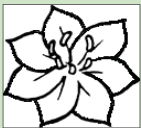


# Starflower Foundation Quick & Easy Habitat Education Activities

*Outdoor education activities for teaching children about the ecology of native plants and wildlife of the Pacific Northwest and Seattle urban area.*



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*Developed for Starflower Foundation by Heidi Bohan, et. al.*

*Quick and Easy Outdoor Education Activities are “quick and easy,” science-based, and designed to reinforce academic achievement standards (including EALRs and GLEs). Q&E Activities are focused on our Pacific Northwest native ecosystems, stress hands-on learning, and accommodate many different learning styles – all factors that research shows help students to succeed.*

*Q&E Activities have been field-tested by teachers and are adaptable for many settings from school grounds to greenbelts to public parks – some or all of which are within walking distance of the classroom door.*

*While gaining familiarity with native plants and animals, students enhance their listening, speaking, reading and writing skills. In addition, these activities can help limited English proficiency students meet state academic content and academic achievement standards. For many students, these outdoor excursions will be the start of a lifetime of appreciation for our native habitat.*

*Q&E Activities can also be used by naturalists and stewards of native plant landscapes to actively involve children and adults in the long-term stewardship of native habitat.*

*Starflower Foundation is pleased to have supported the development and use of these materials in native plant habitats at Seattle public parks (Colman, Frink, Genesee, Greg Davis, Madrona Woods, Magnuson, Mee Kwa Mooks, Pritchard Beach, Roxhill, and Seward), Seattle schools (Dearborn, Hawthorne, Pathfinder, and Sanislo Elementary schools, and Washington Middle School) and the Lake Washington School District Environmental and Adventure Middle School.*



**Western Starflower**  
*(Trientalis latifolia)* is a tiny woodland ground-cover, once common in Seattle forests. Its dainty flowers are born on thin stalks giving the appearance of floating woodland stars. The reintroduction of plants like these to Seattle was a primary goal of Starflower Foundation.

# Quick & Easy Habitat Education Activities

## *For Kindergarten to Fifth Grade Students*

Quick and Easy Habitat Education Activities are presented in an easy to use card format. They provide an integrated and sequential kindergarten through fifth grade hands-on science lesson series. The cards, activity sheets and support materials may be freely duplicated for educational purposes – not for sale. The lessons use materials and equipment readily available in the classroom, easily found in habitat areas, or purchased at low cost from craft, office supply, or grocery stores. These teacher and student-friendly outdoor-focused activities have been proven with Seattle urban elementary classrooms.

Q&E Activities have a focus on Pacific Northwest ecology, stress hands-on learning experiences and speak to many different learning styles – all factors that research shows help students to succeed.

Taking students outdoors makes real world connections that are not possible indoors.

For many students, these excursions will be the start of a lifetime of appreciation of the natural world.

While gaining familiarity with native plants and animals, students also enhance their listening, speaking, reading and writing skills. In addition, these activities can help limited English proficiency students meet state academic content and academic achievement standards.

We were fortunate to have many teachers work with us to develop these activities. They recognized the value of the activities in reinforcing science concepts and the importance of introducing students to their natural environment. The Q&E Activities presented here reflect our shared experiences with students and teachers in the field, and are bolstered by extensive research into the academic learning requirements and teaching techniques stressed in Seattle schools. Our goal was to create meaningful outdoor education activities that:

- are specific to Pacific Northwest ecologies
- provide opportunity to ‘learn as you teach’
- require minimal, readily available materials and props
- can be implemented within a reasonable period of time
- satisfy important EALRs, GLEs, and Seattle School District standards
- serve as meaningful extensions to the Seattle School District Science Kits
- are thematic and link to grade level studies in Seattle schools
- are sequential, yet flexible enough to meet individual classroom needs, and
- are enjoyable, hands-on, and interactive.

Q&E Activities were developed using a process of creation, testing, and refinement. The process began with naturalists and native plant specialists creating informal activities and testing them with students and teachers over several years. This led to the development of formalized activities by curriculum specialists who provided training sessions for teachers and educators who then independently field-tested these activities. The feedback we received throughout this process was invaluable and is reflected herein.

*Q&E Activity sheets and support materials may be freely duplicated for educational purposes - not for sale.*



## Quick and Easy Habitat Education Activities - Thematic, Sequential and Satisfy Multiple Learning Requirements

Quick & Easy Habitat Education Activities provide grade-level appropriate lessons arranged in sequential learning units. Each activity is aligned to Washington State Academic Learning Requirements (EALRs) and strengthens student skills for WASL testing. In addition, Q&E activities can serve to extend and reinforce other curriculum such as NTS Science Kits. Individual grade themes, along with a sample activity and some of the associated EALRs they teach, are shown below.

**Kindergarten**  
Discovering that animals need plants for food and shelter



**Animals, Animals**

**Communication:** 1.2, 1.3 Listen and observe to gain and interpret information. Check for understanding by asking questions, clarify content and meaning.

**Arts** 1.1, 1.2, 1.3 Understand and apply arts concepts and vocabulary to communicate ideas. Use art skills and techniques to solve problems and express ideas.

**Seattle School District Science Standards**

1.2 Some animals and plants are a lot like one another in the way they look and in the things they do, and others are very different from one another.

**First Grade**  
Observing plant and animal characteristics



**Maple Seed Mixup**

**Science** 1.2 Describe how an organism's behavior and ability to survive is influenced by its environment, other life forms, and availability of food and/or other resources.

**Science** 2.1 Develop abilities necessary to do scientific inquiry using modeling.

**Seattle School District Standards**

1.2, 1.4, 1.5 Plants need water and also light from the sun to make their own food to grow.

1.4 Recognize the components, structure, and organizations of systems and the interconnections within and among them.

**Second Grade**  
Exploring native plants



**Leaf Discovery Drawing**

**Science** 1.1 Use properties to identify, describe, and categorize; and use characteristics to categorize living things. 2.1 Develop abilities necessary to do scientific inquiry.

**Arts** 1.2, 1.3 Organize arts elements into artistic compositions. Use and develop art skills and techniques to solve problems and express ideas.

**Seattle School District Standards**

**Science** 1.2 Some plants are a lot like one another in the way they look and in the things they do, and others are very different from one another. 1.1, 1.3 Objects can be described in terms of their composition and their physical properties.

**Third Grade**  
Investigating native seeds



**Seeds of All Kinds Hunt**

**Science** 1.1 Properties: Understand how characteristics are used to categorize life in living systems. 1.1.6 Understand characteristics of living organisms. Identify observable characteristics of living organisms. 1.2 Structures: Understand how components describe living systems. 2.1.1 Ask questions about organisms based on observations of the natural world. Recognize the question being answered in an investigation.

**Reading** 1.1 Use word recognition and meaning to read and comprehend text. 1.2 Build vocabulary through reading.

**Communication** 1.1 Focus attention. 1.2 Listen and observe to gain and interpret information.

**Fourth Grade**  
Examining wildlife habitat and the 'Web of Life'



**Life in the Forest Floor**

**Science:** 1.1.6 Understand how to distinguish living from non living and use characteristics to sort common organisms into plant and animal groups. Classify and sort organisms into plant and animal groups. 1.1.7 Understand the life cycles of plants and animals. 1.2.1 Analyze how the parts of a system go together, and how these parts depend on each other. Describe the function of a part of a system. Explain how one part of a system depends upon other parts of the same system. 1.2.6 Understand that organisms can be a single cell or many cells that form parts with different functions. Describe the function of a part of a living thing. 1.2.7 Understand that people use magnifiers to observe things they cannot see with their eyes.

**Fifth Grade**  
Designing and participating in stewardship activities

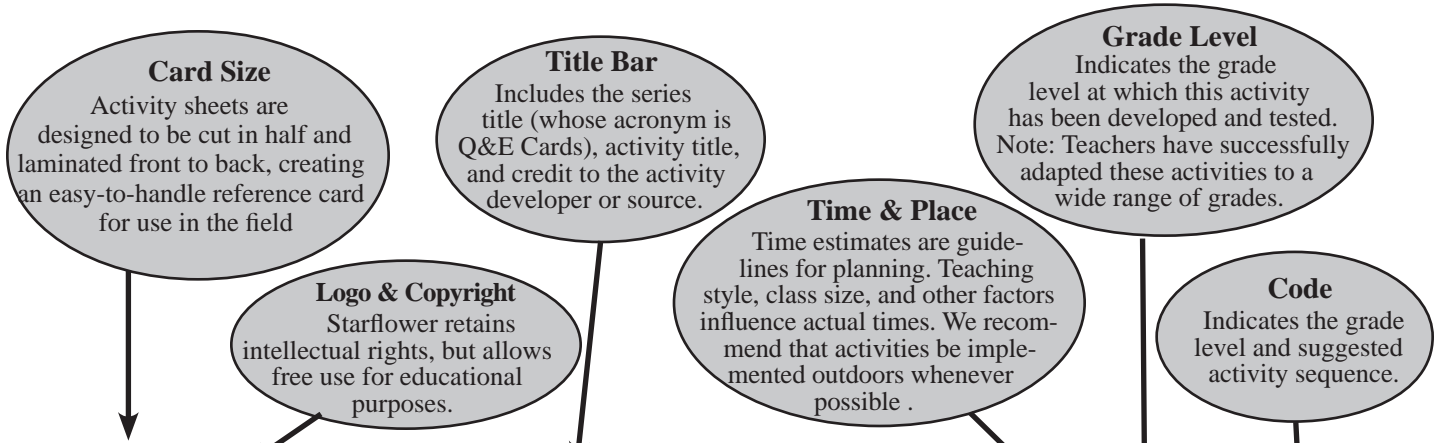



**Monitoring Inspiration**

**Science** 2.1.1 Ask questions about organisms and events based on observations of the natural world. Develop a new question that can be investigated with the same materials and/or data as a given investigation. Recognize the question being answered in an investigation. 2.1.2 Understand how to plan and conduct simple field investigations. Make observations about characteristics or properties. Make predictions and give reasons for the predictions. Plan and conduct an observational investigation that collects information about characteristics or properties. Collect data using simple equipment and tools that extend the senses.

**Communication** 2: The student communicates ideas clearly and effectively. 2.1 Communicate clearly to a range of audiences for different purposes. 2.2 Develop content and ideas. 2.3 Use effective delivery.

