INSIDE OREGON'S FORESTS

A high school forestry curriculum

OUR RESPONSIBILITY TO OREGON'S FORESTS

1: Forest Sustainability
2. Interview a Forest Landowner
2: Service-Learning Project

Oregon Forest Resources Institute

Introduction

Inside Oregon's Forests is a high school curriculum developed by the Oregon Forest Resources Institute (OFRI) to help students build a deep understanding of Oregon's forests. The seven modules are loosely organized around topics and concepts from the *Oregon Forest Literacy Plan*, a forest-education conceptual framework developed by OFRI and available at learnforests.org.

Curriculum Goals and Objectives

The overall goal of this curriculum is to provide engaging, standards-based lessons that help high school students understand the environmental, economic and social importance of Oregon's forests, as well as the principles behind forest management. Through the lessons, students will be able to:

- explain basic tree biology
- identify the forest types in Oregon
- describe the environmental, economic and social benefits Oregon's forests provide
- explain scientific and economic principles involved in managing Oregon's forests
- describe current issues facing Oregon's forests
- identify actions they can take to help ensure the sustainability of our forests

Curriculum Overview

Following is a description, as well as a suggested sequence and time frame, for each of the seven modules in the curriculum.

Sequence & Time Frame	Module	Description
Weeks 1-2	Oregon's Forest Heritage	Students are introduced to Oregon forests and their history, and examine some changes in our state's forestland over time.
Week 3	Forest Basics	Students gain an understanding of both tree biology and the forest types in Oregon, and practice identifying and measuring trees.
Weeks 4-5	Environmental Importance of Oregon's Forests	Students explore the environmental importance of forests: for example, how they protect our water resources, provide habitat and store carbon.
Week 6	Economic Importance of Oregon's Forests	Students examine Oregon's forest economy, including the products, energy and jobs that come from forests.

Weeks 7-9	Forest Management	Students learn about forest management and practice forest management skills, such as surveying a forest tract, analyzing forest soil and developing a management plan.
Weeks 10-11	Forest Management Issues	Students explore the impacts of fire, forest pests and climate change on Oregon's forests, and conduct an opinion survey related to a forest management issue.
Week 12-13	Our Responsibility to Oregon's Forests	Students learn about certification as a way to achieve forest sustainability, and plan and carry out a service-learning project.

How to Use the Curriculum

The curriculum is designed to be flexible. Teachers may select modules or lessons that fit their educational goals, as each lesson can either stand alone or build on prior lessons. This curriculum may be used:

- as the basis for a 13-week or semester-long course on forestry
- to teach a single unit on forestry within other high school courses, such as agricultural science and technology, or environmental science
- to help prepare students for the FFA Career Development Event (CDE) on Forestry, or for Envirothon

Curriculum Resources

The following Resources (available at learnforests.org) support teaching the curriculum:

- Glossary
- Supplies
- OFRI Publications and Videos
- Student Pages
- Field Investigations
- Oregon Standards Connections
- Oregon Forest Literacy Plan Concepts

About OFRI

The Oregon Forest Resources Institute supports and enhances Oregon's forest products industry by advancing public understanding of forests, forest management and forest products.

OUR RESPONSIBILITY TO OREGON'S FORESTS

1: Forest Sustainability

Overview

Students examine forest certification as one approach for ensuring forest sustainability, and then identify other ways to be stewards of Oregon forests.

Time Considerations

Preparation: 20 minutes

Procedure: One 50-minute class period

Learning Objectives

Students will be able to:

- Articulate what parameters they think would be important to include in a forest certification scheme.
- Identify the pros, cons, benefits and drawbacks of three forest certification systems.
- Communicate other ways that Oregonians can be stewards of our forests.

Standards Connections

Oregon Science Standards

- Disciplinary Core Idea – HS.LS4.D. Biodiversity and Humans. Humans depend on the living world for the resources and other benefits provided by biodiversity. But human activity is having adverse impacts on biodiversity through overpopulation, overexploitation, habitat destruction, pollution, introduction of invasive species, and climate change. Thus sustaining biodiversity so that ecosystem functioning and productivity are maintained is essential to supporting and enhancing life on Earth. Sustaining biodiversity also aids humanity by preserving landscapes of recreational or inspirational value.

