

Stormwater Runoff Education Resource Guide (Elementary)

This guide was created by King County with assistance from Nature Vision to provide unincorporated King County school districts with programs and resources applicable to the Stormwater Management Waiver Program.

This guide was created by King County to aid teachers in finding environmental programs that show the relation of ecology, clean water, runoff water and stormwater. We hope these resources will help students connect science and engineering with natural processes. Related topics include the hydrologic cycle; wetlands, streams, rivers, lakes, and their ecological systems; the effects of urbanization and human impacts on surface water quality and quantity; water pollution; land use effects on runoff and stormwater; the causes and effects of flooding; salmonids; wetland and native plants and their benefits to our waterways; watershed studies; and water and carbon sequestration. Programs will be updated as frequently as possible.

This guide is organized by grade and then “type” of program – the types of programs include teacher resources, classroom visitors, field trips, and projects. Teacher resources include lesson plans, kits, and online resources. Classroom visitors are informal educators that will travel to your classroom to present a lesson or investigation. Field trips include day trips and overnight programs. Projects are culminating restoration projects your class can sign up for.

For more information on programs offered by King County, please see the [environmental education programs](#), [solid waste education](#) page and the [wastewater education](#) page. To access reports and projects happening within your school’s watershed, please see this [interactive watershed](#) website.

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Table of Contents

| | |
|--|---------|
| Kindergarten | Page 4 |
| Teacher Resources | Page 4 |
| Classroom Visitors | Page 5 |
| Field Trips | Page 6 |
| Projects | Page 11 |
| | |
| First Grade | Page 13 |
| Teacher Resources | Page 13 |
| Classroom Visitors | Page 13 |
| Field Trips | Page 16 |
| Projects | Page 21 |
| | |
| Second Grade | Page 22 |
| Teacher Resources | Page 22 |
| Classroom Visitors | Page 23 |
| Field Trips | Page 26 |
| Projects | Page 30 |
| | |
| Third Grade | Page 32 |
| Teacher Resources | Page 32 |
| Classroom Visitors | Page 36 |
| Field Trips | Page 40 |
| Projects | Page 47 |
| | |
| Fourth Grade | Page 48 |
| Teacher Resources | Page 48 |
| Classroom Visitors | Page 52 |
| Field Trips | Page 56 |
| Projects | Page 67 |
| | |
| Fifth Grade | Page 69 |
| Teacher Resources | Page 69 |
| Classroom Visitors | Page 72 |
| Field Trips | Page 77 |
| Projects | Page 92 |
| | |
| Grant Opportunities | Page 94 |
| Professional Development Opportunities | Page 99 |

All Grades

King County Green Schools Program – Level Three: Water conservation and pollution prevention

The King County Green Schools Program provides assistance, tools and recognition to schools and school districts to help them improve conservation practices. Level Three of the program is focused on water conservation and pollution prevention best practices for schools. In addition to a Best Practices Guide on water conservation and pollution prevention, the program provides tailored recommendations to help with school-wide education and outreach on stormwater pollution prevention. If a King County Green School participant takes advantage of the resources in this guide, those actions can count toward meeting Level Three recognition criteria.

Link: <http://www.kingcounty.gov/depts/dnrp/solid-waste/programs/greenschools/water-conservation.aspx>

Time: Variable

Cost: No cost

Kindergarten

Teacher Resources

Department of Ecology: Discover Wetlands

A curriculum guide for grades K-12 which focuses on what wetlands are, why they are important, and how human actions affect them.

Unit I: Washington's Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816a.pdf>)

Unit II: Amazing Wetlands: Functions and Values

(<https://fortress.wa.gov/ecy/publications/documents/8816b.pdf>)

Unit III: People and Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816c.pdf>)

Unit IV: A Walk on the Wild Side

(<https://fortress.wa.gov/ecy/publications/documents/8816d.pdf>)

Time: Variable

Cost: No Cost

FOSS Kits: Trees and Water

The Trees and Weather Module provides students with solid experiences to help them develop an understanding of what plants (and animals) need to survive and the relationship between their needs and where they live. By monitoring local weather,

students experience the patterns and variations in weather and come to understand the importance of weather forecasts to prepare for severe weather.

Link: <https://www.fossweb.com/foss-modules>

Time: Variable

Cost: No cost

Puget Sound Starts Here: Drain Rangers

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the *Drain Rangers!* and *Engineering Solutions* curricula and materials is to develop and cultivate an understanding of the serious issues facing our community from stormwater runoff and to share specific actions we can take to improve the quality of our water. In these units, students will utilize problem solving models to replicate the thinking process of engineers addressing polluted stormwater runoff.

Link: <http://www.pugetsoundstartshere.org/drain-rangers>

Time: Variable

Cost: No Cost

Note: Spanish version available.