# Decoding A Quick & Easy Activity Card



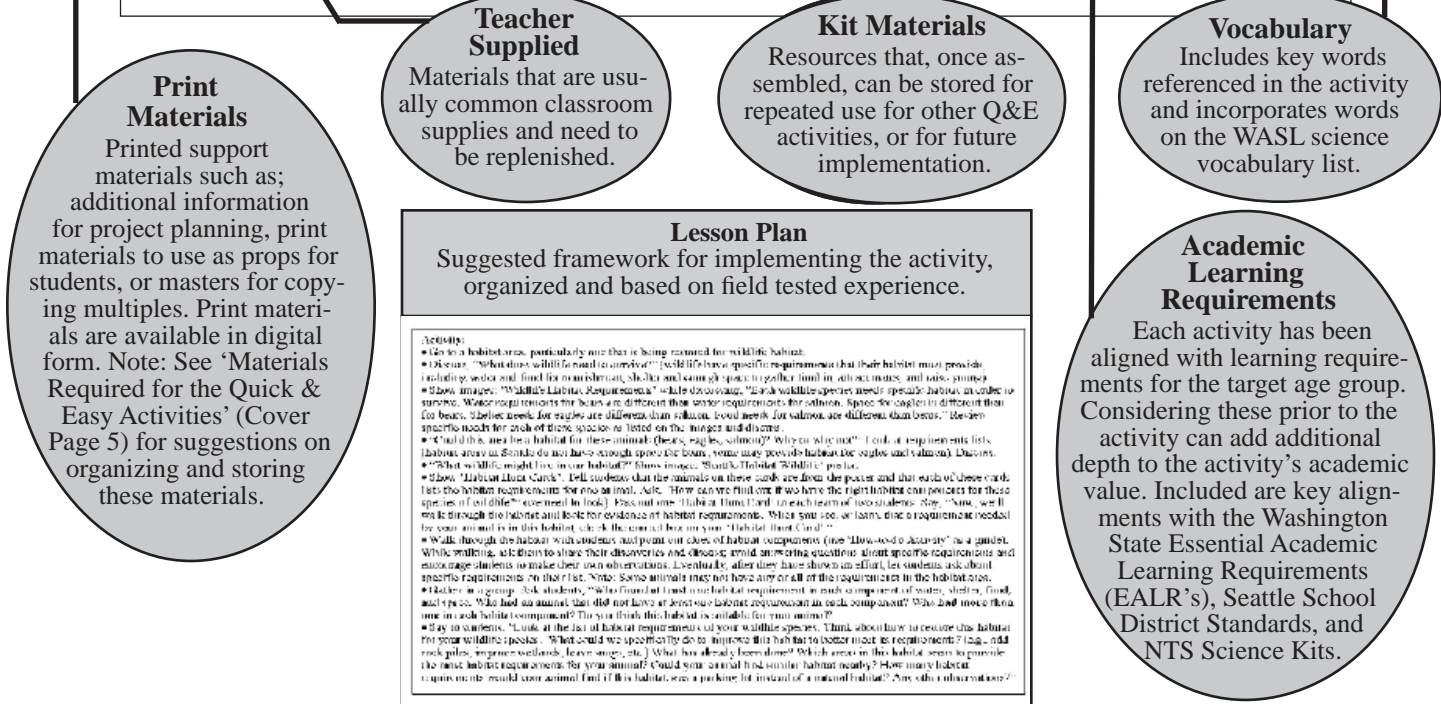


**Quick & Easy Habitat Education Activities**  
**Habitat Hunt**  
*Developed by Heidi Roberts, Starflower Foundation*

**Fourth Grade**  
**30-45 Minutes**  
**Outdoors**

4-2

<p><b>Descriptions:</b> Students work in teams to find the important wildlife habitat components required by different wildlife species that are known to use the types of habitat area being visited. Students evaluate this information to assess the habitat potential for a particular species. They then consider ways that new habitat components might be introduced as part of a restoration project to improve the habitat for specific animals.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Students understand that natural areas provide specific habitat for different species of wildlife.</li> <li>• Students understand that restoration can improve specific habitat features for specific wildlife.</li> </ul> <p><b>Print Materials:</b></p> <ul style="list-style-type: none"> <li>• "How-to-do Activity: Habitat Hunt Clues"</li> <li>• Images: "Wildlife Habitat Requirements," "Seattle Habitat Wildlife" poster, "Poster Overlay"</li> <li>• Master: "Habitat Hunt Cards"</li> </ul> <p><b>Kit Materials:</b></p> <ul style="list-style-type: none"> <li>• Foam core clipboards: 1 per team</li> </ul> <p><b>Teacher supplied:</b></p> <ul style="list-style-type: none"> <li>• Copies of "Habitat Hunt Cards": 1 animal card per team of two students (Note: It is okay if more than one team has the same animal)</li> <li>• Pencils: 1 per team</li> </ul>	<p><b>Vocabulary</b></p> <p><b>Wildlife habitat components:</b> the major parts of a habitat required for a wildlife species to survive. Food, water, shelter, nesting and space (enough to provide food, water and shelter) are needed.</p> <p><b>Habitat restoration:</b> bringing back an environment to its former condition and existence for animals and plants to live and grow.</p> <p><b>Washington State EALRs</b></p> <p><b>Reading 1.1</b> Use oral recognition and meaning to read and comprehend text.</p> <p><b>Science 1.2.1</b> Analyze how the parts of a system go together, and how those parts depend on each other. Explain how one part of a system depends upon other parts of the same system.</p> <p><b>Science 1.3.1</b> Understand how environmental conditions are influenced by behavior, the environment, other life forms, and the availability of air, light, water, nutrients and food. Identify the characteristics of organisms living in a given habitat, and explain how those characteristics allow the organism to survive in the habitat.</p> <p><b>Science Kits: Ecosystems</b></p>
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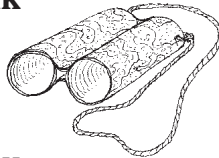


# Quick & Easy Habitat Education Activities

are listed by grade level on this page. The next three pages provide a brief description of the activities.

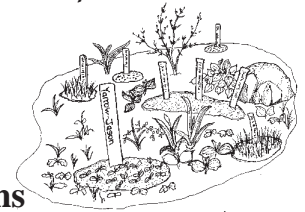
## Kindergarten

- K-1 Everybody Needs a Home
- K-2 Homes in the Habitat Walk
- K-3 Nature Detective Discovery
- K-4 Nature Detective Walk
- K-5 Mystery Animal
- K-6 Animals, Animals
- K-7 Bird Beak Buffet
- K-8 Bird Observation Walk



## Third Grade

- 3-1 Giving Space
- 3-2 Journal the Seasons
- 3-3 Seeds of All Kinds Sort
- 3-4 Seeds of All Kinds Hunt
- 3-5 Flowers to Seeds
- 3-6 Seed Dispersal Sort
- 3-7 Seed Dispersal Hunt
- 3-8 Growing Native Seeds
- 3-9 Plant Growth Monitoring
- 3-10 Seeds for Wildlife
- 3-11 Seeds for People



## First Grade

- 1-1 The Magic Glasses Story
- 1-2 Magnifier Walk
- 1-3 Creepy Crawly Story
- 1-4 Creepy Crawly Exploration
- 1-5 Bark & Leaf Rubbings
- 1-6 Plants & Animals: Same/Different
- 1-7 Maple Seed Mix-up
- 1-8 Plant & Animal Interaction Hike
- 1-9 Drawing for Reflection



## Fourth Grade

- 4-1 Animal Survival Skills
- 4-2 Habitat Hunt
- 4-3 Wildlife Sign Walk
- 4-4 Cycle of Renewal Drawings
- 4-5 Life in the Forest Floor
- 4-6 Habitat Features- Each One Teach One
- 4-7 Ecosystem Explorers
- 4-8 Web of Life
- 4-9 Ethnobotany Story
- 4-10 Ethnobotany Snack Plate



## Second Grade

- 2-1 Dead or Alive?
- 2-2 Meet Douglas Fir
- 2-3 Meet Bigleaf Maple
- 2-4 Evergreen & Deciduous Leaves
- 2-5 Evergreen & Deciduous Walk
- 2-6 Leaf Discover Drawing
- 2-7 Leaf Discovery Walk I
- 2-8 Leaf Discovery Walk II
- 2-9 Meet My Plant



## Fifth Grade

- 5-1 Restoration Bag
- 5-2 Four Direction Walk
- 5-3 Four Direction Plots
- 5-4 Restore a Habitat I- Ecosystems
- 5-5 Restore a Habitat II- Forest Succession
- 5-6 Plant Assessment
- 5-7 Soil Assessment I- Composition
- 5-8 Soil Assessment II- Hydrology
- 5-9 Monitoring Inspiration
- 5-10 Monitoring Stations



**Quick & Easy Habitat Education Activity Descriptions**

<b>Kindergarten</b>		<b>Theme: Discovering that animals need plants for food and shelter</b>
K-1	Everybody Needs a Home	This introductory etiquette activity helps students gain awareness of, and empathy towards, wildlife that make their homes in habitat areas. Students listen to a story and offer feedback about how they might behave when visiting habitat areas. This activity is designed to be followed by <i>Homes in the Habitat Walk</i> activity, with a visit to a habitat area to look for wildlife homes.
K-2	Homes in the Habitat Walk	Students take a walk in a habitat area, and look for evidence of wildlife homes of all kinds, including those of insects, birds and mammals. Students demonstrate good outdoor etiquette including not disturbing these wildlife homes. Students draw a picture of a wildlife home, and the animal they think may use it.
K-3	Nature Detective Discovery	Students become 'Nature Detectives' using their senses to discover and observe different natural objects from the habitat area. They use touch, sight, smell and hearing to investigate sensory sets of 'Mystery Nature Objects' and audio recordings of animal sounds. At the end of each set they learn the name of its plant or animal. This activity is designed to be followed with <i>Nature Detective Walk</i> .
K-4	Nature Detective Walk	Students go to a habitat area and use their senses to learn about the plants and animals they studied during the <i>Nature Detective Discovery</i> activity. They learn about ways to identify these plants and animals using their senses of touch, sight, smell and hearing. They may also use the sense of hearing to discover birds or other animals while going on their walk.
K-5	Mystery Animal	Students hear clues about an animal native to the Pacific Northwest which lives in Seattle urban habitat areas. Students try to guess the animal as clues are being read. After reading through all the clues the students are shown the correct picture of the animal and discuss what they have learned.
K-6	Animals, Animals	This interactive, role playing activity introduces students to many types of wildlife in Seattle urban habitat areas. Students work in teams to role play wildlife shapes, movements and sounds while other students make guesses.
K-7	Bird Beak Buffet	This activity introduces students to the concept that characteristics of animals and plants are related to their survival. Students learn that different birds have different types of beaks. They use models of these beaks to gather different types of 'foods' and learn that gathering success is limited by the type of 'beak' they have.
K-8	Bird Observation Walk	Students go into the habitat area and use their binoculars and ears to look and listen for birds. They try to find three birds by sight, and three birds by sound. Students discuss the behavior of the birds and their association with plants.

**Quick & Easy Habitat Education Activity Descriptions**

<b>First Grade</b>		<b>Theme: Observing plant and animal characteristics</b>
1-1	The Magic Glasses Story	This activity teaches proper outdoor etiquette and precedes going into the habitat area. Students hear a story about children who ran and shouted all the way to a wildlife habitat area, excited to see wildlife but saw none. The children learn about 'Magic Glasses' and good behavior. This is followed with a walk in a habitat area to observe wildlife.
1-2	Magnifier Walk	Students go on an unstructured exploratory walk in the habitat area while practicing their outdoor etiquette skills. Students use magnifiers to freely observe natural objects they encounter on the walk. This allows students to practice using magnifiers, and to familiarize themselves with the many interesting things in their habitat, prior to other activities.
1-3	Creepy Crawly Story	This activity introduces students to the tiny wildlife that live in habitat areas; many of these animals may already be familiar to them. Students listen to a guided imagery story and act out the behaviors of certain invertebrates that are likely to be found in the habitat area. This activity is designed to be followed by <i>Creepy Crawly Exploration</i> .
1-4	Creepy Crawly Exploration	Students go to the habitat area where exploration stations are set up. Using plastic cups and spoons, students collect 'creepy crawly' invertebrates they find in the soil duff. Students try to identify these tiny animals using an invertebrate identification sheet and share their finds with other students. Students return the animals to the soil duff or use them in the 'Organisms' science kit terrarium.
1-5	Bark & Leaf Rubbings	This activity serves to reinforce knowledge about the parts of a plant, and helps students recognize that different plants have different characteristics. Students make leaf and bark rubbings from four different plant species in a habitat area and then use these rubbings to sort by characteristics. The rubbings are also used to find the plants again, using the characteristics as 'clues'.
1-6	Plants & Animals: Same/Different	Students consider the commonalities and differences between plants and animals in the habitat area. Their observations are recorded using a classroom-size Venn diagram that distinguishes between characteristics that are different, and those that are the same, between plants and animals.
1-7	Maple Seed Mix-Up	This interactive game helps students understand the combination of basic environmental conditions necessary for a seed to sprout. Students role-play a seed or one of its needs (sun, soil and water) in a game similar to cake walk. Where a 'seed', 'water', 'sun' and 'soil' have landed together on a 'base', a seed can sprout. Students then evaluate outdoor areas that may or may not provide those same needs.
1-8	Plant and Animal Interaction Hike	This activity connects the previous activities by asking students to use their observation skills to explore the relationship between animals and plants. Students learn to find wildlife sign, then to recognize how plants are being used by wildlife. Students use picture cards to help find and identify these wildlife and plant interactions.
1-9	Drawing for Reflection	Students draw a picture of an animal and plant interaction from their observations made during the <i>Plant and Animal Interaction Hike</i> . While best done in the habitat area, drawing may be done in the classroom from memory. These drawings can be used for assessment, classroom presentations and/or displays.