Oregon English Language Arts Standards

- Reading Science and Technical Subjects – 11-12.RST.9. Synthesize information from a range of sources into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Oregon Forest Literacy Plan Concepts

- 3.C.7. Sustainable forest management takes into account environmental, economic and social dimensions of sustainability. It includes maintaining forest health, productivity and diversity, and maintaining a forested land base for the needs of present and future generations.
- 4.B.1. Everyone has a responsibility to treat forests with respect, and to be a conscientious steward of forests and forest resources.
- 4.B.2. Personal behaviors and actions directly impact the health and resiliency of our forests. Our consumer choices and investments, how we interact with the land (e.g., trails, campgrounds and forest habitat), how we use or conserve water, and how we use fire can either harm or help forests.

Materials

- "Forest Certification Systems Compared" student page
- Colored markers
- Access to websites for Sustainable Forestry Initiative at forests.org, American Tree Farm System at treefarmsystem.org, and Forest Stewardship Council at us.fsc.org

Background Information[1]

Nearly all forest landowners want to manage their lands to sustainably produce environmental, social and economic benefits. Forest certification is a market-based approach to recognizing sustainable forest management by labeling forests and the wood products from those forests as being certified. Having forestland certified under the American Tree Farm System (ATFS), the Sustainable Forestry Initiative (SFI) or the Forest Stewardship Council (FSC) lets people know that landowners are managing their forests sustainably and are in it for the long haul.

In the mid-1990s the Forest Stewardship Council (FSC) was created by the World Wildlife Fund and other conservation groups as a way to certify that wood products were sustainably managed

[1] Source: "Forest Certification Demonstrates Sustainability." Oregon Forest Resources Institute, oregonforests.org.

to meet conservation goals. The American Forest and Paper Association (AFPA) followed with the development of the Sustainable Forestry Initiative (SFI), to demonstrate sustainability while meeting industrial wood-production goals.[2] The American Tree Farm System, which has been around since 1941, also developed a certification system to demonstrate sustainability while meeting a diverse set of family forestland goals.

Today these private, independent programs apply third-party standards to wood and manufactured products from the forest. This level of transparency gives consumers, architects, engineers and builders credible evidence that the products were produced through responsible forestry practices. Certified products earn the right to display an "eco-label" seal of approval. As of June 2022, more than 4.7 million total acres of private Oregon forestlands are certified by one of the three systems. SFI certifies about 3,889,000 acres; ATFS certifies about 719,000 acres; and FSC certifies about 172,000 acres.[3]

Key Vocabulary

afforestation

conservation value

forest certification

sustainable forest management*

tenure and use rights

**included in Glossary*

Preparation

Make copies of the student page or plan for students to have on-screen access to it.

Procedure

1. Ask students whether they've ever received a certificate for completing a program or taking a class, and ask them to describe what it means to "certify" something. List some of their ideas on the board. Ask whether they have heard of forests being certified, and what they think that might mean.

[2] SFI subsequently separated from the AFPA, reorganizing as a nonprofit organization governed by an independent board.
[3] Source: *Oregon Forest Facts, 2023-24 Edition*. Oregon Forest Resources Institute, learnforests.org.

2. Explain that forest certification is one approach to ensuring forest sustainability: When a particular forest meets certain criteria, the forest and products that come from it can be labeled as "certified" to help consumers make more sustainable purchases.
3. Have partners or small groups create a list of criteria they would include in a forest certification program. Challenge them to consider the social, economic and environmental aspects of the forest or forest product.
4. Invite groups to share elements from their list with the class.
5. Explain that there are currently three different forest certification systems that forest landowners use in Oregon. Give students a copy of the "Forest Certification Systems Compared" student page and direct them to use the student page to compare the three different systems. Allow them to look at the organizations' websites to learn more about the three systems.
6. Discuss:
    a. How does forest certification help Oregon forests?
    b. What are the benefits of certification for forest landowners?
    c. What are the benefits for consumers?
    d. What might be drawbacks to certification?
7. Point out that forest certification is just one way that Oregonians can be stewards of our forests. Challenge students working in pairs or small groups to create a list of things that they and others can do to ensure the sustainability of forests.
8. Invite groups to share some of their ideas.

Assessment

Use student responses to the student page to assess their understanding of the material.

Extension Idea

Conduct a study of local stores to find out what certified wood products are available and whether they differ in quality, cost or other features from noncertified products. Use a data collection sheet, such as

Location (Store)	Wood type	Size	Cost	Certification system	Quality or other observations

STUDENT PAGE NAME: _____

LESSON 1

Forest Certification Systems Compared

Follow the steps below to compare the standards and principles from the three forest certification systems commonly used in Oregon:

- Sustainable Forestry Initiative (SFI), forests.org
- American Tree Farm Certification System (ATFS), treefarmsystem.org
- Forest Stewardship Council (FSC), us.fsc.org

Note that in addition to the standards and principles, all three certification systems include detailed criteria and indicators to show whether a standard is met. Check the website for each system to learn more.

