

Making Forest Connections — Grades 3-5



Making Forest Connections: A Correlation of the Washington Forest Education K-12 Learning Framework with Other Educational Resources

Grades 3-5

The Washington Forest Education K-12 Learning Framework gives educators in our forest-rich state a strong foundation for incorporating forest and natural resources in their classrooms and programs and provides a conceptual framework for teaching about Washington's forests. This correlation document helps them further by identifying connections between each of the Washington Forest Education K-12 Learning Framework's 62 concepts and:

- [Next Generation Science Standards \(NGSS\)](#) performance expectations
- [Project Learning Tree \(PLT\)](#) activities
- [Pacific Education Institute Resources](#)
- [Project WILD](#) activities
- Other resources

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Students in the intermediate years are interested in the natural world, how things are put together and how things work. This is a time when their intellectual capabilities expand greatly as they move from a focus on the here and now toward abstract thinking. Students this age work well in groups and enjoy doing collaborative projects. They enjoy problem-solving, sharing ideas and voicing opinions. They also want to be responsible members of the local community.

Forest education activities at the intermediate level may focus on:

- How do trees grow?
- What do forest organisms need to survive and how are they interdependent within an ecosystem?
- How are forests and their inhabitants adapted to Washington's climate and landscape?
- In what ways are forests important to Washington's environment, economy, and people?

Using trees and forests as the focus, students can practice posing questions for investigations, reasoning about the conclusions and implications, and managing multiple variables. Engaging students in a variety of activities will deepen their understanding of the forest ecosystem on which we all depend.

For more information about the forest learning framework by grade level, see [the Washington Forest Education K-12 Learning Framework](#).

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About the Resources

This document identifies connections between the Washington Forest Education K-12 Learning Framework and the following resources for Grades 3-5.

NGSS Performance Expectations – NGSS standards identify expectations for what students should be able to do by the end of the year or grade band. These performance expectations also incorporate three dimensions of science: disciplinary core ideas, science and engineering practices, and cross-cutting concepts. For more information, see www.nextgenscience.org.

Project Learning Tree (PLT) Activities – Relevant activities are identified from PLT's *PreK-8 Environmental Education Activity Guide*. **Bolded** activities are the most relevant. Activities in **red** represent updates found in PLT's *Explore Your Environment K-8 Activity Guide*, published in 2021. Educators can receive these curriculum guides by attending a PLT professional development. For more details, contact the Pacific Education Institute.

Pacific Education Institute (PEI) Resources – A variety of guides, lessons, and videos from PEI help to strengthen the Washington Forest Education K-12 Learning Framework. They provide information and learning activities to support K-12 teachers and their students in learning about forests. These include:

- PEI Guides
- ELA and Math Performance Tasks
- Forests of Washington Lessons
- Healthy Forests, Healthy Waters Curriculum
- PLT extension activities
- K-3 Schoolyard Investigations
- Career Profile Cards
- Solution Oriented Learning Storylines (SOLS)

Resources available for download at <https://pacificeducationinstitute.org/>.

Project WILD Activities – Relevant activities are identified from the *Project WILD K-12 Curriculum and Activity Guide*. Educators can receive this guide by attending a Project WILD workshop. For more details, contact the Pacific Education Institute.

Oregon Forest Resources Institute (OFRI) Materials – A variety of publications and videos from OFRI help to strengthen forest literacy. They provide information and learning activities to support K-12 teachers and their students in learning about the environment.

For more information on receiving these free resources go to: oregonforests.org.

Acknowledgements

This correlation was supported by a Project Learning Tree Model Program Initiative grant from the Sustainable Forestry Initiative. We appreciate the hard work of the Oregon Forest Resources Institute (OFRI) to create such valuable forest education resources and their generosity in sharing them with others to adapt and use. Thank you to Pat Otto, former PLT WA State Coordinator and PEI Education Manager for adapting these correlations for use by Washington educators. Her forest education expertise and work to create locally relevant materials is an invaluable resource and we are grateful.