Classroom Visitors

These programs are taught by an informal educator from various organizations in your classroom.

Eastside Audubon: Migration

This lesson plan focuses on the migration of birds between summer and winter habitats. Students will learn the benefits and challenges of migration and play a game to reinforce their knowledge.

Contact: youthprograms@eastsideaudubon.org

Link: <http://eastsideaudubon.org/education/youth-education-1/youth-workshops>

Time: 45-60 minutes

Cost: No cost

Note: Can be adapted by the volunteer to address stormwater runoff effects on bird migration specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon

This popular presentation consists of a slide show discussing the definition and importance of watersheds, hatchery operations, salmon lifecycle, habitat requirements, and predators of Pacific salmonids and the challenges they face. After the slide show, teachers have the option of a watershed or Native American legend activity for their class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 45-90 minutes

Cost: \$50 per class request

Note: Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available September-June. FISH also offers field trips.

King Conservation District: Water on Wheels

The Water on Wheels (WOW) Program offers free lessons for K-6th grade, public and private schools, and informal presentations throughout King County. WOW lessons include lively, hands-on demonstrations, educational games, and grade-level appropriate materials to give students a better understanding of water and soil conservation as well as stormwater protection.

Contact: Kristen Reichardt at kristen.reichardt@kingcd.org or 425-282-1927

Link: <http://kingcd.org/programs-education-stormwater.htm>

Time: Variable

Cost: \$250 per lesson (KCD partners with city jurisdictions to help cover the cost of the lessons so there is no cost to teachers- ask when registering)

Note: Programs that apply for rebate: Exploring Habitats (K-2), Water Everywhere (K-3)

Nature Vision: Watershed Connections

A Nature Vision educator will visit your classroom to facilitate hands-on lessons that highlight the challenges our local watershed faces with stormwater runoff. Each hour long lesson focuses on specific concepts related to stormwater. Lessons can stand alone or be combined into units that offer a more complete picture of stormwater. Units can be for one grade level or used to scaffold throughout multiple grade levels at a school. Every lesson is designed to support WA State K-12 Learning Standards and help students understand what they can do to reduce the effects of stormwater runoff.

Link: <https://naturevision.org/school-programs/>

Time: 1 hour lessons

Cost: \$100 per lesson

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects.

Vashon Nature Center: Nature Presentations

Trained naturalists and scientists offer short in-class or outdoor programs designed to foster student awareness and understanding of environmental science topics by pinning these topics to real-life local examples on Vashon and Maury Islands. Students become engaged and excited about science through these programs because they see how science is tied to their own backyards and personal lives.

Contact: info@vashonnaturecenter.org or 206-755-5798

Link: <http://vashonnaturecenter.org/what-we-do/scientists-in-schools/>

Time: 30-90 minutes

Cost: \$50-\$150

Note: Vashon NC works with teachers to highlight topics of their choice (stormwater, surface water mgmt). Example: Salmon See-son-the life cycle of salmon and a discussion of how salmon populations are faring in our local streams and where to see them.

Field Trips

King County: Salmon SEEson

During the fall, salmon return to streams and rivers around the Puget Sound. Spot the spawners in the Lake Washington/Cedar/Sammamish and Green/Duwamish and Central Puget Sound watersheds from September to mid-December. Salmon SEEson provides information to help you spy these natural beauties at various times and locations as they make their seasonal journey home each year. Many locations have staff or volunteer naturalists on hand to point out salmon; some are self-guided locations.

Contact: Linda Grob at linda.grob@kingcounty.gov or 206-477-4704

Link: www.govlink.org/watersheds/8/action/salmon-seeson/default.aspx

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Flyers, poster, and a website are available to help you find the best time and location for you and your class to see spawning salmon. King County also offers teacher resources, in-class lessons, and projects.

Camp Solomon Schechter: Osprey Camp – Day-long

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout

all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! Classes arrive in the morning and have the option to extend the school day. Day-long field trips give students the opportunity to open their imaginations in a rich, natural setting. Teachers select the environmental lessons that fit their class' developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. A hot lunch is provided.

Contact: Sue Wattier, Osprey Camp Director, at swattier@campschechter.org or 206-447-2629

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Environmental Science Center: Beach Heroes

The Beach Heroes program introduces students to the local Puget Sound beach habitat and the organisms that live there. During the 1-hour classroom visit, students will learn proper beach etiquette and stewardship while learning about marine invertebrates and their relationship to the beach habitat and the other living things with whom they share their home. During this NGSS-correlated lesson, students will create field guides they will use during their field study. The 2-hour field study features both naturalist-led beach exploration and structured activities, during which students will learn all about the habitat restoration of Seahurst Beach! After participating in ESC's Beach Heroes program, students pledge to adopt three behaviors to protect, to conserve, and to educate others about our oceans and marine debris. To honor these students' commitment to environmental stewardship, they receive an Official Beach Hero identification card.