Directions

1. For each standard or principle, mark whether it focuses on environmental (EN), economic (EC) or social (SO) aspects of sustainable forestry.
2. Looking at the three different systems, use colored markers to color-code the standards and principles that are the same or similar.
3. In what ways are the goals of the three systems the same, and how do they differ?

4. What other differences do you note among the three systems?

5. What are the strengths and weaknesses (or pros and cons) of each system?

6. Why might someone choose one certification over another?

Sustainable Forestry Initiative (SFI) Principles[4]

Goal: To ensure that forestry practices are environmentally responsible, socially beneficial and economically viable.

Certificated organizations must implement and achieve the following forest management principles:

Principle 1: Sustainable Forestry. To practice sustainable forestry means meeting the needs of the present while promoting the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates reforestation and the managing, growing, nurturing and harvesting of trees for useful products, and for the provision of ecosystem services such as the conservation of soil, air and water quality and quantity, climate change adaptation and mitigation, biological diversity, wildlife and aquatic habitats, recreation and aesthetics.

Principle 2: Forest Productivity and Health. To provide for regeneration after harvest, maintain the health and productive capacity of the forest land base, and to protect and maintain long-term soil health and productivity. In addition, to protect forests from economically, environmentally or socially undesirable impacts of wildfire, pests, diseases, invasive species and other damaging agents, and thus maintain and improve long-term forest health and productivity.

Principle 3: Protection of Water Resources. To protect and maintain the water quality and quantity of water bodies and riparian areas, and to conform with forestry best management practices to protect water quality, to meet the needs of both human communities and ecological systems.

Principle 4: Protection of Biological Diversity. To manage forests in ways that protect and promote biological diversity, including animal and plant species, wildlife habitats, ecologically and culturally important species, threatened and endangered species (i.e., Forest with Exceptional Conservation Values) and native forest cover types at multiple scales.

Principle 5: Aesthetics and Recreation. To manage the visual impacts of forest operations, and to provide recreational opportunities for the public.

Principle 6: Protection of Special Sites. To manage lands that are geologically or culturally important in a manner that takes into account their unique qualities.

Principle 7: Legal Compliance. To comply with applicable federal, provincial, state, and local forestry and related environmental laws, statutes and regulations.

[4] Source: SFI 2022 Forest Management Standard. Sustainable Forestry Initiative, forests.org.

Principle 8: Research. To support advances in sustainable forest management through research, science and technology.

Principle 9: Training and Education. To improve the practice of sustainable forestry through training and education programs.

Principle 10: Community Involvement and Social Responsibility, and Respect for Indigenous Rights. To broaden the practice of sustainable forestry on all lands through community involvement and socially responsible practices, and through recognition and respect of Indigenous Peoples' rights and traditional forest-related knowledge.

Principle 11: Transparency. To broaden the understanding of forest certification to the Forest Management Standard by documenting certification audits and making the findings publicly available.

Principle 12: Continual Improvement. To continually improve the practice of forest management, and to monitor, measure and report performance in achieving the commitment to sustainable forestry.

Principle 13: Responsible Fiber Sourcing. To use and promote sustainable forestry across a diversity of ownership and management types in the United States and Canada that is both scientifically credible and socially, environmentally and economically responsible, and to avoid sourcing from controversial sources both domestically and internationally.

American Tree Farm System (ATFS) Standards of Sustainability[5]

Goal: To sustain forests, watershed and healthy wildlife habitats through the power of private stewardship by offering affordable forest certification for family forest landowners in the United States.

Forest landowners must demonstrate compliance with the following standards:

Standard 1: Commitment to Practicing Sustainable Forestry. Landowner demonstrates commitment to forest health and sustainability by developing a forest management plan, implementing sustainable practices, and seeking opportunities to expand their knowledge and understanding of sustainable forest management.

Standard 2: Compliance with Laws. Forest management activities comply with all relevant federal, state and local laws, regulations and ordinances.

Standard 3: Reforestation and Afforestation. Landowner completes timely restocking of desired species of trees on a regeneration harvest site and nonstocked areas where tree growing is consistent with land use practices and the landowner's objectives.