**Quick & Easy Habitat Education Activity Descriptions**

	<b>Second Grade</b>	<b>Theme: Exploring native plants</b>
2-1	Dead or Alive?	Students learn that plants that appear to be dead may actually be dormant. Students learn how to distinguish the difference between a dormant plant and a dead plant. This activity encourages students to be careful near plants while conducting activities in habitat areas.
2-2	Meet Douglas Fir	While students are sitting at the base of a Douglas fir tree in the habitat area they listen to one or more children's stories about the Douglas fir tree while viewing related images. Guiding questions help students focus their attention, test comprehension and emphasize main themes. Students use drawings and graphic organizers to show understanding.
2-3	Meet Bigleaf Maple	After meeting 'Douglas Fir', students now meet 'Bigleaf Maple'. While students are sitting at the base of a bigleaf maple tree in the habitat area they listen to one or more children's stories about maple trees while viewing related images. Guiding questions help students focus their attention, test comprehension and emphasize main themes. Students use drawings and graphic organizers to show understanding and to compare differences between Douglas fir and bigleaf maple trees.
2-4	Evergreen and Deciduous Leaves	Students consider the difference between evergreen and deciduous leaves as represented by Douglas fir and bigleaf maple and other native plants from the habitat area. The class creates models of evergreen and deciduous leaves and conducts an experiment to help understand how these leaves are different. Students compare these results to live leaf samples.
2-5	Evergreen and Deciduous Walk	Students use their knowledge about characteristics of evergreen and deciduous leaves to find evergreen and deciduous plants in the habitat area. Students sort these plants by characteristics and create rules for belonging to evergreen or deciduous groups.
2-6	Leaf Discovery Drawing	Students increase their knowledge about leaves by creating a leaf rubbing of one leaf from the habitat area. Students use the characteristics of their leaf to name their leaf rubbing, and to tell others why they named it. Students use this rubbing and its description as 'clues' to find their plant in the forest during the <i>Leaf Discovery Walk II</i> activity.
2-7	Leaf Discovery Walk I	Students observe characteristics of native plants by looking at leaf shape, edges and texture; as well as plant form. Then, students record this information to learn basic taxonomic terminology and the details on which to focus when using leaves for plant identification. <i>Leaf Discovery Walk I</i> activity familiarizes students with the skills and language necessary for <i>Leaf Discovery Walk II</i> .
2-8	Leaf Discovery Walk II	Students use the leaf rubbing they made in <i>Leaf Discovery Drawing</i> as a 'clue', along with their new awareness of leaf characteristics, to find the plant from which the leaf originated. They use an observation form to record plant characteristic information. Students may conduct further research about their plant.
2-9	Meet My Plant	Students create a journal entry about a plant they observe and study in the habitat area. The journal entry includes a drawing, a rubbing, imaginary name, real name and interesting information about the plant (e.g., wildlife uses, size, plant type, ethnobotany, etc.) This activity can serve as a basis for numerous extension activities.

**Quick & Easy Habitat Education Activity Descriptions**

	<b>Third Grade</b>	<b>Theme: Investigating native seeds</b>
3-1	Giving Space	Students learn about the habitat component of 'space' for wildlife, and apply this understanding as they gain skills for giving personal space to each other, plants, and wildlife while working and studying in habitat areas.
3-2	Journal the Seasons	Students learn about differences between the seasons and begin journaling their observations about changes in plants, animals and weather that describe the seasons. This activity provides an opportunity for students to apply 'giving space' to each other by finding a place in the habitat restoration to study.
3-3	Seeds of All Kinds Sort	Students learn about the life cycle of the bigleaf maple seed which is found in a winged 'samara'. They observe other different native plant seed types and discover the actual seeds in berries, capsules, nuts, seed-heads, samaras and cones.
3-4	Seeds of all Kinds Hunt	Students go into the habitat area and use a scavenger hunt form to locate seeds based on their characteristics. The habitat area is set up in advance to help lead students to a variety of seeds that match these characteristics.
3-5	Flowers to Seeds	Students learn about and observe how flowers become seeds on different native plants. Students find at least one plant in the habitat area that shows evidence of a flower becoming a seed, then draw and label it. Students use a graphic organizer to draw the life cycle of a seed.
3-6	Seed Dispersal Sort	Students learn how and why seeds disperse for germination. Students observe and study different types of seeds and use a graphic organizer to sort seeds into dispersal types. This activity is followed by the <i>Seed Dispersal Hunt</i> activity.
3-7	Seed Dispersal Hunt	Students visit the habitat area and use a scavenger hunt form to identify the seed dispersal types of six different seeds. Students consider reasons how seed dispersal types are important for plant survival.
3-8	Growing Native Seeds	Students propagate native plant seeds using techniques that replicate natural seasonal dispersal of the seed. The seedlings can be used for the <i>Plant Growth Monitoring</i> activity and for stewardship activities such as enhancement plantings, fundraisers, or donations to other restoration projects and nurseries. These native seedlings offer a real world comparison to the hybridized rapid-cycling Wisconsin Fast Plants used in activities for the 'Plant Growth and Development' science kit.
3-9	Plant Growth Monitoring	Students conduct growth monitoring activities using seedlings propagated in the <i>Growing Native Seeds</i> activity, or seedlings and young plants occurring in the habitat area. Students read and record soil and air temperatures using thermometers, and plant height using rulers. This information is used to create line graphs that show the relationship between these conditions and plant growth.
3-10	Seeds for Wildlife	Students learn that wildlife, such as birds, use seeds for food. Students consider beak adaptations for feeding on certain types of seeds. They then build small feeding stations for wildlife using native plant seeds and place them in the garden and make wildlife observations.
3-11	Seeds for People	Students participate in creating a snack plate of edible seeds from native plants and share in eating these foods, while gaining an appreciation of their value to people. Students identify some of the plants that provide these foods. This serves as a culmination activity for students studying native seeds.

### Quick & Easy Habitat Education Activity Descriptions

	<b>Fourth Grade</b>	<b>Theme: Examining wildlife habitat and the ‘Web of Life’</b>
4-1	Animal Survival Skills	Students learn skills for observing wildlife in the habitat project by imitating wildlife survival techniques, while also practicing good outdoor etiquette. These skills help students to move quietly, and to see and hear more clearly. They are also helpful for managing student behavior while visiting habitat areas.
4-2	Habitat Hunt	Students work in teams to find the important wildlife habitat components required by different wildlife species that are known to use the types of habitat area being visited. Students evaluate this information to assess the habitat potential for a particular species. They then consider ways that new habitat components might be introduced as part of a restoration project to improve the habitat for specific animals.
4-3	Wildlife Sign Walk	Students learn how to look for evidence of wildlife in a natural habitat area by studying images of different types of wildlife sign. They walk through the natural habitat, making field observations and looking for wildlife sign, then record wildlife sign through drawing and journaling.
4-4	Cycle of Renewal Drawings	Students learn that the habitat area is a complex system through drawing, imaginative role playing and exploration. They gain an appreciation for tiny organisms and soil, as well as for larger plants and animals. Students develop appreciation for the habitat components which will be important as they conduct other activities in the habitat area.
4-5	Life in the Forest Floor	Students explore woody debris to find evidence of wildlife and plants that live in the decomposing material on the forest floor. Students use magnifiers to see this evidence then examine and explain the importance of woody debris in the cycle of renewal of the habitat area. This activity is designed to follow <i>Cycle of Renewal Drawings</i> .
4-6	Habitat Features- Each One Teach One	Students participate in a hike during which they become ‘the teachers’. At teaching stations, student teams teach their fellow students interesting facts about one habitat feature in the forest and are active learners themselves. The technique for instruction models “leap frog learning” where students learn by teaching.
4-7	Ecosystem Explorers	Students go into a habitat area to learn about, identify and explore ecosystem components. Students go on a scavenger hunt to find and identify evidence of components, and then draw this evidence. These drawings are used in the <i>Web of Life</i> activity, which follows, to create a ‘web of life’ for the habitat.
4-8	Web of Life	Students use drawings created in the <i>Ecosystem Explorers</i> activity to create a model of their ecosystem and to show how the components of an ecosystem depend upon each other. By looking at this interdependence, students increase their awareness of the importance of individual species or elements of the habitat area in maintaining a healthy ecosystem.
4-9	Ethnobotany Story	Students learn about native plants and their uses for food and shelter by Native Americans. Students use this knowledge to ‘survive’ while enacting an ethnobotany story.
4-10	Ethnobotany Snack Plate	Students participate in making a snack food plate from native plants, while learning about the plants which are the source of these foods. This activity helps students understand that humans also depend on natural habitat for survival.

### Quick & Easy Habitat Education Activity Descriptions

	<b>Fifth Grade</b>	<b>Theme: Designing and participating in stewardship activities</b>
5-1	Restoration Bag	Students develop a ‘habitat restoration ethic’ and learn about the tools and practice of a scientific restoration study by looking at and discussing various relevant objects. This activity is to be implemented prior to visiting restoration site.
5-2	Four Direction Walk	The students go to a habitat site and get the “lay of the land” by locating the four cardinal points- N, S, E, W. Students place the cardinal points on site maps and discuss why this information is important when studying an ecosystem.
5-3	Four Direction Plots	Students form teams to select and layout observation study plots in the habitat area which will be used for ongoing observation and monitoring stewardship activities. Students create a plot map and mark the four directions on their map. Students begin to journal about their plots.
5-4	Restore a Habitat I- Ecosystems	Students learn about the Westside Lowland Forest ecosystem, the concepts of plant communities and plant layers, while viewing images. Students assess their plot and determine its plant community as they consider the goals of habitat restoration.
5-5	Restore a Habitat II- Forest Succession	Students study a forest restoration area in the habitat site and visualize its growth in 5, 25 and 100 years. Students draw succession drawings reflecting their predictions. This activity helps students understand restoration potential over time and the role of succession in habitat restoration planning.
5-6	Plant Assessment	Students assess the existing vegetation found on their plots and evaluate their plots for native and non-native plant cover. Students build plant identification skills and collect information useful for future monitoring activities.
5-7	Soil Assessment I- Composition	Students conduct tests to assess soil composition from their study plots and from different plant community types in the habitat area. They compare data and draw conclusions about their results. To reinforce the learning experience and to share equipment and data, consider working with other classes who are studying the ‘Soils’ science kit.
5-8	Soil Assessment II- Hydrology	Students use soil samples collected in the <i>Soils Assessment I</i> activity to study how soil composition affects water flow, and consider how differences in soil composition have an effect in the habitat area. Activities integrate directly with the ‘Land & Water’ science kit, using the plots and habitat area as ‘real world’ examples.
5-9	Monitoring Inspiration	Students consider how to determine if a habitat area is healthy, or if a restoration project is successful, and how this information might be gathered and shared with others. Students review suggested monitoring activities and develop a plan to set up monitoring activities for their plots. Students decide how they will share this information with others in the form of a report or presentation.
5-10	Monitoring Stations	Students implement their monitoring plan as developed in <i>Monitoring Inspiration</i> by setting up several different types of monitoring stations in the habitat area and beginning monitoring activities. Students return to stations over a period of time and record information which can be used in reports about the habitat area.

# Materials Required for the Quick & Easy Activities

Quick and Easy Habitat Education Activities require few materials. Required materials are readily reproduced, available in the classroom, can be found in habitat areas, or may be purchased from craft, office or grocery stores, and fall within three categories: Print Materials, Kit Materials, and Teacher Supplied Materials. Each category is described below:

## Print Materials

Activity sheets and support materials are available as PDF files and can be readily printed on desktop printers or through print and copy stores.