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Theme 1: What is a Forest?					
Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment K-8</i> are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p style="text-align: center;">Definition of a Forest</p> <p>1. Forests are ecosystems characterized by a dominance of tree cover and the presence of a wide variety of other organisms (e.g., other plants and animals).</p> <p>2. Forests are comprised of trees that may differ in species, age and size, and are affected by biotic factors (e.g., plants, animals and humans) and abiotic factors (e.g., soils, nutrients, moisture, sunlight and climate).</p> <p>3. Urban forests include all the publicly and privately owned trees within a city, town, or suburb working together as an ecosystem.</p>	<p>3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p>	<p>2: Get in Touch with Trees</p> <p>4: Sounds Around</p> <p>5: Poet-Tree (p. 143)</p> <p>6: Picture This!</p> <p>7: Habitat Pen Pals</p> <p>8: The Forest of S.T. Shrew</p> <p>10: Charting Diversity (p. 90)</p> <p>20: Environmental Exchange Box</p> <p>22: Trees as Habitat (p. 76)</p> <p>23: The Fallen Log (p. 116)</p> <p>30: Three Cheers for Trees</p> <p>41: How Plants Grow (Here We Grow Again, p. 57)</p> <p>46: Schoolyard Safari-Forest Safari</p> <p>48: Field, Forest, and Stream (p. 257)</p> <p>49: Tropical Treehouse</p> <p>56: We Can Work It Out (Decisions, Decisions, p. 224)</p> <p>68: Name That Tree (Tree ID, p. 186)</p> <p>70: Soil Stories (Soil Builders, p. 161)</p> <p>77: Trees in Trouble (p. 197)</p> <p>78: Signs of Fall (p. 155)</p> <p>E-Unit for Grades 3-5 Energy in Ecosystems</p>	<p>Forests of Washington</p> <p>1: There's no Place Like Home</p> <p>2: Getting to know the Trees of Washington</p> <p>3: Here's Looking at Yew</p> <p>4: Forest Homes</p> <p>ELA Performance Tasks</p> <p>Off to the Woods (Grade 3)</p> <p>Bioblitz (Grade 3-5)</p> <p>Forest Benefits (Grade 4-5)</p> <p>Guides</p> <p>Field Investigations</p> <p>FieldDesign</p> <p>Fostering Outdoor Observation Skills</p> <p>PLT Extensions</p> <p>www.pltwa.com</p> <p>Shape of Things Bingo</p> <p>Trees as Habitats Bingo</p> <p>Fallen Log student page</p> <p>Tree Abundance Field Investigation</p> <p>Solutions Oriented Learning Storylines</p> <p>Urban Forestry: Urban Heat Islands (Grade 5)</p>	<p>What's That Habitat?</p> <p>Forest in a Jar Time Lapse</p>	<p>OFRI</p> <p>Explore the Forest Into the Forest</p> <p>Sounds of the Forest</p> <p>Forest Fact Breaks:</p> <p>Ecosystems</p> <p>Tree Biology</p> <p>US Forest Service-Discover the Forest https://discovertheforest.org/</p> <p>Trees Are Terrific! (Ranger Rick's Naturescope Series Vol. 1)</p>

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Theme 1: What is a Forest?

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<p style="text-align: center;">Trees as Part of the Forest</p> <p>1. A tree is a woody perennial plant usually 12 feet or more (4 meters or more) tall, with a single main stem and a more or less distinct crown of leaves or needles.</p> <p>2. Trees have life stages that include germination, growth, maturity, reproduction, decline and death.</p> <p>3. As part of the forest ecosystem, trees have various roles (e.g., supplying oxygen, providing habitat, holding soil, moderating temperature, capturing, and storing carbon, and cycling water and nutrients).</p> <p>4. Trees compete with each other and with other plants growing near them for nutrients, sunlight, space and water.</p> <p>5. The health and wellness of trees in a forest ecosystem depend on and are affected by many factors.</p>	<p>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death.</p> <p>(Somewhat relevant) 3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</p> <p>(Somewhat relevant) 4-LS1-1. Construct an argument that plant, and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <p>5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <p>5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.</p>	<p>2: Get in Touch with Trees</p> <p>3: Peppermint Beetle (p. 68)</p> <p>4: Sounds Around</p> <p>21: Adopt a Tree (p. 21)</p> <p>22: Trees as Habitats (p. 76)</p> <p>23: The Fallen Log (p. 116)</p> <p>27: Every Tree for Itself (p.110)</p> <p>28: Air Plants</p> <p>31: Plant a Tree (p. 350)</p> <p>36: Pollution Search</p> <p>41: How Plants Grow (Here We Grow Again, p. 57)</p> <p>44: Water Wonders (p. 206)</p> <p>45: Web of Life (p. 216)</p> <p>48: Field, Forest, and Stream (p. 257)</p> <p>62: To Be a Tree</p> <p>63: Tree Factory (p. 180)</p> <p>64: Looking at Leaves (Tree ID, p. 186)</p> <p>67: How Big Is Your Tree? (Nature's Skyscrapers, p. 325)</p> <p>76: Tree Cookies (p. 171)</p> <p>77: Trees in Trouble (p. 197)</p> <p>79: A Tree's Life (Tree Lifecycle), (p. 14)</p> <p>88: Life on the Edge (p. 308)</p> <p>E-Unit for Grades 3-5 Energy in Ecosystems</p>	<p>Forests of Washington</p> <p>1: There's no Place Like Home</p> <p>2: Getting to know the Trees of Washington</p> <p>4: Forest Homes</p> <p>ELA Performance Tasks</p> <p>Bioblitz (Grade 3-5)</p> <p>Forest Benefits (Grade 4-5)</p> <p>Forest Management (Grade 4-5)</p> <p>Guides</p> <p>Field Investigations</p> <p>FieldDesign</p> <p>Fostering Outdoor Observation Skills</p> <p>PLT Extensions</p> <p>www.pltwa.com</p> <p>Every Tree for Itself Cards</p> <p>Tree Cookies</p> <p>Tree Habitat Bingo</p> <p>Fallen Log student page</p> <p>Forest Benefits student page</p> <p>Trees as Habitat and Tree Benefits</p> <p>Leaf as a System</p> <p>Solutions Oriented Learning Storylines</p> <p>Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>	<p>Which Niche?</p> <p>Environmental Barometer</p>	<p>OFRI</p> <p>Explore the Forest Into the Forest</p> <p>Forest Essays, Grades 2-3</p> <p>Forest Essays, Grades 4-5</p> <p>Forest Fact Breaks:</p> <p>Water</p> <p>Carbon Capture</p> <p>Ecosystems</p> <p>Photosynthesis</p> <p>Inquiry at Hinkle Creek</p> <p>Other</p> <p>US Forest Service-Discover the Forest</p> <p>https://discovertheforest.org/</p> <p>I-Tree: Tree Benefits</p> <p>www.treebenefits.com</p>