Standard 4: Air, Water and Soil Protection. Forest management practices maintain or enhance the ecosystems and ecosystem services provided by the forest, including air, water, soil and site quality.

Standard 5: Fish, Wildlife, Biodiversity and Forest Health. Forest management activities contribute to the conservation of biodiversity.

Standard 6: Forest Aesthetics. Forest management activities recognize the value of forest aesthetics.

Standard 7: Protect Special Sites. Special sites are managed in ways that recognize their unique historical, archeological, cultural, geological, biological or ecological characteristics.

Standard 8: Forest Product Harvests and Other Activities. Forest product harvests and other management activities are conducted in accordance with the landowner's objectives and consider other forest values.

[5] Source: 2021 Standards of Sustainability. American Forest Foundation, treefarmsystem.org.

Forest Stewardship Council (FSC) Principles[6]

Goal: To promote environmentally sound, socially beneficial and economically prosperous management of the world's forests.

The following principles apply to all FSC-certified forests around the world:

Principle 1: Compliance with Laws and FSC Principles. Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

Principle 2: Tenure and Use Rights and Responsibilities. Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

Principle 3: Indigenous Peoples' Rights. The legal and customary rights of indigenous peoples to own, use and manage their lands, territories and resources shall be recognized and respected.

Principle 4: Community Relations and Workers' Rights. Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.

Principle 5: Benefits from the Forest. Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

Principle 6: Environmental Impact. Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

Principle 7: Management Plan. A management plan — appropriate to the scale and intensity of the operations — shall be written, implemented and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

Principle 8: Monitoring and Assessment. Monitoring shall be conducted — appropriate to the scale and intensity of forest management — to assess the condition of the forest, yields of forest products, chain of custody, management activities, and their social and environmental impacts.

Principle 9: Maintenance of High Conservation Value Forests. Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests.

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[6] Source: "Mission and Vision." Forest Stewardship Council, us.fsc.org.

Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

Principle 10: Plantations. Plantations shall be planned and managed in accordance with Principles and Criteria 1-9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

2: Interview a Forest Landowner

Overview

Students interview forest landowners to learn what they value about their forests, and the challenges they face in sustaining them.

This lesson was adapted from Project Learning Tree's "Who Owns America's Forests?" *Exploring Environmental Issues: Focus on Forests, Secondary Environmental Education Module*.

Time Considerations

Preparation: 15 minutes

Procedure: One to two 50-minute class periods

Learning Objectives

Students will be able to:

- Conduct an interview to explore forest landowners' motivations, priorities and choices in managing their forests.
- Articulate what individual forest landowners are doing to sustain their forests.
- Make inferences about how to support sustainable forestry on private forestland.

Standards Connections

New Generation Science Standards

- Disciplinary Core Idea – HS.LS4.D. Biodiversity and Humans. Humans depend on the living world for the resources and other benefits provided by biodiversity. But human activity is having adverse impacts on biodiversity through overpopulation, overexploitation, habitat destruction, pollution, introduction of invasive species, and climate change. Thus sustaining biodiversity so that ecosystem functioning and productivity are maintained is essential to supporting and enhancing life on Earth. Sustaining biodiversity also aids humanity by preserving landscapes of recreational or inspirational value.

Oregon English Language Arts Standards

- Speaking and Listening – 11-12.SL.1.C. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

Oregon Forest Literacy Plan Concepts

- 3.A.4. Oregon's forests are managed under private (e.g., family and industrial), public (e.g., state and federal) and tribal ownership. Each type of ownership may have different management objectives, and is subject to different protection laws and policies. Management objectives may even differ within classes of ownership.

Materials

Optional: "Forest Landowner Interview" student page (see Procedure)

Background Information[7]

In Oregon, 62,000 individuals own between 10 and 5,000 acres of forestland. Classified as "family forestlands," these acres have often been handed down through generations.

Most of these landowners are not professional foresters; they're doctors, teachers, accountants and clergy. They're also quite possibly your neighbors. That's because a lot of family forestland is located close to residential areas in the foothills just outside Oregon's primary metropolitan areas.

The amount of timber coming from family forestlands varies greatly depending on demand in the market. Family forestlands accounted for about 12% of Oregon's annual timber harvest in 2022. Yet not all family forestlands are managed for timber production. Family forest landowners also manage forests for recreational use, fish and wildlife habitat, or just pure aesthetics.

A recent survey of family forest landowners indicated that they, like most Oregonians, desire to keep their property as forestland. But caring for the forest costs money. In many cases, family forest landowners use their land to earn a living. If the cost of managing the forest gets too expensive, they will turn to alternatives including, unfortunately, potentially selling the family forest.

