

# A Forest Beyond the Trees: An Introduction to Non-Timber Forest Products

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**Adapted from:** Lynch, Kathryn 2005. *Nontimber Forest Products Curriculum Workbook*. Institute for Culture and Ecology. Portland, Oregon

**Time:** 45 minutes

**Age Range:** 10-12 grades

## **Overview**

This activity introduces participants to the importance of Non-timber Forest Products (NTFPs). By using five NTFPs that grow in the Northwest as examples, this activity will give participants an introduction to key issues surrounding harvesting, management, and distribution of these very important resources. Through cooperative and inquiry based learning, this lesson will take a constructivist approach to educating about a very important classification of forest resources.

## **Benchmarks Addressed:**

SC.05.LS.05 Describe the relationship between characteristics of specific habitats and the organisms that live there

SC.05.LS.06.01 Describe changes to the environment that have caused the population of some species to change.

SC.05.LS.06.02 Identify conditions that might cause a species to become endangered or extinct

SC.05.LS.01.01 Classify a variety of living things into groups using various characteristics.

## **Learning Objectives:**

By the end of this activity, participants will be able to:

1. Identify the importance of NTFPs for past and present uses amongst diverse user groups.
2. Be able to name and describe the uses of some significant local NTFPs
3. Understand Value of NTFPs through concept of sustained yield in forest management

**Materials Needed:**

1. Plant specimens of Available NTFPs (Oregon grape, Sword ferns, Salal, Chanterelles, Morels, Fir boughs, Yew, Bear grass, fiddle heads, Maple. (depending on seasonal availability)
2. Computer with PowerPoint, projector, and screen

**Background Information:**

Forests around the world provide a massive variety of valuable products aside from the timber we use to build houses, or heat our homes. Non-Timber Forest Products are defined as anything that is harvested or collected from forests that are not trees to be cut into timber. This includes a large variety of foods, medicines, materials for arts and crafts, floral greens, plants used for dye, and much more. Some NTFPs are highly valuable on local and global markets. This has led to the over-harvest of important plants like Ginseng and Goldenseal, which have become endangered in some places and nearly extinct in others. This phenomenon drives prices for these rare species way up making them even more lucrative to harvest and sell for profit. Due to modern medicine's dependency on many NTFPs from around the globe, they have become very important commodities that need to be protected rather than exploited.

Many societies depend on the forest for food. There are life forms that grow in forests that humans cannot effectively grow in a controlled agricultural environment. Therefore, they must be gathered from local forests and wild-lands. This can include mushrooms, berries, roots and tubers, and greens or vegetables. The wet forest ecosystems of the Northwestern United States provide a rich habitat for a large variety of edible mushrooms for example. These mushrooms are wonderful food sources, some of which are highly prized as delicacies. Many people who cannot afford to buy these hand picked mushrooms in the store gather them themselves. To meet the demands of restaurants and stores that sell these fresh mushrooms, thousands of people harvest, distribute, and sell these mushrooms.

The nature of commercial NTFP harvest is very low profile and easily accessible to people who may not have the skills to work closer to society, which might require English speaking and writing skills or other job related training that can be difficult to attain. Often a variety of minority groups are involved in the commercial harvest NTFPs. With many factors inter-playing in the use and management of NTFPs, including culturally diverse consumers, harvesters, and distributors, the issue requires learners to think critically and carefully about the future of this resource.

**Activity: Getting to Know Northwest NTFPs (40 Minutes)**

**Prep:**

Instructor will need to prepare slide show computer, screen, projector, and arrange samples in a place where all students can see them

**Step 1: Inquiry-Based Introduction (10 minutes)**

- Let students know what they will be learning about
- Ask for their uninterrupted attention
- Ask for their participation in inquiry-based introduction, they need to raise their hands to speak
- Let them know there will be time for questions at the end if they are not called upon

Begin by defining Non-Timber Forest Products

- Products that grow in the forest that are not timber -

Q: Does anyone see anything in this room that might grow in the forest or is made from something that grows in the forest?

A: Anticipate differing answers depending on what is in the room

- Prompt them by referencing a few items

Q: Has anyone ever harvested any berries, mushrooms, or medicinal plants or other NTFPs by themselves, with family, or with friends?

A: Anticipate answers of more common NTFPs

- Have a few students share their stories
- Ask them to describe who, what, where, when of their experience

Q: Does anyone know why NTFPs are important?

A: Anticipate answers relating to food and medicine sources

- Use background information to inform them on importance's

NTFPs play

in many cultures including our own.

These inquiry-based questions are designed to connect students to the subject through personal experience. They may have knowledge of NTFPs but not even know it

General Introduction by Instructor:

- Used as foods, medicines, arts and crafts materials, floral greens, adhesives, cosmetics and essential oils,
- Bought and sold on international, regional, and local markets
- Harvested by subsistence, recreational, and commercial harvester or gathers

## **Step 2: PowerPoint Slide Show of Interesting NTFPs (10) minutes**

Slides:

- Ginseng
  - Picture of root
  - Discuss basic medicinal properties, natural habitat, and international market influence on demand, extraordinary price
  
- Echinacea
  - Picture of flower, native habitat, medicinal properties
  
- Rosy Periwinkle
  - Important cancer fighting drug growing only in Madagascar
  
- St John's Wort
  - Grows in Northwest and all over the world
  - Used in modern medicine to treat depression
  
- Beer Grass, Salal, Sword ferns
  - Floral greens, and flowers
  
- Fiddle heads
  - Interesting edible part of ferns
  
- Maple
  - Discuss where maple syrup originates
  
- Mushrooms
  - Chanterelles, Morels, Matsutake, Lobster, King Bolete
  - Discuss edibility, market demand, coexistence with tree species,

Time for a few brief questions

## **Step 3. Northwest NTFP Matching Activity (15 minutes)**

Pass out clues to volunteers. Have them read the clue out loud to the class then match it to the plant specimen on display/

### 1. Oregon Grape

I have leaves that look like holly with prickly spines ranging from green to red. My roots are used to treat skin conditions like minor infections or

inflammations, to cleanse the liver and to promote healthy digestion in the stomach. My berries were eaten by local Native American and my flowers were used to make tea. I am also used as a decorative plant used in landscaping because I am hardy, easy to maintain, and have beautiful yellow flowers in the spring time.

## 2. Salal

I have large green leaves that are rather tough. I am harvested for my attractive leaves and used by florists around the world, especially in Europe. My berries taste bland but were used by Native Americans of the Northwest to make pemmican (a combination of dried meats and berries to eat).

## 3. Yew

I am a conifer that grows in the Pacific Northwest. I have short flat needles, very small cones and can live to be a thousand years old. My bark was used to create a cancer fighting drug called taxol before scientist figured out how to recreate it in laboratories. Though I was not cut down for the creation of this drug the removal of my bark often killed me. I was once very abundant in the northwest but now I hide in remote areas or places that were protected.

## 4. Morels

I am a soft, fleshy fungus with a brown top that has many little holes in it. I grow where in old burns several years after fires have come through. I am edible and highly prized for my delicious nutty flavor. I demand high prices in restaurants and markets and the northwest and am often dried and shipped around the world.

## 5. Sword Ferns

I am a very large green leaf that is shaped like a big thick sword. I am made up of many smaller leafs with tiny brown spores on my underside. I grow in the under story of northwest conifer forests. My attractive shape and colors are used in floral bouquets and craft project

## **Step 4: Wrap Up (5 minutes)**