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<p style="text-align: center;">Forests as Ecosystems</p> <p>1. Forest ecosystems consist of different types of organisms (e.g. producers, consumers, and decomposers) and nonliving components (e.g. sunlight, soil, minerals, and water) interacting within a given environment, space, and time.</p> <p>2. Humans depend on and influence forest ecosystems and are themselves influenced by forest ecosystems.</p> <p>3. Forest ecosystems include processes such as photosynthesis, energy flow and the cycling of nutrients, water, carbon, and other matter.</p> <p>4. Forest ecosystems are complex and dynamic, and continuously undergo change or adaptation, ranging from gradual change (e.g., succession and climate) to abrupt change (e.g., fire and disease).</p> <p>5. Natural and human-caused disturbance events are a part of forest ecosystems. Examples of natural events are wind and volcanic activity, and examples of human-caused events are logging, road construction and development. Wildfire is a disturbance that can be both natural and human-caused.</p> <p>6. Forests are interconnected with other terrestrial (e.g., rangeland) and aquatic (e.g., estuary) ecosystems, forming a larger system.</p>	<p>(Somewhat relevant) 3-LS2-1. Construct an argument that some animals form groups that help members survive.</p> <p>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.</p> <p>5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>3: Peppermint Beetle (p. 68)</p> <p>9: Planet Diversity (Discover Diversity, p. 97)</p> <p>10: Charting Diversity (Charting Biodiversity, p. 90)</p> <p>11: Can It Be Real?</p> <p>12: Invasive Species (p. 299)</p> <p>16: Pass the Plants, Please</p> <p>17: People of the Forest</p> <p>18: Tale of the Sun</p> <p>20: Environmental Exchange Box</p> <p>21: Adopt a Tree (p. 21)</p> <p>22: Trees as Habitat (p. 76)</p> <p>23: The Fallen Log (p. 116)</p> <p>24: Nature's Recyclers</p> <p>25: Birds and Worms (Birds and Bugs, p. 35)</p> <p>26: Dynamic Duos</p> <p>27: Every Tree for Itself (p. 110)</p> <p>28: Air Plants</p> <p>39: Energy Sleuths (Exploration Energy, p. 247)</p> <p>42: Sunlight and Shades of Green (Here We Grow Again, p. 57)</p> <p>44: Water Wonders (p. 206)</p> <p>45: Web of Life (p. 216)</p> <p>46: Schoolyard Safari-Forest Safari (Backyard Safari, p. 29)</p>	<p>Forests of Washington</p> <p>1. There's no Place Like Home</p> <p>2. Getting to know the Trees of Washington</p> <p>3. Here's Looking at Yew</p> <p>4. Forest Homes</p> <p>5. Come Grow with Us</p> <p>6. Washington Forest Eco-Connections</p> <p>7. Fire: Friend or Foe</p> <p>8: The Forest Flu</p> <p>9: Weather Waltzes with the Forest</p> <p>ELA Performance Tasks</p> <p>Bioblitz (Grade 3-5)</p> <p>Forest Benefits (Grade 4-5)</p> <p>Forest Management Grade 4-5)</p> <p>Guides</p> <p>Field Investigations</p> <p>FieldDesign</p> <p>Fostering Outdoor Observation Skills</p> <p>Schoolyard Investigations</p> <p>Fall Color Change (Grade 3, also available in Spanish)</p> <p>Soil Temperature Investigations (Grade 3, also available in Spanish)</p> <p>PLT Extensions</p> <p>www.pltwa.com</p> <p>Fallen log student page</p> <p>Forest Benefits student page</p> <p>Trees as Habitat and Tree Benefits</p> <p>Leaf as a System</p>	<p>Limiting Factors: How Many Bears?</p> <p>Tracks!</p> <p>Oh Deer!</p> <p>Graphanimal</p> <p>What's that Habitat?</p> <p>Which Niche? Urban Nature Search</p> <p>Busy Bees, Busy Blooms</p> <p>Surprise Terrarium</p> <p>What Bear Goes Where?</p> <p>Seed Need</p> <p>Good Buddies</p> <p>Trophic Transfer</p> <p>Environmental Barometer</p> <p>Eco-enrichers</p>	<p>OFRI</p> <p>Explore the Forest Into the Forest</p> <p>Sounds of the Forest</p> <p>Forest Essays, Grades 2-3</p> <p>Forest Essays, Grades 4- 5</p> <p>Inquiry at Hinkle Creek (v)</p> <p>Forest Fact Breaks:</p> <p>Tree Biology</p> <p>Photosynthesis</p> <p>Water</p> <p>Carbon Capture</p> <p>Fire</p> <p>Fire Safety</p> <p>Forest Types</p> <p>Into the Forest</p> <p>Oregon's Forests (poster)</p> <p>Other</p> <p>Ellie's Log and Teacher's Guide http://ellieslog.osupress.oregonstate.edu/</p> <p>US Forest Service-Discover the Forest https://discovertheforest.org/</p> <p>Starflower lessons https://www.wnps.org/starflower</p> <p>Trees Are Terrific! (Ranger Rick's Naturescope Series Vol. 1)</p> <p>I-Tree: Tree Benefits www.treebenefits.com</p>