[7] Source: "The Life of a Working Forest." Oregon Forest Resources Institute, oregonforests.org.

Key Vocabulary

regulation

resource

Preparation

- Decide whether students will conduct interviews individually in the community, or as a group in class with a panel of landowners you invite. To find possible forest landowners in your area to interview, contact your local chapter of the Oregon Small Woodlands Association (oswa.org) or your local OSU Forestry and Natural Resources Extension agent (forestry.oregonstate.edu) and ask for a Master Woodland Manager.
- You may choose to have students use the questions provided on the student page or develop their own. If they'll be developing their own questions, allow extra time for them to do so.

Procedure

1. Introduce the lesson by asking students what they think they could learn from local forest landowners about the challenges they face in sustaining their forests.
2. Explain that students will interview forest landowners to find out about their motivations, priorities and choices; what they value about their forests; and what they do to sustain their forests. Depending on what you've decided, these may be individual interviews students conduct in the community, or a group interview in class with a panel of landowners.
3. You may have students use the sample interview questions on the "Forest Landowner Interview" student page, or have them develop a different set of questions based on their interests, or on local issues. If they're developing questions, have each student prepare one to three possibilities and then choose the best ones as a class.
4. Provide copies of the final interview questions to use in conducting the interviews and for taking notes.
5. After the interviews, lead a class discussion about the findings:
    a. What did students learn from the interviews about either individual owners or the choices and challenges they face?
    b. What confirmed students' prior understanding about forestland ownership? What was a surprise to them?
    c. From the interviews, what can students infer about what forest landowners are doing to sustain their forests?

d. What can we do – as individuals and a society – to support efforts to sustain forests in Oregon?

Assessment

- Students write a response to one of the following prompts:
    - Based on what you learned from the interview, what is the biggest challenge private forest landowners in our area face? Use specific examples from the interview to support your view.
    - Based on what you learned from the interview, what can Oregonians do to increase the sustainability of our forests? Use specific examples from the interview to support your view.

Extension Idea

Compare Oregon forest landowners with those across the United States by looking at data from the National Woodland Owner Survey, which is conducted periodically by the US Forest Service. For more information see "National Woodland Owner Survey" (available at www.fia.fs.usda.gov/nwos).

STUDENT PAGE
LESSON 2

NAME(S): _____

Forest Landowner Interview[8]

Forest Landowner's Name:_____

1. Describe the forestland you own: Where is it located? What types of trees, water, resources and built structures does it have? What is the surrounding area like?

2. How long have you owned this land? How did you acquire it?

3. Why do you own this forestland? What do you value most about it?

4. How do you use this land?

5. How do you make decisions about managing this forestland?

6. What are the biggest challenges you face in managing this forestland?

[8] Source: Adapted from "Who Owns America's Forests?" *Exploring Environmental Issues: Focus on Forests, Secondary Environmental Education Module.* Project Learning Tree.

7. How has this forestland changed over the past 10, 20 or 50 years? In what ways has it stayed the same?

8. What do you see happening to this land in the next 10, 20 or 50 years?

9. What are your biggest concerns about the future of this land?

10. What actions, if any, are you taking to ensure the long-term sustainability of your forestland?

3: Service-Learning Project

Overview

In this lesson, students plan and carry out a service-learning project related to Oregon forests.

Time Considerations

Preparation: One hour or more

Procedure: The duration of this lesson depends on the specific project, and may range from one class period to an entire term

Learning Objectives

Students will be able to:

- Identify and assess a need in their community.
- Develop and implement an action plan.
- Practice problem-solving skills.

Standards Connections

Oregon Science Standards

- Disciplinary Core Idea – HS.LS4.D. Biodiversity and Humans. Humans depend on the living world for the resources and other benefits provided by biodiversity. But human activity is having adverse impacts on biodiversity through overpopulation, overexploitation, habitat destruction, pollution, introduction of invasive species, and climate change. Thus sustaining biodiversity so that ecosystem functioning and productivity are maintained is essential to supporting and enhancing life on Earth. Sustaining biodiversity also aids humanity by preserving landscapes of recreational or inspirational value.

Other relevant standards depend on the specific project.

Oregon Forest Literacy Plan Concepts

- 4.A.2. Everyone should have the opportunity to identify and explore their personal and cultural relationships with forests, and to spend time in forests. Accommodations such as

paved paths, multi-language signage, and proximity to public transportation help to ensure access to forests for all.