- **Activity sheet:** Designed for use in the field, the “activity sheet” is the core document for each activity and contains activity description, objectives, materials, vocabulary, alignments to learning requirements, and the lesson plan. This document can be printed in black and white, cut in half, and laminated front to back for ease of use in the field. Grade level sets can be assembled using file rings for field use, using the provided ‘Title Page’ as a cover and table of contents.
- **‘How-to-do Activity’:** When present, this document provides additional details for preparing or implementing the activity. One or more pages in length, these are for educator reference and may be stored in the educator binder.
- **Images:** These are important documents for use as props while implementing the activity with students. There may be one or more pages, and usually require color printing. Most are letter size, though ‘posters’ are ledger size (11”x17”). They may be printed at a copy and print store, or on a desktop color printer. For ease of use in the field, these can be laminated and assembled on rings. They may be stored in ‘kits’ along with other activity materials, or hole punched and stored in an educator binder.
- **Masters:** These are the original documents from which student worksheets are printed as needed for class use or for the creation of laminated ‘kit materials’. Some activities require one set per student, while others require one set per team of students. Preserve the masters in the educator binder in plastic sleeves for future use.



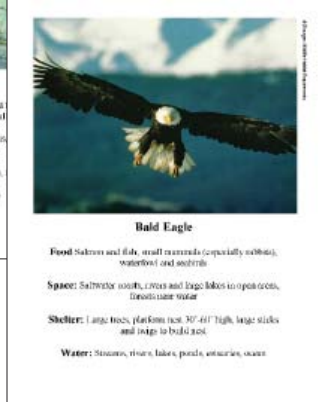
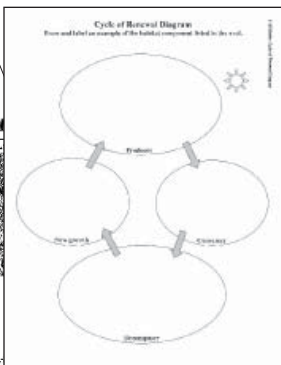
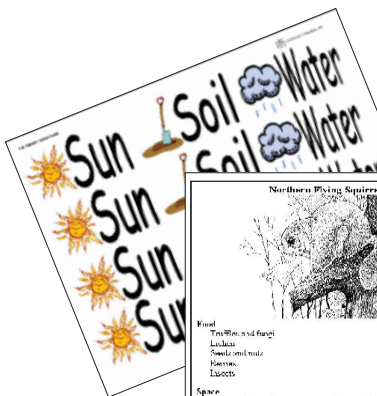
‘Activity Sheet’



‘Activity Sheet’ cut in half and laminated front to back for field use.



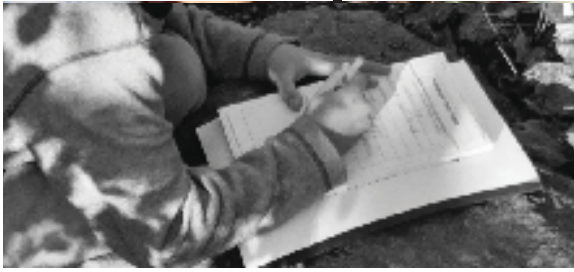
‘How-to-do Activity’



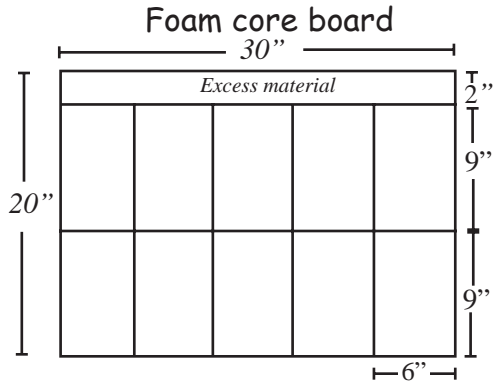
‘Masters’: for making multiple copies of student worksheets or props

‘Images’: for use as props during activity

## Foam Core Clipboards



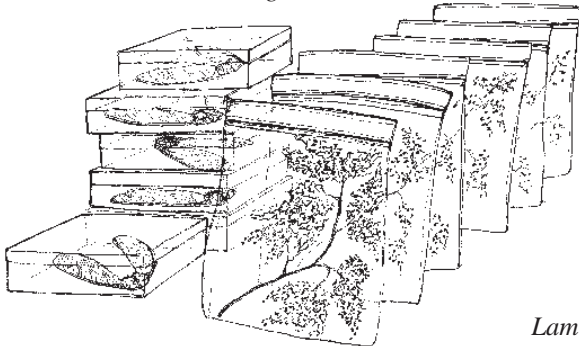
Foam core clipboards are easy to make, affordable, lightweight, water resistant and easy to store. This style is designed for the 1/2 page worksheets typical for Q&E activities. Larger foam core clipboards are more likely to break.



Cut with a utility knife using a straight-edge as a guide. Each foam core board makes 10 clipboards. Rubber bands can hold paper in place. Clear plastic can be stapled to one edge to protect paper from rain.

## Plastic Baggies and Containers

Store props in plastic baggies, viewing containers, storage containers and bins.



Laminating print materials ensures longer use. Laminated print materials may be hole punched for storage in a binder, and/or may be bound using file rings for field use.



Magnifiers are useful in many activities, and enjoyable for students. Jeweler's loupes are sold affordably as 'Private Eyes' for student use.

## Kit Materials

Materials which can be used repeatedly and stored for future use are listed. Each activity sheet provides a list of any required 'Kit Materials'. 'Support Materials Descriptions' gives details about these materials, along with their suggested sources.

Some kit materials such as 'foam core clipboards' or jeweler loupe magnifiers are used in several activities. Other kit materials such as bagged and labeled natural objects for *Nature Detectives* activity, or seed samples for *Seed Dispersal Sort* activity may be preserved for repeat implementation of the same activity. Some kit materials such as 'Game Cards' in the *Maple Seed Mixup* activity may be created from document masters that are printed, cut, laminated and assembled into sets which are best housed in 'kits'.

'Kits' can be made for individual activities, for a series of activities, or for the entire set of Q&E activities. They may be stored in plastic bins or cardboard boxes and clearly labeled for ease of access. Schools may store them in their school library, or in their education storage rooms. Stewardship community groups can make and store kits for use while hosting stewardship activities for youth at projects.

Making kits provides ideal projects for parent and community volunteers, education specialists and parks staff, and the small budget required lends itself to funding by grants, donations and fundraising.

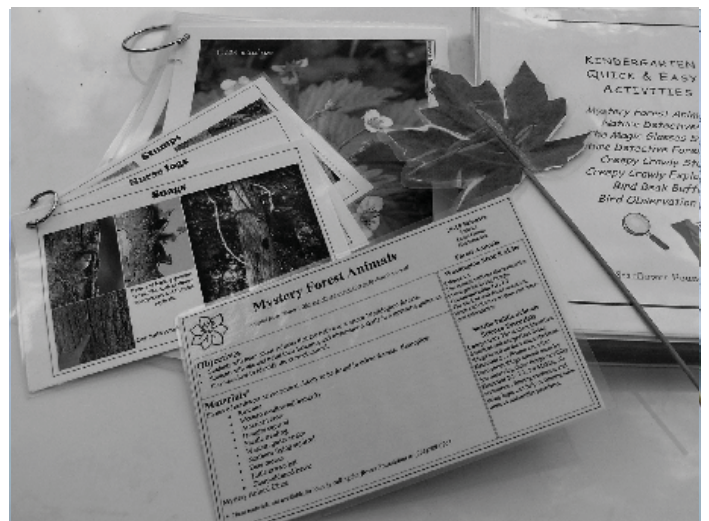
## Teacher Supplied

Specified on the "Activity Sheet", this category indicates supplies that are usually readily available in the classroom (such as paper and pencils) or from the habitat area (such as fresh berries or leaves) and that require frequent replenishment. In some cases, further details are provided in the 'How-to-do Activity' documents. Parent helpers or classroom assistants can help with gathering and organizing these materials.

## Using the Outdoors As a Classroom

School grounds and nearby parks or natural areas provide an excellent "classroom". Forethought and a few preparations can make education outdoors an exceptional learning experience. It is best to introduce students to the natural world during pleasant weather to foster a favorable initial outdoors experience. Flexibility is one of the great advantages to using school grounds or nearby natural areas; you may conduct impromptu visits on an exceptionally nice day, or delay a planned activity because of inclement weather.

## Assembling Print Materials in Sets



Planning and providing a few simple pieces of equipment can help assure that visits to habitat areas are a positive experience regardless of the weather. Even with proper notice, most students are not prepared for outdoor activities, so it is important to provide some basic gear. These are some suggestions:

- Encourage students to bring inexpensive raingear to use on outdoor classroom days or to store in class. Many classroom teachers assemble a classroom set of raingear and keep it on hand at all times. Low cost ponchos can be purchased with grant or other one-time funds and shared with other classes. For the sake of time and storage it is best to have all one color and type of poncho. A class set of ponchos can be stored in a single, large plastic bin, or hung on the back of a door. We know of one school that keeps a classroom set on the back door of the principal's office, along with a portable library of field guides stored nearby.

- Small plastic bags held in place around the ankle with rubber bands make fast and simple mud protection for shoes. For classes involved in serious stewardship activities consider having students bring in an old pair of shoes to be stored at school during the school year rather than expecting students to remember (or choose!) to wear appropriate shoes.

- Foam pads, carpet squares, even plastic bags can provide a barrier for seating or kneeling for observation and journaling activities. Some teachers make a one-time purchase of garden kneeling pads that can be used for many years, and shared between classes.

- A portable file box can store a class set of pencils, magnifiers, spare paper, foam core clipboards, rubber bands, kleenex, bandaids and other small items for use in the field. Having this 'ready to go' helps expedite an impromptu visit to your habitat area.

- Be aware of students who may have allergies to plant pollens or bee stings and plan accordingly. If mosquitoes are present, plan to visit when there are slight winds, or during the middle of the day. Though there are now effective herbal repellents on the market, school policies usually limit or prohibit use of any medications.

- Familiarize yourself and your students with stinging nettle plants (See 1-5b Image: 'Stinging Nettle' for good identification information). For very young students you may want to mark areas containing nettle.



**Stinging Nettle** (*Urtica dioica*) is a common native plant of Pacific Northwest forests with great habitat value for wildlife, especially the larvae of many of our native butterflies. It dies back each fall, re-emerges in late winter, and grows to 6' tall by summer's end.

It is a highly nutritious edible plant, favored by humans and wildlife, and has therefore developed an elaborate defense system in the form of fine prickles, which cover its stalk and underside of leaf. These prickles contain formic acid which is injected into the skin upon the slightest contact.

The sting from nettle is usually a short-lived, but intense, sensation of stinging and burning. The formic acid can be washed away with water (soap may aggravate), or somewhat neutralized by the crushed leaves of sword fern, plantain, dock or alder leaves. Using these plant remedies also affords a distraction from the discomfort, and provides a topic of discussion for other students.

Once encountered, most people quickly learn to identify stinging nettle while outdoors.



**Ponchos**  
Affordable, functional  
and easily stored



### Emergency Raingear

Large plastic trash bags can be easily adapted to make an emergency poncho by cutting out head and arm holes, only lacking a bit in style.

Decidedly less fashionable but certainly functional are plastic shopping bag 'mud shoes' to protect those inevitable "\$100 shoes that my mother will kill me (you) if dirt gets on them" scenarios. And they are just ugly enough that perhaps next time they will wear appropriate shoes.

### Portable File Box



This plastic file box is rainproof and holds a class set of foam core clipboards, pencils and field guides.

# Outdoor Resources

## *Taking Students Outdoors*

Outside the door of most classrooms are a variety of opportunities for taking students outdoors. School grounds and public parks are especially rich areas for outdoor classroom activities.

At each grade level, the first Q&E activity serves as an introductory etiquette activity to help students establish an outdoor ethic and develop an awareness of appropriate behavior while visiting habitat areas. These etiquette activities are appropriate to the grade level and tie to the theme of the series. Students can be reminded of this etiquette activity throughout the unit as needed to help modify behavior.

When taking students outdoors it is important to tell students that the rules of the classroom apply equally to outdoor classrooms. Emphasize that the outdoor time is not a ‘recess’ or a ‘camp’ experience where boisterous games and sporting activities are often an expectation. Instead the ‘outdoor classroom’ is a place to study and appreciate nature.

