



HARVESTING THE WILD

Lesson 1: Wild Things at Home

Grade level: 7-12

Background Information:

The landscape of Oregon has provided an enormous variety of edible plants for a variety of people through the ages. Native Americans depended on the land for their very survival, and members of the Lewis and Clark expedition surely would have starved had it not been for the assistance of local Indians who shared roots and other vegetables with the party. Today, the majority of us get most of our food from supermarkets and most of that food is transported for thousands of miles. If left stranded in the woods, we would likely starve, even when surrounded by a cornucopia of wild foodstuffs.

In these activities, students will survey their local campus, parks, or other open spaces to learn about some local edible plants as well as other plants that have economic value. The class group will compile a guide to campus (or local) plants, including botanical information, common uses, and preparations.

Content Standards:

This lesson addresses the following Oregon State Content Standards:

- Geography: Compare and analyze physical (e.g. landforms, vegetation, wildlife, climate, and natural hazards) and human (e.g. population, land use, language, and religion) characteristics of places and regions.
- Geography: Understand the distribution and movement of people, ideas, and products
- Geography: Understand the geographic results of resource use and management programs and policies.
- Writing: Uses a variety of modes and written forms to express ideas.

Extension Web Sites from PBS:

- **Nova – Hot Science: Plant Magic**
<http://www.pbs.org/wgbh/nova/shamanactivity/amazon2.html>
Visit this interactive site to learn how some plants have been used medicinally.
- **Harriman Expedition Retraced – Harriman and Plant Identification**
http://www.pbs.org/harriman/education/lessonplans/plant_id.html
In this five-part lesson plan students will focus on the importance of detailed observations and scientific techniques of verifying the identification of plants.
- **Food for the Ancestors – Discovering the Foods of Mexico**
<http://www.pbs.org/foodancestors/main.html>
Students learn about how traditional foods of Mexico are used.
- **Scientific American Frontiers: DRAGON SCIENCE: Wisdom of Li Shizhen**
http://www.pbs.org/safarchive/4_class/45_pguides/pguide_602/4562_wis.html#activity
How much do you know about herbal plant remedies? Try this quiz.

- **Nova – Warriors of the Amazon**
http://www.pbs.org/wgbh/nova/teachers/programs/2309_shaman.html
Explore the daily life of the Yanomami people and look at native plant medicines.

Activity 1: Where the Wild Things Are

Time Allotted:

One 45-minute class period

Materials:

Copy of the Oregon Story: Wildcrafting video

Objectives:

- Students will construct a framework for wildharvesting issues by brainstorming wild plants with economic value.
- Students will build a sense of place by contemplating ways that the land of Oregon has provided for people over the years.

Teaching Instructions

1. Ask students to think about what they know about the Lewis and Clark expedition and how they ate. Remind students that Lewis and Clark spent a winter at Fort Clatsop on the Oregon Coast after traveling for two years from civilization. Ask them:
 - What do you think they ate?
 - Where do you think they got it?
 - What did native Indians eat and where did they get that?
 - Are these resources still available for us today?
 - Has any one in this class ever harvested wild foods to eat?
 - Name as many wild plants as you can think of that might be harvested for food or commercial use.
2. Watch the Oregon Story: “Wildcrafting” video clip starting at the beginning and end after hearing “We may not know it, but we may be feeding the Lakers.”
 - While watching, ask students to note and think about the following:
 - What are some plants that are used for wild harvests?
 - What types of things are they used for?
 - What are potential problems for wild harvesting?
 - What conflicts can you see arising?
3. After watching the video, discuss their observations and results from the above questions. Be sure students generate a list of possible uses for wild plants including:
 - Medicinal plants
 - Herbs
 - Oils (for aromatherapy and other fragrant oils)
 - Edible plants
 - Mushrooms
 - Berries
 - Honey
 - Greens
 - Others
 - Floral products
 - Christmas greens
 - Greens for flower bouquets
 - Cones
 - Mosses
 - Others
 - Live plants for gardens/houseplants
 - Seed and root suppliers
 - Specialty wood products from foraged wood

Activity 2: The Wild Things at Home and School

Time Allotted:

One 45-minute class period

Materials:

- Local plant identification guides
- Baskets or bags for harvesting

Objectives:

- Students will develop a sense of place by finding and identifying local wild plants with economic value.