Registration form link:

https://docs.google.com/forms/d/e/1FAIpQLScTo3_c3cps0s72AZj-4lIS62138i7KIWWamG3C5aNWIOc7sQ/viewform

Time: 1 hour (in classroom) + 2 hours (field trip)

Cost: \$150 per class (sliding scale- see registration form; max 30 students)

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered March-June. For schools with a Free & Reduced Lunch Rate of 50% or greater, transportation subsidies and fee reductions and waivers are available. Sliding-scale fee structure is detailed on the registration form.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon - Hatchery Tours
Come see the salmon at Issaquah Creek! Watch spawning salmon, see the hatchery in action, and learn about challenges salmon face and what we can do to help them. Scheduled groups of students and adults are led through the hatchery by trained volunteer docents.

Contact: Contact Rachel Martin, Program Coordinator, FISH at education@issaquahfish.org or 425-392-1118

Time: Tours last 45 minutes to one hour and are available primarily mid-September through early November, though winter and spring/summer tours may also be scheduled.

Cost: FISH requests a fee of \$2 per student when possible.

Transportation: Please contact.

Note: The tour, ideally in conjunction with the Those Amazing Salmon classroom presentation, helps fulfill the state mandate to provide environmental education experiences to students and is aligned to Washington State standards in science and social studies.

Friends of Soos Creek (Kent): Interpretive Walk

Friends of Soos Creek Park is a non-profit organization comprised of volunteer members who take a pro-active role in preserving and extending the Soos Creek Trail Park and who sponsor and lead park clean-ups and interpretive walks for public education about the importance of wetlands specifically and undisturbed nature generally. Soos Creek Park is one of south King County's prized wetland habitats. An 8.5 mile trail follows the creek through cattail marshes, forested swamps, wet meadows and willow thickets. This trail is suited to all levels of fitness and is wheelchair accessible. Take any or all of these interpretive walks to learn more about this fascinating area and its wildlife residents. Volunteers from The Friends of Soos Creek Park lead these interpretive walks.

Contact: Kent Parks and Recreation at 253-856-5000

Time: Variable

Transportation: Please contact.

Note: All of these walks take place out of doors, so be sure to dress for the weather.

Mercer Slough Environmental Education Center: Soil Adventures

Roll up those sleeves – it's time to explore soils. During a wetland hike, examine the characteristics of different soils using soil probes and your senses as you look for signs that new soil is being made. In the lab, use magnifying lenses to identify the soil recyclers that live in wetland soils and discover why soils are an important resource.

Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207

Link: <https://www.pacificsciencecenter.org/mercer-slough/teachers-school-groups/>

Time: 3 hours

Cost: \$160 for up to 16 students, \$259 for 17-32 students

Transportation: Please contact.

Note: Programs require a ratio of one chaperone per 16 students. Adults are free of charge. Limited financial assistance is available for qualifying schools!

Nature Bridge: Environmental Science Program

NatureBridge environmental science programs in Olympic National Park offer students in grades K-12 the opportunity to learn hands-on science in an International Biosphere Reserve. The three to five-day residential outdoor science programs are led by experienced educators and customized to enhance your school's curriculum. A classroom without walls: located on the shore of glacially carved Lake Crescent, students can investigate old growth forests, wilderness coasts, and alpine peaks. Inquiry-based learning: motivated by their own curiosity, students monitor the dynamic Elwha River system, collect and identify macroinvertebrates in Barnes Creek, and study the adaptations of local mammals in the skins and skulls lab. Responsible actions: students are inspired to make informed decisions about what constitutes a healthy relationship between natural and human communities, their role in that relationship and appropriate actions they can take to sustain it.

Request Information: <https://naturebridge.org/request-information-olympic> or contact Eva Foster at efoster@naturebridge.org and 206-382-6212x14 or call 206-300-6291

Link: <https://naturebridge.org/olympic/school-group>

Time: 3 or 5 days

Cost: Price range for programs can be found here:

<https://naturebridge.org/olympic/school-group/rates>

Rates are for 3 day/2 night program starting at \$234 per student, 3 day/3 night program starting at \$294 per student, 5 day/4 night program starting at \$340 per student, and 5 day/5 night program starting at \$400 per student. Need-based scholarships available and additional optional services available. Tuition includes quality customized environmental science education; on-site lodging in heated, dormitory cabins on the shores of Lake Crescent; and home-style all-you-can-eat buffet meals.