While it is important to emphasize appropriate outdoor behavior, make sure to explain that the rules are to protect the animals and plants that live in the area. Students have misunderstood the rules to mean that wild areas are unsafe and that plants are harmful. “Stay on the trail!”, “Don’t touch the plants!” and “Don’t pick the berries, they might be poisonous!” can sound alarming. Also encourage students to come back with their families and enjoy more intimate exploration and experiences.

## *School Grounds for Outdoor Education*

Outdoor education opportunities vary from school to school and over time. Many schools have developed wonderful nature classrooms, with native plant gardens or greenbelt restorations on school grounds. Some schools have already been landscaped with native plants. Even small landscapes provide opportunities to observe soil invertebrates, wildlife, plant growth, seasonal variations as a component of Q&E activities. Uncovering opportunities sometimes takes close observation. We have worked at schools with dozens of native plant species already occurring in their mature landscapes, though most school staff were unaware that this resource was at their front door. Many schools have greenbelts included on the school grounds which provide opportunities to implement all of the Q&E activities.

Developing school native plant gardens provides amazing learning and the resulting gardens offer many advantages over using nearby parks or habitat areas. The following are a few of the primary advantages of using school grounds for Q&E activities:



*Taking students outside creates opportunities for memorable moments and time for reflection (above and below).*



*School gardens can be convenient and used for project-based learning (right).*



- Proximity to classroom for short, frequent or impromptu visits
- Potential for a strong sense of stewardship
- Ability to harvest from plants (berries, leaf pressing, seeds, etc.), especially if designed as food or ethnobotany resource gardens.
- Hardscape enhancements such as pathways, signage, fencing and seating are easier to implement with more available resources and a less restrictive approval process.

### *Public Parks for Outdoor Education*

The Seattle urban area is dotted with dozens of small to large parks, many of which contain natural habitat areas with native plantings. In the past decade there have been hundreds of restoration projects at these parks, restoring native plant communities and their associated wildlife communities. In many locations, it is possible to walk a few blocks from school and encounter a range of wildlife from dragonflies to bald eagles, hummingbirds to blue herons, squirrels to muskrats, and Pacific chorus frogs to turtles. The plant diversity in restorations has increased to include hundreds of species of native plants, many of which were extirpated in the early part of the last century.

Seattle natural areas were preserved as early as 1903 and some have remnant old growth forests. These are true gems in the middle of the Seattle urban area and include Seward and Schmitz park. Others have had 80-90 years to grow back from logging and now have mature second growth plant communities. Stewardship groups have worked hard to restore the plant diversity, removing non-native invasive plants such as blackberry and ivy. Schools within walking distance of parks that have natural habitat areas, or are undergoing habitat restoration, are wonderful resources for implementing education activities. Major parks such as Seward Park and Washington Park Arboretum are worth a bus ride for special field trips. Some considerations for visiting Seattle parks for education activities include:

- Students can see large, working plant communities and study their ecology.
- Wildlife sightings of unusual urban wildlife such as eagle, muskrat, salmon and heron are more likely in larger natural areas.
- Comparisons can be made to school ground habitats and plants.
- Most Seattle parks have associated stewardship groups or parks staff that can host classes, assist with implementing Q&E or other outdoor activities, or provide student stewardship activities such as native plantings and non-native plant removal. Q&E activities provide ideal links to stewardship activities as students rotate through ‘work stations’ and ‘education stations’.



*Creating outdoor seating areas can help manage students.*

## **Basic Outdoor Etiquette**

- Stay on trails: heavy traffic has a major impact on soils compaction, disturbs wildlife breeding and raising of young, and harms plant growth, especially the more tender groundcover plants.

- Do not collect living plant material in public parks. Uprooting, damaging or collecting plant materials is forbidden in city, county and state parks. While it is okay to collect berries, be sure to know the identity of any berry before eating. And make sure to leave plenty for the wildlife.

- When traveling in large groups along trails be sure to allow right of way for other park users. Typically people travel along their right side of the path, allowing others to pass on the left.

- Do not chase, follow or collect wildlife. Native wildlife is protected by law, and harassment by humans and pets is illegal. If you suspect you are near a den or nest of wildlife, leave them plenty of room. Wildlife includes frogs, turtles, butterflies and other fascinating, previously commonly collected creatures.

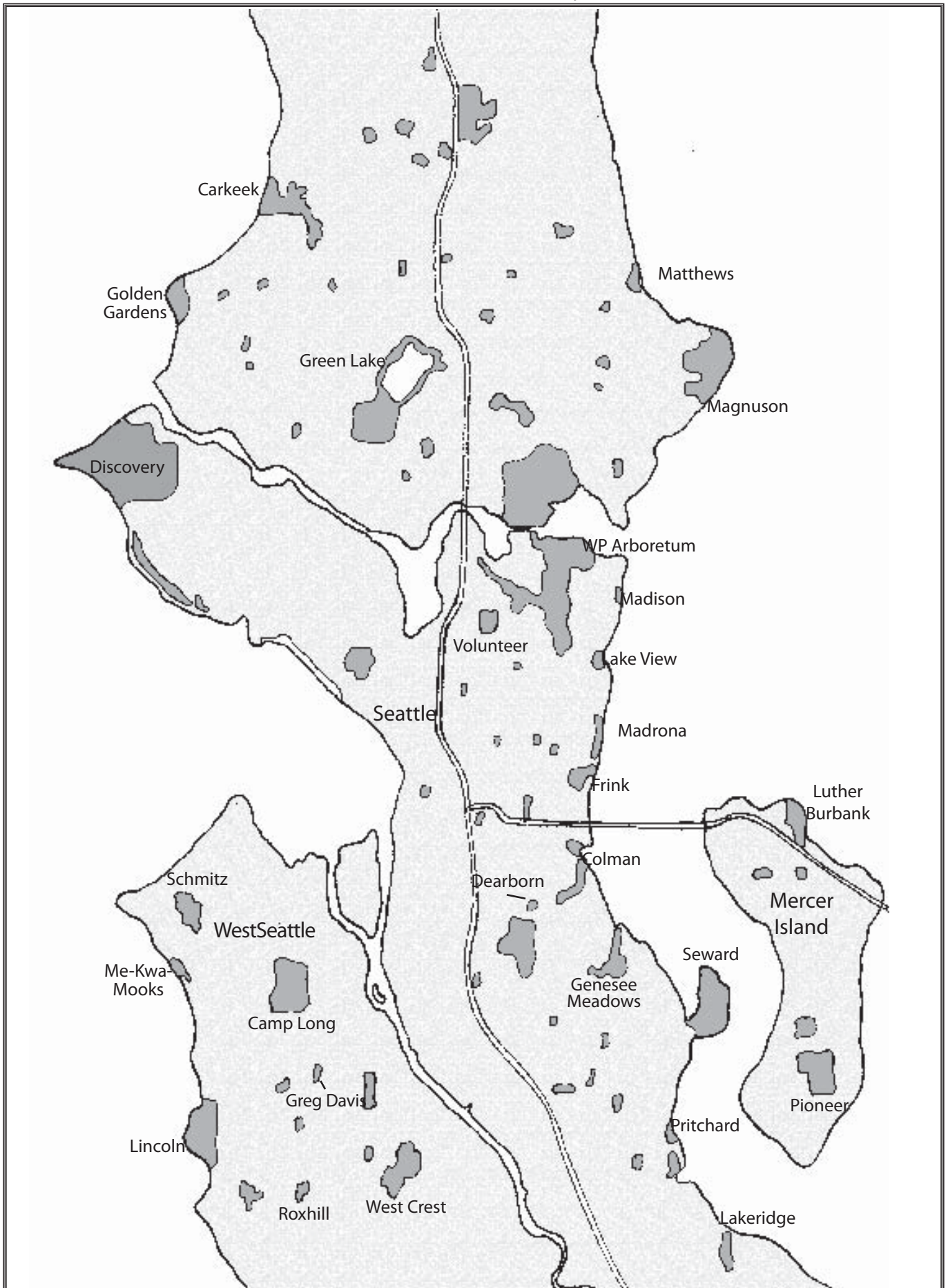
- Keep dogs on leash, or preferably at home. Though dogs do not usually accompany school groups, occasionally parent volunteers may bring their pets. Dogs are far more threatening to wildlife than humans and will hamper opportunities to view wildlife.

- Keep noise levels down for other park or school grounds occupants, both animal and human.



*Q&E's are designed to require a minimum of supplies.*

# Seattle Public Parks Map



## Seattle Public Parks

There are scores of parks in the Seattle urban area, from small neighborhood playgrounds to natural greenbelts to large multi-use parks with facilities such as sports fields and pools. Some include environmental learning centers which provide a variety of programs for the public and school groups. The parks listed here have substantial natural habitat areas, are being restored with native plants and habitat areas, and are within walking distance of schools, which makes them ideal for implementing Quick & Easy Habitat Education activities. Parks in which Starflower Foundation has assisted the community with restoration projects are marked with an asterisk (\*). There are many other fine parks, some of which may be in your neighborhood, that also have wonderful habitat areas and habitat restoration projects to visit with your students.

### Habitat Area Community Parks

**Colman Park \***: 24 acres along Lake Washington which has been restored with riparian, wetland and upland forest habitat. One of the original Olmstead designed parks with architecture from the early 1900's, this park has a paved trail that stretches from the shoreline to upland forest.

**Frink Park\***: 17 acres along Lake Washington Blvd. with a wooded creek and ravine with numerous trails. An active community group has implemented habitat restoration activities and trails improvements.

**Genesee Meadows\***: Located along Lake Washington, this park was previously a dump and landfill, which has been restored as a wetland meadow with upland forest. The diversity of native plants and habitat attracts large numbers of birds and insects.

**Greg Davis\***: Located along Longfellow Creek, this small park is being restored to highly diverse meadows and riparian forest by neighbors, youth groups and nearby schools.

**Lakeridge Park**: 35 acres with a creek which outlets into Lake Washington. Formerly known as 'Dead Horse Canyon', this park has undergone a restoration to the forested understory. A trail follows the creek through a mature forest canopy.

**Lincoln Park**: 135 acres along Puget Sound with beach access and many trails through forested areas.

**Madrona Park\***: 31 acres located on Lake Washington with a beach and trails through a wooded hillside. The forested ravine has been undergoing habitat restoration by an active neighborhood group and nearby schools.

**Magnuson (Warren G.) Park\***: 350 acres along Lake Washington with a variety of uses, including natural areas on Promontory Point with native plant restorations, and a butterfly garden developed by Northwest Montessori school. This new park has many stewardship opportunities with an active stewardship group.

**Me-Kwa-Mooks\***: 3.5 acres bordering Puget Sound with trails through a wooded hillside. Nearby schools and the community have participated in restoration and park improvement projects at this small park.

**Pritchard Beach\***: 19 acres along Lake Washington, with a beach and restored wetland edged with a variety of forest habitats. A rock amphitheatre hosts classes who study the variety of wildlife and native plants which thrive there. Stewardship opportunities are available through an active stewardship group.

**Roxhill Park\***: The headwaters of Longfellow Creek, and possibly Fauntleroy Creek, this park has recently been restored to wetlands with a great diversity of bog, meadow and wetland plants, bordered by forests.

**Schmitz Preserve Park**: 53 acres of fine old growth forest along a creek which empties into Puget Sound. A loop trail easily transports students along the trail to observe old growth trees and wildlife. An active stewardship group is continuing to preserve and restore this park.

### Parks with Education Facilities and Programs

**Carkeek Park**: 186 acres along Puget Sound with beach, salmonid creek, riparian and forest habitat.

**Discovery Park**: 534 acres along Puget Sound with tidal beaches, meadow, riparian and forest habitats. A walk along Salmon Bay may reveal sea lions, eagles and juvenile salmon.

**Washington Park Arboretum**: 230 acres along Lake Washington and the Montlake Cut with a boardwalk through wetlands, and trails through woods with trees from around the world, including a Pacific Northwest native plant collection.