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Theme 1: What is a Forest?					
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<p>7. Washington’s regions vary in soil types, elevation, temperature, wind, and rainfall patterns. These variations create the different forest types and residents (plants and animals) that, together with disturbance histories, contribute to that region’s biodiversity.</p>		<p>47: Are Vacant Lots Vacant? (<i>Discover Diversity</i>, p. 97) 48: Field, Forest, and Stream (p. 257) 64: Looking at Leaves (<i>Tree ID</i>, p. 186) 65: Bursting Buds (p. 40) 68: Name that Tree (<i>Tree ID</i>, p. 186) 69: Forest for the Trees 70: Soil Stories (<i>Soil Builders</i>, p. 161) 76: Tree Cookies (p. 171) 77: Trees in Trouble (p. 197) 78: Signs of Fall (p. 155) 80: Nothing Succeeds Like Succession (p. 334) 81: Living with Fire (p. 315) 86: Our Changing World 88: Life on the Edge (p. 308)</p> <p>E-Unit for Grades 3-5 Energy in Ecosystems</p>	<p>Temperature investigation journal Rainfall investigation Habitat diversity field investigations</p> <p>Solution Oriented Learning Storylines Fire: Wildfires in Washington (Grade 3, also available in Spanish) Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>		
<p style="text-align: center;">Forest Classification</p> <p>1. Trees can be identified by their leaves, seeds, cones, flowers, fruits, and other characteristics. Trees can be classified into family, genus and species groups based on their reproductive parts and/or genetics.</p> <p>2. Different forest biomes exist around the world. Examples include tropical forests, temperate forests, and boreal forests. Washington is in the temperate forest biome.</p>	<p>3-LS4-3. Construct an argument with evidence that a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p> <p>(Somewhat relevant) 4-LS1-1. Construct an argument that plant, and animals have internal and external structures that function to support survival, growth,</p>	<p>6: Picture This! 8: The Forest of S.T. Shrew 11: Can It Be Real? 12: Invasive Species (p. 299) 16: Pass the Plants, Please 43: Have Seeds, Will Travel (p. 50) 49: Tropical Treehouse 61: The Closer You Look (p. 72) 62: To Be a Tree 63: Tree Factory (p. 180)</p>	<p>Forests of Washington</p> <ol style="list-style-type: none"> There’s no Place Like Home Getting to know the Trees of Washington Forest Homes Come Grow with Us Washington Forest Eco-connections <p>PLT Extensions www.pltwa.com Habitat diversity Field Investigations</p>	<p>Raindrops and Ranges</p> <p>Time Lapse</p>	<p>OFRI Explore the Forest Into the Forest Forest Essays, Grades 2- 3 Forest Fact Breaks: Forest Types</p> <p>Other Starflower Tree ID cards https://www.wnps.org/starflower</p> <p>US Forest Service Coloring Pages https://www.fs.fed.us/wildflowers/kids/coloring/index.shtml</p>

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3. Many different forest types exist within a biome, typically named by their dominant tree species. Common forest types in Washington include spruce-hemlock, Douglas-fir, ponderosa pine, mixed conifer, and hardwood.	behavior, and reproduction.	<p>64: Looking at Leaves (Tree ID, p. 186)</p> <p>65: Bursting Buds (p. 40)</p> <p>66: Germinating Giants (<i>Nature's Skyscrapers</i>, p. 325)</p> <p>68: Name That Tree (Tree ID, p. 186)</p> <p>70: Soil Stories (<i>Soil Builders</i>, p. 161)</p> <p>E-Unit for Grades 3-5 Energy in Ecosystems</p>	Tree Abundance Field Investigation		<p>Native Plant Society https://www.wnps.org/cps-programs/education</p> <p>Tree/Plant ID App https://www.treespnw.com/</p>

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Theme 2: Why Are Forests Important?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment</i> K-8 are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p>Historical Importance</p> <p>1. Today, as in the past, forest continue to play a significant cultural, spiritual, and economic role in Native American Societies.</p> <p>2. In Washington 's development toward becoming a state, forests provided basic resources for Native Americans and settlers, jobs for a growing workforce, resources for building the nation and dollars for a new state economy.</p> <p>3. As multiple demands on forests increased, the practice of forest management evolved to conserve and preserve natural resources and to improve society's use of forestlands. It incorporated scientific principles and an understanding of competing interests.</p> <p>4. Historical perspectives, which may include aesthetic, cultural, spiritual, economic, and educational factors, form our understanding of forests and our personal connections to forests, and guide decisions to ensure forests for future generations.</p>	<p>4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p> <p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>	<p>40: Then and Now 75: Tipi Talk 80: Nothing Succeeds Like Succession (p. 334) 90: Native Ways 92: A Look at Lifestyles 93: Paper Civilizations 95: Did You Notice? (p. 293)</p>	<p>Forests of Washington</p> <p>13. Who Manages Washington's Forests? 14. Where There's a Will There's a Way 21. A Forest Full of Views</p>		<p>Why Would Anyone Cut a Tree Down? Adapt mini unit for lower grades</p>
<p>Environmental Importance</p> <p>1. Forests affect air, water, and soil quality.</p> <p>2. Forests provide habitat for fish and wildlife.</p> <p>3. Forests provide the opportunity to study ecosystems, conservation, and natural resource management.</p> <p>4. Forests sequester carbon from</p>	<p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p> <p>5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and</p>	<p>1: The Shape of Things 2: Get in Touch with Trees 4: Sounds Around 6: Picture This! 7: Habitat Pen Pals 8: The Forest of S.T. Shrew 13: We All Need Trees (p. 82) 22: Trees as Habitats (p. 76) 23: The Fallen Log (p. 116)</p>	<p>Forests of Washington</p> <p>3. Here's Looking at Yew 4. Forest Homes 5. Come Grow with Us 6. Washington Forest Eco connections 19. Town Trees</p> <p>ELA Performance Tasks</p> <p>Forest Benefits (Grade 4-5)</p>	<p>Habitat Circles</p> <p>My Kingdom for a Shelter</p> <p>What's That, Habitat?</p> <p>Habicache</p> <p>Tracks!</p> <p>Graphanimal</p>	<p>OFRI</p> <p>Sounds of the Forest Explore the Forest Into the Forest Forest Essays, Grades 2-3 Forest Essays, Grades 4- 5 Forest Fact Breaks: Water Wildlife Carbon Capture Inquiry at Hinkle Creek (video)</p>