Teaching Instructions:

Warning: Plants and mushrooms can be confused, parts of edible plants can be poisonous, dogs use outdoor areas as lavatories, and herbicides and pesticides are used in many parks and on campuses. Caution students away from actually eating plants they find during your field trip unless you are SURE you can positively identify the plant and know that it comes from a clean area. Have students wash any plant they intend to eat.

1. Prior to teaching, scout your local area (campus, neighborhood parks, vacant lots) to familiarize yourself with edible plants that grow there. You may want to scout these areas immediately before teaching the class so that you can be aware of what is growing, flowering, or fruiting at that time. Try to choose an area or a route with a large diversity of flora so that students have a lot to choose from. Note that this activity is best completed during the autumn or late spring so that the maximum number of edible plants are available.
2. Prepare students for a field trip. Arrange necessary permission according to your district policies. Warn students to bring appropriate clothes, coats, hats, shoes or whatever will be necessary on the day of the trip.
3. You may wish to structure this activity in one of several ways.
 - Ideally, students will create a plant survey of their campus. Assign each student group to a small portion of the campus and have them collect and document all the plants they find within that area. This would work well integrated into a unit on biodiversity, local ecology, or succession for instance.
 - If you don't have the necessary outdoor facilities on campus, or don't have the time for a complete survey, take students on a nature hike to a particularly wild area of campus, a local and natural park, or even a vacant lot.
 - Alternatively you might wish to combine this assignment with other activities on a major field trip to a wild area, having students collect samples while conducting other field trip activities to then bring back and research in the classroom.
4. Assign student groups. Students may work in groups of two or three.
5. Have students follow directions for collecting plants on the nature walk. Be sure to warn them about any potential hazardous plants (nettles, poison oak, etc.). You may choose to have students collect plant specimens, or you might have them draw or photograph individual plants if the plants are in a delicate area.
6. While in the field, students should keep a notebook outlining where they collected each plant, the conditions it was in (sunlight, proximity to trees or other plants, quantity, etc.)

For your information, the following is a list of common wild plants found in Oregon's forests and neighborhoods. Most firs, pines, and other evergreen trees are also used in the greens industry. You may wish to become familiar with these plants to help steer your students in the right direction.

Species

Oregon Grape	Bunchberry
Salal	Puffball
Dandelion	Stinging Nettles
Wild Plums	Wild Cherries
Huckleberries	Braken fern
Currants	Gooseberries
Watercress	Himalayan blackberry
Miners lettuce	Wild onion
Raspberry	Salmonberry
Thimbleberry	Californian blackberry
Elderberry	Broadleaf arrowhead
Common chickweed	Common dandelion
Stinging nettle	Beargrass
Sagebrush	Wooly Mullein
Yarrow	Willow

Activity 3: Field Guide to the Wild Things

Time Allotted

One to two 45-minute class periods

Materials

- Plant identification books
- Internet access
- Guides to medicinal plants, non-timber forest product guides, etc. such as the following:
 - *Identifying and Harvesting Edible and Medicinal Plants in Wild (and Not so Wild) Places*. 1994 by Brill and Dean
 - *Edible Wild Plants: A North American Field Guide*. 1990. Elias and Dykeman
 - *The Wild Foods Trail Guide*. 1976. Hall.
 - *Profiles of Northwest Plants: Food Uses-Medicinal Uses- Legends*. 1979. Robinson.