**Seward Park\***: 300 acres located on a peninsula in Lake Washington, this park is a rarity in Seattle, with old growth forests and habitat that supports bald eagle nests. The environmental learning center is surrounded by a native plant garden.

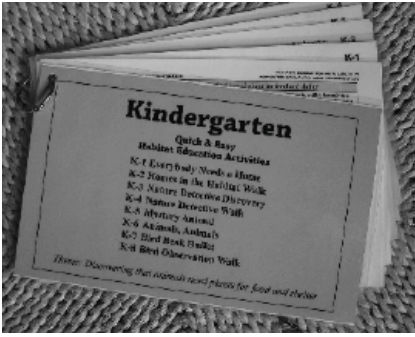
**Camp Long**: 68 acres on the ridge overlooking the Duwamish watershed with wetlands, forests and native plant gardens. There are picnic shelters ideal for activities with students.



Photo by Heidi Bohan

*Students in front of an old growth cedar at Schmitz Park*

# Gathering and Printing Necessary Materials



Activity Sheets can be assembled in half-page laminated sets with title page and activity descriptions for quick reference and ease of use (left).

Binders can be used to store activity sheets, masters and images using the grade level title page as a cover. Activity sheets and masters can be stored in plastic sleeves for protection. Images should be laminated and may be hole punched and stored in the binder (middle).

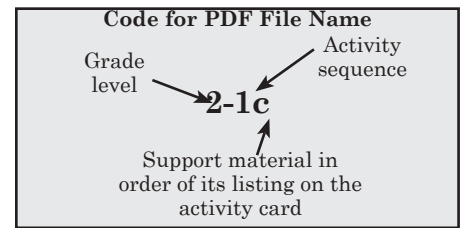


Starflower Native Plant ID cards can be printed, cut in half and laminated for field use by students.

Use the following tables for planning your acquisition of the materials needed for the various Q&E activities. For each activity, the table describes the items required, their sources, and suggested storage (see also, Q&E cover pages 9 & 10). It also provides information for printing the Q&E activity sheets and any props from the PDF files available on the *Q&E Activities CD-ROM* or as downloadable PDF files from [www.starflower.org](http://www.starflower.org). Specific print requirements are found in the “Print Info” column, which is coded as described below.

Code for “Print Info”
CR: Color
OCR: Optional color
BW: Black & white
LTR: Letter size paper
TAB: 11x17 paper
Number: Quantity of pages to be printed
*: Quantity dependent on class size

**For example:**  
**3: CR/LTR** indicates that you will need to print 3 letter-size pages in color  
**\*:OCR/TAB** indicates that quantity will depend on class size, printing in color is optional, and paper size is 11x17



Activity number	Materials as listed on Q&E Card	Description/Recommended storage	Print Info	Source
K	Kindergarten Title Page	Print material; use for binder and field set cover	1:BW/LTR	PDF K-Title
K-1	<b><i>Everybody Needs a Home Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-1
	Story: “Everybody Needs a Home”	Print material; laminate or use plastic sleeve; store in binder	1:BW/LTR	PDF K-1a
K-2	<b><i>Homes in the Habitat Walk Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-2
	Images: ‘Animal Homes in the Habitat’	Print material; laminate; store in binder or kit	7:CR/LTR	PDF K-2a
K-3	<b><i>Nature Detective Discovery Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-3
	‘How-to-do Activity: Mystery Nature Objects’	Print material; store in binder	1:BW/LTR	PDF K-3a
	Images: ‘Mystery Nature Sounds’	Laminate for prop; store in binder or kit	5:CR/LTR	PDF K-3b
	‘Mystery Nature Objects’ (selected from ‘How-to-do Activity’)	Found natural objects from habitat area, see ‘How-to-do Activity’; dry and store in kit		Habitat area
	‘Mystery Nature Objects’ paper bags– color coded in sets of 6 for easy management	Lunch-size paper bags, see ‘How-to-do Activity’; store in kit		Grocery store
	Audio recording: ‘Mystery Nature Sounds’	Audio tracks for black-capped chickadee, Pacific chorus frog, Douglas squirrel, great horned owl, pileated woodpecker; store in binder or kit		Library, bookstores
K-4	<b><i>Nature Detective Walk Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-4
	Starflower Native Plant ID Cards: western red cedar, bigleaf maple tree, beaked hazelnut, Douglas fir, Nootka rose, vine maple, black cottonwood, yarrow, pearly everlasting	For use by the educator to identify native plants to use for this activity; color print; laminate and assemble for field use	9:CR/LTR	PDF from Native Plant ID Cards

	'Mystery Nature Objects' for plants selected for walk.	Found natural objects from natural area used in the K-3 activity		K-3 activity props
K-5	<b><i>Mystery Animal Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-5
	Images: 'Mystery Animal Cards'	Print material; laminate for prop; store in binder or kit	10:CR/LTR	PDF K-5a
	Images: 'Image Labels'	Print material; cut and laminate on back side of 'Mystery Animal Cards'	5:BW/ LTR	PDF K-5b
K-6	<b><i>Animals, Animals Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-6
	Images: 'Animals, Animals'	Print material; cut page 9 into labels; attach labels to back of images; laminate; store in binder or kit	9:CR/LTR	PDF K-6a
	Image: 'Seattle Habitat Wildlife' poster	Print material; laminate; store in kit	1:CR/TAB	PDF K-6b
	Image: 'Poster Overlay'	Print material; attach to back of poster; laminate	1:BW/LTR	PDF K-6c
	Master: 'Animals, Animals' picture cards of 8 urban native wildlife species	Print material; use as a master for making sets of cards for students; store in plastic sleeve in binder; label as 'master' for future reference	2:CR/LTR	PDF K-6d
	1 set of 8 laminated 'Animals, Animals' picture cards	Copy from master: 'Animals, Animals'; cut into cards; laminate for student set; store in kit	From master 2:CR/LTR	From master or PDF K-6d
K-7	<b><i>Bird Beak Buffet</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-7
	'How-to-do Activity: Bird Beak Buffet Food'	Print material; store in binder	1:BW/LTR	PDF K-7a
	Images: 'Bird Beaks'	Print material; laminate for prop; store in binder or kit	3:CR/LTR	PDF K-7b
	Model 'Stomachs'	1 small plastic cup/student; stack and store in kit		Grocery store
K-8	<b><i>Bird Observation Walk Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF K-8
	'How-to-do Activity: Paper-roll Binoculars'	Print material; store in binder	1:BW/LTR	PDF K-8a
	Master: 'Bird Observation Study Sheet'	Print material; use as a master for making sets of student study sheets; store in plastic sleeve in binder; label as 'master' for future reference	2:CR/LTR	PDF K-8b
	Audio Recording: Urban Bird Sounds	Audio recordings of calls and songs of local birds; store in kit or binder		Book store, library
	Class set of 'Bird Observation Study Sheet': 1 per student or set of students	Copy from master 'Bird Observation Study Sheet', selecting for your appropriate habitat type (forest or wetland/ meadow)	From master * : CR/LTR	From master or PDF K-8a
1st	First Grade Title Page	Print material; use for binder and field set cover	1:BW/LTR	PDF 1-Title
1-1	<b><i>The Magic Glasses Story Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-1
	Story: "The Magic Glasses Story"	Print material; laminate or store in plastic sleeve; store in binder	2:BW/LTR	PDF 1-1a
	Images: 'Magic Glasses Story'	Print material; laminate; store in binder or kits	6:CR/LTR	PDF 1-1b
1-2	<b><i>Magnifier Walk Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-2
	Image: 'Stinging Nettle' (to identify and mark if present in habitat area)	Print material; laminate as prop and store in binder or kit	1:CR/LTR	PDF1-2a
	Jeweler's loupes ('Private Eyes'), or other magnifiers: 1 per student	Plastic magnifiers (child appropriate); package and store in kit		Science or craft store

1-3	<b><i>Creepy Crawly Story Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-3
	Story: “The Creepy Crawly Story”	Print material; laminate or sleeve; store in binder	1:BW/LTR	PDF 1-3a
	Image: ‘Creepy Crawly Story’	Print material; laminate for props; store in binder or kit	1:CR/LTR	PDF 1-3b
	Master: ‘Bigleaf Maple Magic Wand’	Print material; laminate or sleeve; store in binder	1:CR/LTR	PDF 1-3c
	‘Bigleaf Maple Magic Wand’	Copy from master, cut and assemble with wooden dowel or wire as shown on sheet; laminate for prop; store in kit	From master 1:CR/LTR	From master or PDF 1-3c
1-4	<b><i>Creepy Crawly Exploration Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-4
	Master: ‘Creepy Crawly Invertebrate ID Sheet’	Print material; use as master to create student ID sheets, store in plastic sleeve in binder; label as ‘master’ for future reference	1:BW/LTR	PDF 1-4a
	Jeweler’s loupes (‘Private Eyes’), or other magnifiers: 1 per student	Child appropriate, plastic magnifiers; package and store in kit		Science/ craft store
	Clear plastic cups and spoons: 1 each per student	Students use to collect invertebrates; store in kit		Grocery store
	Laminated copies of ‘Creepy Crawly Invertebrate ID Sheet’: 1 per group	Copy from master: ‘Creepy Crawly Invertebrate ID Sheet’; laminate and store in binder or kit	6:BW/LTR	PDF 1-4a
	1 clear plastic container for class ‘zoo	Plastic bin or tub for students to temporarily store invertebrates while doing activity; use kit bin or store in bin		Craft/ hard- ware store
1-5	<b><i>Bark &amp; Leaf Rubbings Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-5
	‘How-to-do Activity: Making Rubbings’	Print material; store in binder	1:BW/LTR	PDF 1-5a
	Image: ‘Stinging Nettle’ (to identify and mark if present in habitat area)	Print material; laminate as prop and store in binder or kit	1:CR/LTR	PDF 1-5b
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office sup- ply store
1-6	<b><i>Plants &amp; Animals: Same/Different Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-6
	‘How-to-do Activity: Sample Venn Diagram’	Print material; store in binder	1:BW/LTR	PDF 1-6a
	Image: ‘Seattle Habitat Wildlife’ poster	Print material; attach ‘Poster Overlay to back of ‘Seattle Habitat Wildlife’ poster; laminate for props; store in binder or kit.	1:CR/TAB	PDF 1-6b
	Image: ‘Poster Overlay’		1:BW/LTR	PDF 1-6c
1-7	<b><i>Maple Seed Mix-up</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-7
	‘How-to-do Activity: Playing the Game’	Print material; store in binder	1:OCR/LTR	PDF 1-7a
	Image: ‘Bigleaf Maple Tree’	Print material; laminate as prop; store in binder or kit	1:CR/LTR	PDF 1-7b
	Master: ‘Game Cards: Seed, Soil, Sun and Water’	Print material; make laminated game cards; store in plastic sleeve in binder; label as ‘master’ for future reference	2:OCR/LTR	PDF 1-7c
	Master: ‘Maple leaves’	Print material; store in plastic sleeve in binder; label as ‘master’ for future reference	1:OCR/LTR	PDF 1-7d
	Starflower Plant ID card: bigleaf maple	Print material, used to identify a tree suitable for the activity; laminate and store in binder	1:CR/LTR	PDFs from Native Plant ID cards
	Laminated copy of ‘Game Cards’	Print material; copy one set from master; laminate and cut, store in kit	From master 2:OCR/LTR	From Master or PDF 1-7c
	Laminated copies of ‘Maple Leaves’: one leaf per student	Print material; copy from master: ‘Maple Leaves’; 1 page makes 6 leaves (determine how many pages you will need); cut out leaf shape and laminate; store in kit;	5:OCR/LTR	From Master or PDF 1-7d
	‘Bases’ for game	Any suitable object: fabric square, carpet square		Craft store
1-8	<b><i>Plant and Animal Interaction Hike Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-8