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Theme 2: Why Are Forests Important?

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<p>the atmosphere and are an essential component of the global carbon cycle. Forest products made from wood also store carbon.</p> <p>5. Washington’s forests are important ecological systems, interconnected with other systems not only environmentally, but socially and economically. Changes in the conditions and uses of Washington’s forests may affect the conditions and uses of forests worldwide.</p>	<p>water.</p> <p>5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>	<p>24: Nature’s Recyclers 25: Birds and Worms (<i>Birds and Bugs</i>, p. 35) 26: Dynamic Duos 28: Air Plants 34: Who Works in the Forest (My Green Future, p. 132) 44: Water Wonders (p. 206) 46: Schoolyard Safari (<i>Backyard Safari</i>, p. 29) 47: Are Vacant Lots Vacant? (<i>Discover Diversity</i>, p. 97) 49: Tropical Treehouse 64: Looking at Leaves (Tree ID, p. 186) 65: Bursting Buds (p. 40) 67: How Big Is Your Tree? (<i>Nature’s Skyscrapers</i>, p. 325) 68: Name that Tree (Tree ID, p. 186) 89: Trees for Many Reasons (p. 193) 86: Our Changing World 95: Did You Notice? (p. 44)</p> <p>E-Unit for Grades 3-5 Energy in Ecosystems</p>	<p>Forest Management (Grade 4-5)</p> <p>Guides Field Investigations Field Design Fostering Outdoor Observation Skills Career Profile Cards</p> <p>Solutions Oriented Learning Storylines Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p> <p>PLT Extensions www.pltwa.com Leaf as a System</p> <p>Curriculum Heathy Forests, Healthy Waters (modified) Drain Rangers Elementary</p>	<p>Seed Need</p> <p>Eco-Enrichers</p> <p>Environmental Barometer</p> <p>Nature in Art</p>	<p>Other Forest Carbon Cycle Stations Trees and Carbon Investments in Forest Carbon https://www.rainforest-alliance.org/curricula/climate</p> <p>Ellie’s Log and Teacher’s Guide http://ellieslog.osupress.oregonstate.edu</p> <p>www.budburst.org -for Investigations in the forest</p> <p>I-Tree: Tree Benefits www.treebenefits.com</p>
<p>Social Importance</p> <p>1. Washington’s forests provide basic resources that people use every day.</p> <p>2. Individuals hold different values concerning forests and their use, based on their experience and connection with the forest.</p>	<p>4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p>	<p>13: We All Need Trees 16: Pass the Plants, Please 17: People of the Forest 18: Tale of the Sun 21: Adopt a Tree (p. 21) 30: Three Cheers for Trees 55: Planning the Ideal Community</p>	<p>Forests of Washington Lesson 19: Town Trees</p> <p>ELA Performance Task Forest Benefits (Grade 4-5) Forest Management (Grade 4-5)</p>	<p>Habicache</p>	<p>OFRI Explore the Forest Into the Forest</p> <p>Other Why Would Anyone Cut a Tree Down? Adapt mini unit for lower grades</p>