Objectives

- Students will investigate wild plants to learn about alternative uses and economic value
- Students will use their knowledge of plants to identify and learn about wild plant species.
- Students will gain appreciation for Native American culture by learning about the multiple uses for plants.
- Students will describe an alternative economic value for our National Forests.

Teaching Instructions

1. Upon returning to the classroom, students will identify plants with plant guidebooks. You may wish to preserve plants by laminating them. Have students affix them to paper, and then run through the laminator. If materials are limited you may wish to have students select one or two of their best and most unique samples for lamination.
2. Students should continue following steps 4-6 on the student handout. They will need identification (mushrooms, wildflowers, tree, etc) books, collector's books, and Internet access to do this. You may wish to limit each group to one or two plants, perhaps selecting for the greatest classroom diversity.
3. Students should turn in pages that include the following information:
 - A sample or image of the plant (including berries, stems, flowers, etc., as applicable)
 - Latin name and common name(s) of the plant
 - Journal entry about the place and conditions from where it was collected
 - List and types of uses
 - Instructions for preparation

Activity 4: An Imaginary Walk on the Wild Side

Time Allotted

- One 45-minute class period

Materials

Student guides to wild plants produced in the previous sections of this lesson

Objectives

- Students will investigate the uses of a number of wild plants in Oregon
- Students will use imaginative writing to convey understanding of how wild things in Oregon might be used for subsistence.

Teacher Instructions

1. Hang the laminated student guides around the room where students can see them
2. Instruct students to wander through the room, getting to know some of the variety of plants that have been described. They may wish to bring a pen and paper to write down the names and uses of some plants.
3. Tell students that they are to imagine that they have been transported to this spot 1000 years ago. They wake up to find themselves in this position. They should write a 1-2 page short story describing how they survive the first day, including what plants they use and how they use them.
4. Once students have completed their writing, invite students to share their stories with the group.

Student Instructions

Use With: Activity 2 – Wild Things at Home

Safety Note: Do not eat anything without checking with your teacher. Even though some parts of a species might be edible, others may be poisonous. Public parks and campuses are also often treated with pesticides and herbicides. Your teacher will tell you if any of your collection is safe to eat.

1. Your teacher will assign you to collect five plant specimens from home or during a field trip. If plants are fruiting or flowering, you may want to collect samples of the fruit and/or flower as well as a leaf with a bit of stem. All of these parts help in plant identification and may be of economic value. Your teacher may also ask that you not pick plants in a certain area, but instead photograph or draw them. Be sure to follow your teacher's instructions.
 - While collecting samples, label each sample with:
 - Location from where it was collected
 - Name if possible
 - Conditions it was growing in (sunny, wet, on tree, etc)
 - Quantity
2. Once you have collected your samples, take them back to the classroom and use plant identification guides to determine their Latin and common names.
3. Research your plant further. Does it have an edible use? Medicinal?
4. To help you with your research, you might try one of the following sites:
 - Non-timber forest products searchable database
<http://www.ifcae.org/cgi-bin/ntfp/db/dbsql/db.cgi?db=prod&uid=default>
 - Native American uses for wild plants
<http://herb.umd.umich.edu/>
 - Wildcrafting primer
<http://www.opb.org/programs/oregonstory/harvest>
 - US forest service website (potentially useful)
<http://www.fs.fed.us/land/fm/sfp/sfp.html>
5. If it does have a practical use, try to classify it as one or more of the following:
 - Medicinal
 - Edible
 - Decorative or Floral
 - Christmas Greens
 - Landscape
6. Gather further information, including at least one method for preparation either as a recipe, or for medicinal use, or for how to prepare it for the market. Include this information on your sheet.
7. Finally submit your sheet to your teacher to include in the classroom guide to local economically valuable plants.
8. The product will be a plant guide sheet that will include the following:
 - A sample or image of the plant (including berries, stems, flowers, etc., as applicable)
 - Latin name and common name(s) of the plant
 - Journal entry about the place and conditions from where it was collected
 - List and types of uses
 - Instructions for preparation