	Images: 'Plant and Animal Interactions'	Print materials; laminate as prop; store in binder or kit	9:CR/LTR	PDF 1-8a
	Master: 'Evidence Card'	Print material, used to make 'Evidence Cards'; store in plastic sleeve in binder; label as 'master' for future reference	1:CR/LTR	PDF 1-8b
	Laminated copies of 'Evidence Card': 1 per student or pair of students*	Print material, 1 page makes two 'Evidence cards'; laminate as prop; store in kits	From master *: CR/LTR	From Master or PDF 1-8a
1-9	<b>Drawing for Reflection Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 1-9
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
2nd	Second Grade Title Page	Print material; use for binder and field set cover	1:BW/LTR	PDF 2-Title
2-1	<b>Dead or Alive? Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-1
	Images: 'Dead or Alive?'	Print material; laminate for props; store in binder or kit	4:CR/LTR	PDF 2-1a
	'Starflower Native Plant ID Cards' for your habitat (these indicate whether a plant is evergreen, deciduous or herbaceous)	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF from Native Plant ID Cards
2-2	<b>Meet Douglas Fir</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-2
	'How-to-do Activity: Suggested Books & Places'	Print material; store in binder	1:BW/LTR	PDF 2-2a
	Story: "The Mouse, Douglas Fir and the Forest Fire"	Print material; laminate and store in binder or kit	1:CR/LTR	PDF 2-2b
	Images: 'Meet Douglas Fir'	Print material; laminate and store in binder or kit	7:CR/LTR	PDF 2-2c
	Masters: 'Meet Douglas Fir' student worksheet; 'Tree Characteristics Matrix' and 'Douglas Fir Life Cycle' graphic organizers	Print material; to be used to make copies of student worksheets during activity; store in plastic sleeves in binder; label as 'master' for future reference	3:BW/LTR	PDF 2-2d, 2-2e, 2-2f
2-3	<b>Meet Bigleaf Maple Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-3
	'How-to-do Activity: Suggested Books & Venn Diagram'	Print material; store in binder	2:BW/LTR	PDF 2-3a
	Images: 'Meet Bigleaf Maple'	Print material; laminate and store in binder or kit	8:CR/LTR	PDF 2-3b
	Masters: 'Meet Bigleaf Maple' student worksheet; 'Big Leaf Maple Life Cycle' and 'Tree Comparison Venn Diagram' graphic organizers	Print material; to be used to make copies of student worksheets during activity; store in plastic sleeves in binder; label as 'master' for future reference	3:BW/LTR	PDF 2-3c, 2-3d, 2-3e
2-4	<b>Evergreen &amp; Deciduous Leaves Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-4
	'How-to-do Activity: Evergreen & Deciduous Experiment'	Print material; store in binder	1:BW/LTR	PDF 2-4a
	Images: 'The Seasons'	Print material; laminate and store in binder or kit	1:CR/LTR	PDF 2-4b
2-5	<b>Evergreen &amp; Deciduous Walk Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-5
	'Starflower Native Plant ID Cards' for your habitat area (these will indicate evergreen or deciduous plants)	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF for Native Plant ID Cards
	Foam clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
2-6	<b>Leaf Discovery Drawing Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-6
	Image: 'Stinging Nettle Rubbing'	Print material; laminate for props; store in binder or kit	1:BW/LTR	PDF 2-6a

	Images: 'Leaf Shapes, Leaf Edges, Leaf Texture'	Print material; laminate and store in binder or kit	6:CR/LTR	PDF 2-6b
	Masters: 'Leaf Chart' and 'Leaf Characteristics Matrix' graphic organizers	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	2:BW/LTR	PDF 2-6c, 2-6d
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
2-7	<b><i>Leaf Discovery Walk I Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-7
	Images: 'Plant Forms: Tree, Shrub, Groundcover'	Print material; laminate and store in binder or kit	3:CR/LTR	PDF 2-7a
	Master: 'Plant Observation Worksheet'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 2-7b
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
2-8	<b><i>Leaf Discovery Walk II Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-8
	Master: 'Plant Observation Worksheet'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 2-8a
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
	'Starflower Native Plant ID' cards for habitat type	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF files for Native Plant ID Cards
2-9	<b><i>Meet My Plant Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 2-9
	Masters: 'Meet My Plant-Worksheets'; 'Meet My Plant Journal Instructions'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	4:BW/LTR	PDF 2-9a, 2-9b
	'Starflower Native Plant ID' cards for habitat type	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF files for Native Plant ID Cards
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
3rd	Third Grade Title Page	Print material; use for binder and field set cover	1:OCR/LTR	PDF 3-Title
3-1	<b><i>Giving Space Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-1
	'How-to-do Activity: How to Hunker'	Print material; laminate for props; store in binder or kit	1:BW/LTR	PDF 3-1a
	Images: 'Giving Space'	Print material; laminate for props; store in binder or kit	7:CR/LTR	PDF 3-1b
3-2	<b><i>Journal the Seasons Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-2
	Images: 'The Seasons'	Print material; lay page 2 on the back of page 1 and laminate for props; store in binder or kit	2:CR/LTR	PDF 3-2a
	Masters: 'Journal the Seasons', 'The Seasonal Cycle' graphic organizer	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	2:BW/LTR	PDF 3-2b, 3-2c
	Foam clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
3-3	<b><i>Seeds of All Kinds Sort Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-3
	'How-to-do Activity: Seed Samples'	Print material; store in binder	1:OCR/LTR	PDF 3-3a
	Images: 'Bigleaf Maple Seed Cycle' poster	Print material; laminate for props; store in binder or kit	1:BW/TAB	PDF 3-3b
	'Seeds of All Kinds' poster	Print material; laminate for props; store in binder or kit	1:CR/TAB	PDF 3-3c

	Seeds of All Kinds Poster Overlay'	Print material; laminate to back of poster	1:BW/LTR	PDF 3-3d
	Masters: 'Seeds of All Kinds' graphic organizer; 'Bigleaf Maple Seed Cycle Drawing'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	2:BW/LTR	PDF 3-3e, 3-3f
	'Seed Samples' (see 'How-to-do Activity')	Seed samples to be used for activity; store in plastic containers and store in kits		Habitat area
	Wheat samples (seedhead, groats, flakes, flour) in individual baggies	Samples to be used for activity; store in plastic containers and store in kits		Craft store, natural food store
3-4	<b>Seeds of All Kinds Hunt Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-4
	'How-to-do Activity: Suggested Plants'	Print material; store in binder	2:BW/LTR	PDF 3-4a
	Master: 'Seed Scavenger Hunt'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 3-4b
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
3-5	<b>Flowers to Seeds Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-5
	Images: 'Flowers to Seeds'	Print material; laminate for props; store in binder or kit	4:CR/LTR	PDF 3-5a
	'Starflower Native Plant ID' cards for your habitat type	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF files for Native Plant ID Cards
3-6	<b>Seed Dispersal Sort Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-6
	'How-to-Do Activity: Seed Samples & Dispersal Types'	Print material; store in binder	1:OCR/LTR	PDF 3-6a
	Master: 'Seed Dispersal Sort' graphic organizer	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 3-6b
	'Seed Dispersal Type Samples'	Seed samples to be used in activity (see 'How-to-do Activity'); store in plastic container for kits		Habitat area
3-7	<b>Seed Dispersal Hunt Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-7
	'How-to-do Activity: Suggested Plants'	Print material; store in binder	1:OCR/LTR	PDF 3-7a
	Master: 'Seed Dispersal Hunt'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 3-7b
	Foam clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
	Plant Number Labels	2 sets of plant labels, each with numbers 1 through 6 (see 'How-to-do Activity'); bundle and store in kits		Craft store/ recycle
3-8	<b>Growing Native Seeds Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-8
	How-to-do Activity: Native Plant Seed Propagation'	Print material; store in binder	4:OCR/LTR	PDF 3-8a
	'Seed Dispersal Type Samples' (from <i>Seed Dispersal Sort</i> activity)	Seed samples to be used in activity (see 'How-to-do Activity'); store in plastic containers in kits		Habitat area
	'Starflower Native Plant ID' cards of the plants to be propagated	Print material; laminate for props; store in binder or kit	TBD:CR/LTR	PDF files from Native Plant ID Cards
3-9	<b>Plant Growth Monitoring Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-9
	'How-to-do Activity: Suggested Plants & Data Collection'	Print material; store in binder	1:BW/LTR	PDF 3-9a

	Masters: 'Plant Growth Monitoring Record', 'Plant Growth Monitoring Chart'	Print material; to be used to make transparencies and student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	2:BW/LTR	PDF 3-9b, 3-9c
	Transparencies: 'Plant Growth Monitoring Record', 'Plant Growth Monitoring Chart'	Transparencies made from masters, used to show students how to fill out worksheets; store in binder or kit	From Master 2:BW/LTR transparencies	From Master or PDF 3-9b, 3-9c
	Thermometers: Soil & Air: 1 of each or more	Thermometers for monitoring activities; store in containers in kits		Nurseries/ hardware stores
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
3-10	<b><i>Seeds for Wildlife Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-10
	'How-to-do Activity: Making Feeding Stations'	Print material; store in binder	1:OCR/LTR	PDF 3-10a
	Images: 'Audubon Bird Paintings'	Print material; laminate for props; store in binder or kit	7:CR/LTR	PDF 3-10b
	Model beaks: Nutcracker, awl, tweezers: 1 each	Props to be used during activity to model different bird beak types; store in container in kits		Grocery and craft store
3-11	<b><i>Seeds for People Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 3-11
	'How-to-do Activity: Snack Plates'	Print material; store in binder	1:OCR/LTR	PDF 3-11a
	Images: 'Seeds for People'	Print material; laminate for props; store in binder or kit	4:CR/LTR	PDF 3-11b
	Basket trays for serving foods	Woven paper plate holders used for picnics; store in kit		Home store
	'Starflower Native Plant ID' cards for beaked hazelnut, bigleaf maple, wild rose, salal, evergreen huckleberry, Oregon grape, wild strawberry	Print material; laminate for props; store in binder or kit	6:CR/LTR	PDF files for Starflower Native Plant ID Cards
4th	Fourth Grade Title Page	Print material; use for binder and field set cover	1:OCR/LTR	PDF 4-Title
4-1	<b><i>Animal Survival Skills Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-1
	Images: 'Animal Survival Skills'	Print material; lay associated 'Image Labels' on back of matching 'Animal Survival Skills' image; laminate for props; store in binder or kit	3:CR/LTR	PDF 4-1a
	Images: 'Image Labels'		3:BW/LTR	PDF 4-1b
	Images: 'Seattle Habitat Wildlife' poster	Print material; attach 'Poster Overlay to back of 'Seattle Habitat Wildlife' poster; laminate for props; store in binder or kit.	1:CR/TAB	PDF 4-1c
	Images: 'Poster Overlay'		1:BW/LTR	PDF 4-1d
4-2	<b><i>Habitat Hunt Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-2
	'How-to-do Activity: Habitat Hunt Clues'	Print material; store in binder	1:OCR/LTR	PDF 4-2a
	Images: 'Wildlife Habitat Requirements'	Print material; laminate for props; store in binder or kit	3:CR/LTR	PDF 4-2b
	'Seattle Habitat Wildlife' poster	Print material; attach 'Poster Overlay to back of 'Seattle Habitat Wildlife' poster; laminate for props; store in binder or kit.	1:CR/TAB	PDF 4-2c
	Images: 'Poster Overlay'		1:BW/LTR	PDF 4-2d
	Master: 'Habitat Hunt Cards'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	8:BW/LTR	PDF 4-2e
	Foam core clipboards: 1 per team	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
4-3	<b><i>Wildlife Sign Walk Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-3