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Theme 2: Why Are Forests Important?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment</i> K-8 are in red)	PEI Resources	Project WILD Activities	Additional Resources
3. Forests influence the economic, social and cultural composition of both urban and rural communities		56: We Can Work It Out (<i>Decisions, Decisions</i> , p. 224) 82: Resource-Go-Round 90: Native Ways 92: A Look at Lifestyles 93: Paper Civilizations 95: Did You Notice? (p. 44)	Solutions Oriented Learning Storylines Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish) Urban Forestry: Urban Heat Islands (Grade 5)		
<p style="text-align: center;">Economic Importance</p> <p>1. Forests provide multiple economic benefits, including jobs and forest products; renewable energy and minerals; financial returns to owners and investors; and ecosystem service benefits such as carbon storage, clean water, recreation, and tourism.</p> <p>2. Forests provide income for local, state, national, and international economies. Washington’s forest sector is one of the state’s largest economic sectors and provides critical resources and products to the global marketplace, including softwood lumber, plywood, and engineered wood products.</p> <p>3. Forest products are an important component of Washington’s “green” economy. They come from a renewable resource and store carbon, and most are also reusable and recyclable.</p> <p>4. Economic returns to forest landowners are important in preventing the loss of forests to other non-forest land uses.</p>	<p>4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p> <p>5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.</p>	<p>13: We All Need Trees 14: Renewable or Not? 15: A Few of My Favorite Things (<i>Global Goods</i>, p. 272) 20: Environmental Exchange Box 32: A Forest of Many Uses 34: Who Works in this Forest? (<i>My Green Future</i>, p. 132) 39: Energy Sleuths (<i>Exploration Energy</i>, p. 247) 51: Make Your Own Paper (p. 63) 75: Tipi Talk 82: Resource-Go-Round 83: A Peek at Packaging (p. 136)</p>	<p>Forests of Washington 11. Watershed Benefits 13. Who Manages Washington’s Forests? 14. Where There’s a Will There’s a Way 16. Tree Uses 21. A Forest Full of View ELA Performance Tasks- Forest Benefits (Grade 4-5) Forest Management (Grade 4-5) Career Profile Cards</p> <p>Solutions Oriented Learning Storyline Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>		<p>OFRI Explore the Forest Into the Forest Forest Essays, Grades 4-5 Forest Fact Breaks: Carbon Capture Green Building Wood Products Inquiry at Hinkle Creek</p> <p>Other Why Would Anyone Cut a Tree Down? Adapt mini unit for lower grades</p> <p>I-Tree: Tree Benefits www.treebenefits.com</p>

Making Forest Connections — Grades 3-5

Theme 3: How Do We Sustain Our Forests?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment</i> K-8 are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p style="text-align: center;">Forest Ownership</p> <p>1. The size and scale of forest ownership can vary from hundreds of thousands of acres in a national forest to an individual patch of trees in an urban forest.</p> <p>2. Washington’s forests are managed under private (e.g., family and industrial) and public (e.g., state and federal) ownership. Each type of ownership may have different management objectives and may be subject to different laws and policies.</p> <p>3. Forestlands— as well as fire and other disturbances that affect them – cross natural boundaries, such as watersheds, and administrative boundaries, such as city limits and private property lines.</p> <p>4. Many forest landscapes are made up of a variety of ownerships, a mix of management objectives, and a blend of forest ecosystems.</p>		<p>35: Loving It Too Much (Our Federal Forests, p. 342)</p> <p>69: Forest for the Trees</p> <p>71: Watch on Wetlands</p> <p>81: Living with Fire (p. 315)</p>	<p>Solutions Oriented Learning Storylines</p> <p>Fire: Wildfires in Washington (Grade 3, also available in Spanish)</p> <p>Urban Forestry: Urban Heat Islands (Grade 5)</p>		<p>OFRI</p> <p>Forest Fact Sheet: Ownership</p>
<p style="text-align: center;">Forest Management</p> <p>1. Forest management is a long- term process that can lead to changes in tree species composition, size, and age, as well as in forest health and resilience.</p> <p>2. Forest management ranges from active management (e.g., planting, thinning, and harvesting) to passive management (e.g., set- asides and wilderness areas) to grow, restore, maintain, conserve, or alter forests.</p> <p>3. Forest management includes the use of natural processes and goal-</p>	<p>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.</p> <p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>	<p>14: Renewable of Not?</p> <p>15: A Few of My Favorite Things (Global Goods, p. 272)</p> <p>31: Plant a Tree (p. 350)</p> <p>32: A Forest of Many Uses (Our Federal Forests, p. 342)</p> <p>34: Who Works in the Forest (My Green Future, p. 132)</p> <p>69: Forest for the Trees</p> <p>80: Nothing Succeeds Like Succession (p. 334)</p>	<p>Forests of Washington</p> <p>7. Fire: Friend or Foe?</p> <p>8. The Forest Flu</p> <p>9. Weather Waltzes with the Forest</p> <p>13. Who Manages Washington’s Forests?</p> <p>14. Where There’s a Will There’s a Way</p> <p>18. Let’s Make a New Deal</p> <p>19. Town Trees</p> <p>21. A Forest Full of Views</p>	<p>Bat Blitz</p> <p>Time Lapse</p> <p>Ecosystem Architects (adapt)</p>	<p>OFRI</p> <p>Into the Forest</p> <p>Forest Fact Breaks</p> <p>Clearcutting Sustainability</p> <p>Forest Management Inquiry at Hinkle Creek (v)</p> <p>Other</p> <p>I-Tree: Tree Benefits www.treebenefits.com</p>

