Identify different ecosystems & cultural adaptations (A.12.8)

Identify & examine sources of information about history (B.4.1)

Use & evaluate primary sources of information (B.8.1)

Analyze primary & secondary sources about historical event (B.12.1)

Describe influence of ethnic cultures (E.4.4)

Describe influence of ethnic cultures (E.8.3)

Describe a particular culture (E.12.10)

special qualities of the plant such as particular medicinal uses or other unique characteristics. Present these advertisements to the entire class and post them for all to see.

- Choose a plant species to learn more about throughout the school year. What unique qualities does this plant species have? What changes happen at different times of year and why? Grow the plant in the classroom and transplant it to the restoration site.
- Create a mural of life-size prairie plants or plants found in other ecosystems like woodland or wetland areas.

Additional Resources

- Brown, Lauren. (1979). *Grasses-An identification guide*. Houghton Mifflin Co., New York.
- Brown, Lauren. (1976). *Weeds in winter*. W.W. Norton & Company, Inc., New York.
- Currah, R. & Van Dyk, M. (1983). *Prairie wildflowers- An illustrated manual of species suitable for cultivation and grassland restoration*. Friends of the Devonian Botanic Gardens-University of Alberta, Edmonton.
- Fassett, Norman C. (1951). *Grasses of Wisconsin*. Regents of the University of Wisconsin, Madison, WI. (*Recommended for high school level*)
- Kindscher, Kelly. (1987). *Edible wild plants of the Prairie*. University Press of Kansas, Lawrence, KS.
- Kindscher, Kelly. (1992). *Medicinal wild plants of the prairie*. University Press of Kansas, Lawrence, KS.
- Kirt, Russell R. (1995). *Prairie plants of the Midwest: Identification and Ecology*. Stipes Publishing Company, Champaign, IL.
- Mirk, Walter. (1997). *An introduction to the tall grass prairie of the Upper Midwest*. The Prairie Enthusiasts, c/o Gary Eldred, 4192 Sleepy Hollow Trail, Boscobel, WI 53805.
- Newcomb, Lawrence. (1977). *Newcomb's Wildflower Guide*. Little, Brown & Co., Boston.
- Runkel, Sylvan T. and Roosa, Dean M. (1989). *Wildflowers of the tall-grass prairie- The Upper Midwest*. Iowa State University Press, Ames, Iowa.
- Smith, J. Robert with Beatrice S. Smith. (1980). *The prairie garden- 70 native plants you can grow in town or country*. The University of Wisconsin Press, Madison, WI.
- Stokes, Donald & Lillian. (1985). *A Guide to enjoying wildflowers*. Little, Brown & Co., Boston.
- University of Wisconsin-Extension. (1998). *Prairie primer*. UW Extension Pubs, Madison, WI.

Up Close and Personal (cont.)

Assessments

- Identify primary components of plant structure, including different types of leaf arrangement and flower structure.
- Make an oral report to the class based on research of a native plant. Conduct peer reviews of these reports.
- Describe three important uses or characteristics of a native plant(s).
- Compile the Plant Information Sheets into a class portfolio of student work.

Plant Information Sheet



Common name

Latin Name

General description (Describe leaves, stem, roots, flower, seed, etc.)

Height

Flower Color

Time of bloom

Habitat

Picture

Did You Know...

Medicinal and food uses...