	'How-to-do Activity: Wildlife Sign Basics'	Print material; store in binder	1:BW/LTR	PDF 4-3a
	Images: 'Wildlife Sign'	Print material; laminate for props; store in binder or kit	6:CR/LTR	PDF 4-3b
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
4-4	<b><i>Cycle of Renewal Drawing Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-4
	'How-to-do Activity: Terminology & Definitions'	Print material; store in binder	1:BW/LTR	PDF 4-4a
	Image: 'Cycle of Renewal' poster	Print material; laminate for props; store in binder or kit	1:CR/TAB	PDF 4-4b
	Masters: 'Cycle of Renewal Drawing' (for overhead and student worksheets), 'Cycle of Renewal Diagram' graphic organizer	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	2:BW/LTR	PDF 4-4c, 4-4d
4-5	<b><i>Life in the Forest Floor Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-4
	Image: 'Forest Woody Debris'	Print material; laminate for props; store in binder or kit	4:CR/LTR	PDF 4-5a
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
4-6	<b><i>Habitat Features- Each One Teach One Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-6
	'Each One Teach One- Habitat Features' cards	Print material; cut in half and lay front to back, laminate for props; store in binder or kit	10:CR/LTR	PDF 4-6a
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
4-7	<b><i>Ecosystem Explorers Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-7
	Images: 'Ecosystem Components'	Print material; laminate for props; store in binder or kit	8:CR/LTR	PDF 4-7a
	Images: 'Ecosystem Charts'	Print material; laminate for props; store in binder or kit	5:CR/LTR	PDF 4-7b
	Master: 'Ecosystem Explorers' student worksheets	Print material; store in binder	5:BW/LTR	PDF 4-7c
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
4-8	<b><i>Web of Life Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assembled in activity sets for field use	1:BW/LTR	PDF 4-8
	'How-to-do Activity: Web of Life Model'	Print material; store in binder	2:CR/LTR	PDF 4-8a
4-9	<b><i>Ethnobotany Story Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 4-9
	'How-to-do Activity: Suggested Plants and their Uses'	Print material; store in binder	2:BW/LTR	PDF 4-9a
	Images: 'Ethnobotany- Food & Shelter'	Print material; laminate for props; store in binder or kit	9:CR/LTR	PDF 4-9b
	Master: 'Ethnobotany Story'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 4-9c
	Foam core clipboards (if needed for taking field notes): 1 per student	Used by students for drawing or writing in the field; see Q&E cover <a href="#">page 10</a> for construction details		Office supply store
	'Starflower Native Plant ID' cards for habitat area	Print material; laminate for props; store in binder or kit		PDF files for Native Plant ID Cards
4-10	'How to do Activity: Ethnobotany Snack Plate'	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:OCR/LTR	PDF 4-10a

	Images: 'Ethnobotany- Foods'	Print material; laminate for props; store in binder or kit	5:CR/LTR	PDF 4-10b
5th	Fifth Grade Title Page	Print material; use for binder and field set cover	1:OCR/LTR	PDF 5-Title
5-1	<b>Restoration Bag Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-1
	'How-to-do Activity: Restoration Bag Objects'	Print material; store in binder	1:BW/LTR	PDF 5-1a
	'Restoration Bag Objects'	Commonly available objects such as bucket, field guide, gloves and binoculars (see 'How-to-do Activity'), store in garbage bag in kit.		Second hand stores, donation, etc.
	Foam core clipboards: 1 per student	Used by students for drawing or writing in the field; see Q&E cover page 10 for construction details		Office supply store
5-2	<b>Four Direction Walk Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-2
	'How-to-do Activity: Evaluating Aspect'	Print material; store in binder	1:OCR/LTR	PDF 5-2a
	Images: 'Aspect Influences'	Print material; laminate for props; store in binder or kit	5:CR/LTR	PDF 5-2b
	Four direction flags or markers	Survey flags, plastic flagging on a stick, or similar; mark with E, S, W, N (optional); bundle and store in kit		Hardware store
	Thermometers: Soil & Air	Used to measure soil and air temperature; package and store in kit		Nursery, Hardware store
	Compass and/or site map to confirm the cardinal directions of the habitat area	Tool or map to confirm student evaluation of the four directions; package and store in kit		Recreation store
	Optional: Light meter (such as those intended for cameras, greenhouses, etc)	Tool to measure the amount of light to help students evaluate the sun/ shade aspect; package and store in kit		Nursery, camera shop
5-3	<b>Four Direction Walk Plots</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-3
	'How to do Activity: Plot Layout'	Print material; store in binder	1:BW/LTR	PDF 5-3a
	Masters: 'Role Card', 'Plot Map'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	2:BW/LTR	PDF 5-3b, 5-3c
	Radius Twine: 3', 4' & 6' lengths: 1/team	Garden twine with a loop tied on the end (see 'How-to-do Activity'), used to measure circular plots; store in plastic bag in kit		Nursery
	Cloth tape measure: 1/team	Measuring device to measure square or rectangular plots; store in plastic container in kit		Sewing, grocery store
5-4	<b>Restore a Habitat I- Ecosystems Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-4
	Images: 'Restore a Habitat I'	Print material; laminate for props; store in binder or kit	14:CR/TAB	PDF 5-4a
	Images script: 'Restore a Habitat I'	Print material; store in binder	2:BW/LTR	PDF 5-4b
5-5	<b>Restore a Habitat II- Forest Succession Activity</b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-5
	Images: 'Restore a Habitat II- Forest Succession'	Print material; laminate for props; store in binder or kit	6:CR/TAB	PDF 5-5a
	Image script: 'Restore a Habitat II- Forest Succession'	Print material; store in binder	1:BW/LTR	PDF 5-5b
	'Forest Succession Drawings'	Print material; laminate for props; store in binder or kit	3:OCR/LTR	PDF 5-5c
	Master: 'Plant Growth List' study sheet	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 5-5d

	'Starflower Native Plant ID' cards for habitat area	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF files for Native Plant ID Cards
5-6	<b><i>Plant Assessment Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-6
	'How-to-do Activity: Plot Vegetation'	Print material; store in binder	1:CR/LTR	PDF 5-6a
	Image: 'Plot Map Drawings'	Print material; laminate for props; store in binder or kit	1:CR/LTR	PDF 5-6b
	Masters: 'Plot Vegetation' form, 'Plot Map', 'Plant Community Lists', 'Plot Evaluation' form	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	5:BW/LTR	PDF 5-6c, 5-6d, 5-6e, 5-6f
	'Starflower Native Plant ID' cards for habitat area	Print material; laminate for props; store in binder or kit	Depends on habitat type: CR/LTR	PDF files for Native Plant ID Cards
5-7	<b><i>Soil Assessment I- Composition Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-7
	'How-to-do Activity: Soil Composition Tests'	Print material; store in binder	1:OCR/LTR	PDF 5-7a
	Masters: 'Soil Assessment Form', 'Soil Composition Test Instructions'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	3:BW/LTR	PDF 5-7b, 5-7c
	Tools and equipment for assessments: 1 set per plot team (see 'How-to-do Activity')	Readily available equipment to create soil test stations such as jars and trowels (see 'How-to-do Activity'); store in a plastic bin		Household, hardware store
5-8	<b><i>Soil Assessment II- Hydrology Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-8
	'How-to-do Activity: Soil Hydrology Tests'	Print material; store in binder	1:BW/LTR	PDF 5-8a
	Master: 'Soil Hydrology Test Instructions'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	1:BW/LTR	PDF 5-8b
	Tools and equipment for assessments: 1 set per plot team (see 'How-to-do Activity')	Readily available equipment to create soil test stations such as jars, measuring cups and coffee filters		Household, hardware stores
5-9	<b><i>Monitoring Inspiration Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-9
	Masters: 'Monitoring Activities Overview', 'Plot Monitoring Inspiration'	Print material; to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	5:BW/LTR	PDF 5-9a, 5-9b
5-10	<b><i>Monitoring Stations Activity</i></b>	Print material; cut in half and laminate front to back; store in binder or assemble in activity sets for field use	1:BW/LTR	PDF 5-10
	Master: 'Plot Monitoring Record'	Print material; store in binder	1:BW/LTR	PDF 5-10a
	Master: 'Arthropod ID Sheets'	Print material, to be used to make student worksheets; store in plastic sleeve in binder; label as 'master' for future reference	4:CR/LTR	PDF 5-10b
	Thermometers: Soil & Air: 1 each (to be shared by plots) or 1 per plot team	Used to measure soil and air temperature; package and store in kit		Nursery, hardware store
	Laminated copies of 'Arthropod ID Sheets': 1 set per plot team	Print material; laminate for props; store in binder or kit	Depends on class size: CR/LTR	From Master or PDF 5-10b

## Additional Resources

### *Field Guides for Use with Q&E Activities*

**Plants of the Pacific Northwest Coast** by Pojar & Mackinnon

**Plants & Animals of the Pacific Northwest** by Eugene N. Kozloff

**Familiar Birds of the Northwest** by Harry B. Nehls

**Birds of Seattle and Puget Sound** by Chris C. Fisher

### *Education Activity Guides to Extend Q&E Activities*

#### *Plants*

**Celebrating Wildflowers: An Educator's Guide to the Appreciation and Conservation of Native Plants of Washington** by Scherrer & Johannessen

**Trees are Terrific** (Ranger Rick's NatureScope) by Judy Braus, editor (Teacher resource & activity guide)

#### *Wildlife*

**City Kids and City Critters!** Activities for Urban Explorers by Roberts & Huelbig

**Project WILD- K-12 Activity Guide** by Council for Environmental Education (Wildlife focused activities)

**Birds, Birds, Birds** (Ranger Rick Naturescope) by Sandra Stotksy (Teacher resource & activity guide)

#### *Sharpening Observations Skills*

**Sharing Nature with Children** - Joseph Cornell (Naturalist activity guide)

**The Private Eye: Looking/ Thinking by Analogy-** Kerry Rueff (Activities using jeweler's loupes for science inquiry)

### *Education Supplies for Activity Materials*

#### *Catalogs:*

**Acorn Naturalists: Resources for the Trail and Classroom-** 800-422-8886 (M-F, 7am-5pm PST)

Web: [www.acornnaturalists.com](http://www.acornnaturalists.com)

**Resources for Garden Based Education from Gardens for Growing People-** 415-663-9433

Email: [growpepl@svn.net](mailto:growpepl@svn.net) Web: [www.svn.net/growpepl](http://www.svn.net/growpepl)

#### *Local Retailers:*

**Science, Art & More-** 6417 Roosevelt Way NE, Seattle, Washington 98115 206-524-3795

**Ben Franklin-** multiple locations throughout Seattle area

**Michael's Crafts-** multiple locations throughout Seattle area

# Quick & Easy Habitat Education Activities Project Development

*The People Who Made this Possible:*

**Ann Lennartz** - *Founder and President, Starflower Foundation*

**Sandy Fry** - *Director*

**Heidi Bohan** - *Education Materials Development Contractor/Project Lead, activity development, prototype activities, text and graphics*

**James A. Kolb** - *Education Consultant, education program guidance, oversight, and material review*

**Starflower Staff** - *prototype activities*

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**Hawthorne Elementary**

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**Pathfinder School**

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**Roxhill Elementary**

*Thomas Weschler, Peter Martin, Tom West*

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*Evelyn Fairchild, Vivian Fuller, Tom Dusenbury, Rick Jesus, Will Depusoy and Sheri Fujisawa*

## *In Memory of Ann Lennartz*

Starflower Foundation was founded in 1996 by Ann Lennartz with the mission of assisting with the creation, rehabilitation and stewardship of Pacific Northwest native plant communities by supporting citizen-driven restoration and education projects that inspire understanding, appreciation and preservation of Pacific Northwest native ecosystems, with humans as an integral part of these ecosystems. Having met the founder's expectations, Starflower Foundation ceased operations in December 2007. As part of the foundation's legacy, we have made our learnings and education materials available through the Washington Native Plant Society's website at [www.wnps.org](http://www.wnps.org).

Over its 10-year history, the foundation worked on 18 urban habitat restoration projects in Seattle, Washington. A core of committed volunteers was at the center of each project with the vision of restoring an area of their neighborhood park or school grounds with Pacific Northwest native plant communities. As an operating foundation, Starflower supported design, implementation, and maintenance for these projects. During all phases of the projects, the foundation pursued a restoration strategy to fast-track the successional process and strove for a high level of native plant species diversity.

As envisioned by Ann, each project Starflower Foundation worked on included a significant educational component. *Quick and Easy Habitat Education Activities* were created to actively involve students, teachers, and project stewards in the long-term stewardship of the projects and to promote Pacific Northwest native plant landscapes and stewardship. Valuable feedback from teachers, students, and the stewardship community shaped these activities and demonstrated their value.