Making Forest Connections — Grades 3-5

Theme 3: How Do We Sustain Our Forests?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment</i> K-8 are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p>oriented decisions and actions to achieve a variety of desired outcomes, including ecological (e.g., improving wildlife habitat), economic (e.g., timber production), and social (e.g., recreation) outcomes. Many of these outcomes are interrelated and can be managed for simultaneously, while others may be incompatible.</p> <p>4. In Washington, forest management in private and state forests is regulated by the Washington Forest Practices Act, which aims to sustain forest land for timber production and the other benefits forests provide, including clean water, wildlife habitat, and recreation.</p> <p>5. As human populations and global demand for forest resources increase, forest management and advances in research and technological systems can help to ensure forest resources are maintained or improved to produce the desired values and products.</p>			<p>ELA Performance Tasks Forest Management (Grade 4-5) Forest Benefits (Grade 4-5)</p> <p>Career Profile Cards</p> <p>Solutions Oriented Learning Storylines Fire: Wildfires in Washington (Grade 3, also available in Spanish) Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>		
<p>Forest Management Decisions</p> <p>1. A variety of individuals, companies, organizations, and government agencies manage forests. Forest management decisions may involve some or all of these working collaboratively to ensure mutually beneficial outcomes.</p> <p>2. Forest resource professionals aim to meet individual, societal and environmental needs.</p>	<p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>	<p>12: Invasive Species 31: Plant a Tree (p. 350) 32: A Forest of Many Uses (Our Federal Forests, p. 342) 34: Who Works in this Forest? (My Green Future, p. 132) 54: I'd Like to Visit a Place Where... 57: Democracy in Action 58: There Ought to Be a Law 69: Forest for the Trees</p>	<p>Forests of Washington</p> <p>7. Fire: Friend or Foe? 8. The Forest Flu 9. Weather Waltzes with the Forest 13. Who Manages Washington’s Forests? 14. Where There’s a Will There’s a Way 18. Let’s Make a New Deal 19. Town Trees 21. A Forest Full of Views</p>	<p>Keeping Cool</p> <p>Ecosystem Architects (adapt for younger grades)</p>	<p>OFRI Forest Fact Breaks Clearcutting</p> <p>Other I-Tree: Tree Benefits www.treebenefits.com</p>

Making Forest Connections — Grades 3-5

Theme 3: How Do We Sustain Our Forests?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment</i> K-8 are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p>3. The type and intensity of forest management is dependent on the purposes for which the forest is managed, as well as forest type, ownership, size, and location.</p> <p>4. Washington foresters and forest managers prepare forest management plans based on landowner goals and objectives, capabilities of the forest site, laws, and available tools (e.g., planting, harvesting, and using prescribed fire).</p> <p>5. The public empowers governments to conserve, maintain and sustain forest resources by enacting laws, creating policies, establishing agencies, creating public lands and providing management guidelines and continuing education for forest landowners.</p> <p>6. Government has a role in actively engaging organizations, businesses, communities and individuals in forest management and policy decisions, especially for publicly owned forests.</p> <p>7. Sustainable management of forests takes into account social, economic and ecological dimensions of sustainability. It includes maintaining forest health, productivity and diversity, and conserving a forested land base for the needs of present and future generations.</p> <p>8. Changing public demands and expectations for the forest, as well as unanticipated events, affect</p>			<p>ELA Performance Tasks Forest Management (Grade 4-5) Forest Benefits (Grade 4-5)</p> <p>Career Profile Cards</p> <p>Solutions Oriented Learning Storylines Fire: Wildfires in Washington (Grade 3, also available in Spanish) Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>		

Making Forest Connections — Grades 3-5

Theme 3: How Do We Sustain Our Forests?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment</i> K-8 are in red)	PEI Resources	Project WILD Activities	Additional Resources
decisions about forest resource use. Sound management based on scientific research, economic analysis and public involvement is required.					
<p>Forest Management Perspectives</p> <p>1. People have differing perspectives about forest management, which can be affected by politics, science, economics, values, perception, and experience.</p> <p>2. Forest management can be controversial because of diverse perspectives as well as the complex nature of forest ecosystems.</p> <p>3. Issues related to forest management include the effects of timber harvest, carbon sequestration and climate change, forest land uses, wildfire, and others.</p> <p>4. Involving multiple perspectives in decision-making, especially with regard to Washington’s public forests, can lead to more effective problem-solving and result in more sustainable outcomes for Washington’s forests.</p>	<p>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.</p> <p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>	<p>5: Poet-Tree (p. 143)</p> <p>32: A Forest of Many Uses (Our Federal Forests, p. 342)</p> <p>60: Publicize It!</p> <p>69: Forest for the Trees</p> <p>81: Living with Fire (p. 315)</p> <p>86: Our Changing World</p> <p>88: Life on the Edge (p. 308)</p> <p>89: Trees for Many Reasons (p. 193)</p> <p>90: Native Ways</p>	<p>Forests of Washington</p> <p>7. Fire: Friend or Foe?</p> <p>8. The Forest Flu</p> <p>9. Weather Waltzes with the Forest</p> <p>13. Who Manages Washington’s Forests?</p> <p>14. Where There’s a Will There’s a Way</p> <p>18. Let’s Make a New Deal</p> <p>19. Town Trees</p> <p>21. A Forest Full of Views</p> <p>ELA Performance Tasks</p> <p>Forest Management (Grade 4-5)</p> <p>Forest Benefits (Grade 4-5)</p> <p>Career Profile Cards</p> <p>Guides</p> <p>FieldDesign</p> <p>Project Based Learning Model</p> <p>Solutions Oriented Learning Storylines</p> <p>Fire: Wildfires in Washington (Grade 3, also available in Spanish)</p> <p>Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>	<p>Keeping Cool</p> <p>Environmental Barometer</p>	<p>OFRI</p> <p>Forest Fact Breaks</p> <p>Clearcutting</p> <p>Other</p> <p>I-Tree: Tree Benefits www.treebenefits.com</p>