- 4.A.3. There are many ways we can deepen our relationship with forests, including learning about forests, recreating in forests, volunteering for projects in and around forests, and recognizing the ways forests enhance our lives.
- 4.B.1. Everyone has a responsibility to treat forests with respect, and to be a conscientious steward of forests and forest resources.

Materials

- "Service-Learning Planning Template" teacher page
- "Sample Service-Learning Projects" teacher page
- Any materials needed for the planned project

Background Information

Service-learning is a teaching method that combines service to the community with meaningful and relevant learning experiences. According to the National Youth Leadership Council, high-quality service-learning actively engages students in meaningful and personally relevant service activities. It is an intentional instructional strategy used to meet learning goals or content standards.

To be effective, service-learning incorporates ongoing reflective activities that prompt deep thinking and analysis about one's relationship to society. It provides students with a strong voice in planning, implementing and evaluating their service-learning experiences. It also gives students the opportunity to demonstrate what they learned from the project or how the service affected them.

Preparation

- Use the "Service-Learning Planning Template" teacher page to map out possible service-learning projects, taking into account your community's needs. Identify your instructional goals, any assessment you plan to incorporate into the project, and any time or space constraints. See the "Sample Service-Learning Projects" teacher page for possible projects.
- Check other resources for project ideas and opportunities, such as SOLVE Oregon at solveoregon.org.
- Consider having students invite community leaders, stakeholders or local media for a presentation about the completed project.

Procedure

1. Explain to students that service-learning is an opportunity to apply what they learn in school to the real world. Ask for their ideas of service-learning projects that would both help the community in some way and enable them to apply their learning about forestry. See the "Sample Service-Learning Projects" teacher page for ideas.
2. As a class, look at the list of project ideas and combine or eliminate any, as appropriate. Discuss what sector of the community each project remaining on the list would serve, how the project might meet the community's needs, and what knowledge and skills students would be able to demonstrate. Vote on one project, or use another method for determining which to undertake.
3. As a class, develop an action plan for the selected project. The plan should include a timeline, materials needed, budget, community resources and steps required to carry out the project. It should also include a way for students to demonstrate their learning.
4. Implement the action plan, making sure that all students have meaningful roles. Encourage students to problem-solve any issues that arise.
5. After the project, take time for students to reflect on their learning and celebrate their accomplishments.

Assessment

Build into the project a way for students to demonstrate what they have learned, and then use that to assess their learning.

Service-Learning Planning Template

Forest-related project idea:

_____

Service

Community need:

_____

Learning

Connections to curriculum, Oregon Standards and Conceptual Framework

- ☐ Arts:
- ☐ English/Language Arts:
- ☐ Mathematics:
- ☐ Science:
- ☐ Social Sciences:
- ☐ Other:

Concept Development

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Skill Development

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Project Plan

Timeline:

Preparation:

Action:

Reflection:

Demonstration of learning:

Community resources:

Books, other resources:

Notes:

Sample Service-Learning Projects

Forest Stream Monitoring. Students monitor a nearby forest stream and riparian zone for the local watershed council. They map the area using GPS units, take ongoing water quality samples, keep photo journals, analyze their results and develop a multimedia presentation of their findings.

Invasive Species Removal. Students remove invasive plants from a nearby forest area, after assessing the prevalence of invasive species. They learn about the impact of invasive species on forest ecosystems, practice identifying some of the most prevalent invasive species, learn the best methods for removal, document the effectiveness of the treatment and communicate with others in the community about the problem of invasive species.

Forest Interpretive Trail. Students develop an interpretive trail for the community that goes through a local forest. Students learn about the local ecosystem, research interesting facts about plants, animals or historical figures, work with government agencies and businesses, and create signs or a brochure for the trail.

Forest Species Living Lab. Students design an outdoor forest species living lab for their school community. They research Oregon native plants and what they need to thrive, organize fundraising efforts for suitable plants and needed supplies, create planning maps of the lab site, and then plant and care for the plants.

Forest Field Day. Students plan and carry out a field day to teach elementary students about the local forest ecosystem. They research topic areas, plan activities and demonstrations, practice teaching their lessons and present them to elementary students.

Tree Planting and Monitoring. Students work with a local park or government agency to plant trees and then monitor the trees' development over time. They plan what, where and how many trees to plant, organize fundraising efforts to buy the trees, and carry out their planting plan. Then, over time, they collect data on the newly planted trees to monitor their growth and impact.