Making Forest Connections — Grades 3-5

Theme 4: What is Our Responsibility to Washington Forests?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment K-8</i> are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p>Our Connection to Washington’s Forests</p> <p>1. Everyone should have the opportunity to identify and explore their personal connection with forests.</p> <p>2. Resources we use and consume every day are connected to Washington’s forests.</p> <p>3. There are many ways that individuals can connect with forests in Washington, including hiking and picnicking in forests, volunteering for projects in and around forests, becoming informed and active voters, attending public meetings, and making wise consumer choices.</p>		<p>2: Get in Touch with Trees 4: Sounds Around 5: Poet-Tree (p. 143) 7: Habitat Pen Pals 13: We All Need Trees 15: A Few of My Favorite Things (Global Goods, p. 272) 18: Tale of the Sun 21: Adopt a Tree (p. 21) 22: Trees as Habitats- Forest as Habitat (p. 76) 30: Three Cheers for Trees 31: Plant a Tree (p. 350) 32: A Forest of Many Uses (Our Federal Forests, p. 342) 37: Reduce, Reuse, Recycle (p. 356) 38: Every Drop Counts (p. 104) 46: Schoolyard Safari-Forest Safari (Backyard Safari, p. 29) 54: I'd Like to Visit a Place Where... 61: The Closer You Look (p. 72) 83: A Peek at Packaging (p. 136) 89: Trees for Many Reasons (p. 193) 92: A Look at Lifestyles 96: Improve Your Place (p. 293)</p>	<p>Forests of Washington</p> <p>1. There’s no Place Like Home 2. Getting to know the Trees of Washington 3. Here’s Looking at Yew 4. Forest Homes 5. Come Grow with Us 6. Washington Forest Eco-Connections 15. Less is More 16. Tree Uses 17. Wood You Make a Difference?</p> <p>ELA Performance Tasks Forest Benefits (Grade 4-5)</p> <p>Guides: Field Investigations Fostering Outdoor Observation Skills</p> <p>Curriculum Healthy Forests, Healthy Waters (modified)</p> <p>PLT Extensions www.pltwa.com Tree Benefits journal</p> <p>Solutions Oriented Learning Storylines Forests: Forest Ecosystem Benefits (Grade 5, also available in Spanish)</p>	<p>Animal Poetry</p> <p>Learning to Look, Looking to See</p> <p>Nature in Art Tracks!</p> <p>Graphanimal</p> <p>Urban Nature Search</p> <p>Seed Need</p> <p>Eco-Enrichers</p>	<p>OFRI Explore the Forest Forest Essays, Grades 2- 3 Forest Essays, Grades 4- 5</p>

Making Forest Connections — Grades 3-5

Theme 4: What is Our Responsibility to Washington Forests?

Washington Forest Education Framework	NGSS Performance Expectations	Project Learning Tree Activities (Title and Location in <i>Explore Your Environment K-8</i> are in red)	PEI Resources	Project WILD Activities	Additional Resources
<p>Working for the Future of Washington's Forests</p> <p>1. Everyone has a responsibility to treat forests with respect and to become a conscientious steward of Washington's forests and forest resources.</p> <p>2. Personal behaviors directly impact the health and resiliency of our forests. For example, the products we buy, how we treat trails and campgrounds, and how we hunt or use fire can either harm or help forests.</p> <p>3. Choices we make regarding the use of forest resources affect our ability to sustain forest ecosystems into the future.</p> <p>4. A variety of professionals and skilled trade workers are needed to sustain our forests, including foresters, biologists, soil scientists, engineers, lawyers, information technology professionals, land managers, investors, environmental educators, communications specialists, logging operators, mechanics, and wood products manufacturers.</p> <p>5. As individuals or as members of groups, we can influence laws and policies about Washington's forests.</p>	<p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>	<p>14: Renewable or Not? (p. 364)</p> <p>15: A Few of My Favorite Things (<i>Global Goods</i>, p. 272)</p> <p>30: Three Cheers for Trees</p> <p>31: Plant a Tree (p. 350)</p> <p>34: Who Works in this Forest? (<i>My Green Future</i>, p. 132)</p> <p>36: Pollution Search</p> <p>37: Reduce, Reuse, Recycle (p. 356)</p> <p>38: Every Drop Counts (p. 104)</p> <p>51: Make Your Own Paper (p. 63)</p> <p>54: I'd Like to Visit a Place Where...</p> <p>57: Democracy in Action</p> <p>58: There Ought to Be a Law</p> <p>81: Living with Fire (p. 315)</p> <p>82: Resource-Go-Round</p> <p>83: A Peek at Packaging (p. 136)</p> <p>87: Earth Manners</p> <p>96: Improve Your Place (p. 293)</p> <p>E-Unit for Grades 3-5 Energy in Ecosystems</p>	<p>Forests of Washington</p> <p>15. Less is More</p> <p>17. Wood You Make a Difference?</p> <p>19. Town Trees</p> <p>20. Earthkeepers: From Schoolyard to Planet</p> <p>22: A Washington Forest Fair</p> <p>Guides Project Based Learning Model FieldDesign</p> <p>Curriculum Healthy Forests, Healthy Waters (modified) Drain Rangers Elementary</p> <p>Solutions Oriented Learning Storylines Fire: Wildfires in Washington (Grade 3, also available in Spanish)</p>	<p>Ecosystem Architects</p>	<p>OFRI</p> <p>Sounds of the Forest Forest Essays, Grades 2-3</p> <p>Forest Essays, Grades 4- 5</p> <p>Into the Forest</p>