Transportation information:

<https://naturebridge.org/sites/default/files/Transportation%20-%20OLYM.pdf>

Nature Vision: Stream Connections

A Nature Vision educator will meet your class at your local stream and facilitate a variety of activities related to salmon and the effects of stormwater. All activities support WA

State K-12 Learning Standards and are customized to the watershed in which the stream is located. This allows students to make connections to their local environment and learn how they can become stewards where it matters to them most.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Nature Vision: Wetland Connections

A Nature Vision educator will meet your class at your local wetland, retention pond, or location of your choice to facilitate activities that show the importance of these unique ecosystems in helping manage the effects of stormwater runoff. All activities support WA State K-12 Learning Standards and are customized to be site specific. This allows students to observe real-world solutions to stormwater management and learn about ways they can have a positive impact on their local watershed.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Seattle Aquarium: Salmon Exploration

Learn about the life cycle of Seattle's most iconic animal, the salmon. With the use of storyboards and interactive activities, students will explore salmon from egg to adult and discuss the many different factors that affect these amazing fish.

Link: <http://www.seattleaquarium.org/education-programs/plan-a-visit>

Time: 60 minutes

Cost: \$10 each (This is the price of aquarium admission for adults and youth 4 and up)

Transportation: Please contact.

Seattle Parks and Recreation: Camp Long

Bringing science, environmental education, and experiential learning to your parks. Seattle Parks and Recreation's Environmental Education and Outdoor Learning staff provide opportunities for grades K-12 and organized groups, such as scouts and camps, to experience age-appropriate, hands-on adventures in learning about natural communities in an urban setting. Programs align with WA State Essential Academic Learning Requirements for core content areas and support science kits.

Ponds (spring and summer only): Experience the freshwater habitats of a city park at Camp Long or Discovery Park. Waddling ducks, wriggling tadpoles, and

dancing dragonflies are some of the creatures they may see as they explore what makes these places so special.

Forest: Camp Long and Discovery Park have lots of forest habitat to explore. Venture through the trees looking for clues to animal habits, hiding places, and seasonal happenings. Forest programs empower participants to feel comfortable in the outdoors.

Link: <https://www.seattle.gov/parks/find/centers/camp-long/camps>

Transportation: Please contact.

Projects

Nature Vision: Blue Teams

Nature Vision offers Blue Teams, a student stewardship project funded by our water sponsors. Blue Teams are groups of kindergarden-12th grade students who commit to taking on and completing a watershed stewardship project. Students complete projects such as invasive plant removal, native plant restoration, planting water-wise gardens, finding and fixing leaks, and much more.

The Blue Team program was developed to educate local youth about water resources and related ecosystems, foster sustainable stewardship values and practices in the community through hands-on youth projects, and to empower youth to take positive steps to improve their local environment.

Blue Teams receive Nature Vision's help in planning, preparing for, and executing their projects at school or at an off-campus project site, as well as regular teacher consultations via phone or email. Teachers/Instructors may register their class or youth group to become a team, and Nature Vision staff will help each team to design a watershed stewardship project. Staff will visit the students multiple times to teach inquiry-based programs, giving the students the knowledge and help they will need to successfully complete and understand the value of their project.

Link: <https://naturevision.org/blue-teams>

Time: Variable

Cost: Free Blue Teams may be available, please email info@naturevision.org for more information.

Transportation: Must provide own transportation.

Note: Nature Vision also offers in-class lessons and field trips.

1st Grade

Teacher Resources

Department of Ecology: Discover Wetlands

A curriculum guide for grades K-12 which focuses on what wetlands are, why they are important, and how human actions affect them.

Unit I: Washington's Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816a.pdf>)

Unit II: Amazing Wetlands: Functions and Values

(<https://fortress.wa.gov/ecy/publications/documents/8816b.pdf>)

Unit III: People and Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816c.pdf>)

Unit IV: A Walk on the Wild Side

(<https://fortress.wa.gov/ecy/publications/documents/8816d.pdf>)

Time: Variable

Cost: No Cost

Puget Sound Starts Here: Drain Rangers

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the *Drain Rangers!* and *Engineering Solutions* curricula and materials is to develop and cultivate an understanding of the serious issues facing our community from stormwater runoff and to share specific actions we can take to improve the quality of our water. In these units, students will utilize problem solving models to replicate the thinking process of engineers addressing polluted stormwater runoff.

Link: <http://www.pugetsoundstartshere.org/drain-rangers>

Time: Variable

Cost: No Cost

Note: Spanish version available.

Classroom Visitors

These programs are taught by an informal educator from various organizations in your classroom.

City of Duvall: Surface Water Management Classroom Visitor

King County Stormwater Elementary Education Resource Guide

Created April 2017 – Last Updated Jan 2018

Boyd Benson is the Public Works Director/City Engineer and Sara Ruhland is in the Engineering Department. Both can adapt their discussion to what you are teaching in the classroom.

Contact: Boyd E. Benson at boyd.benson@duvallwa.gov and 425-939-8042 or Sara Ruhland at sara.ruhland@duvallwa.gov and 425-788-3434x8042

Link: <http://www.duvallwa.gov/305/sewer-water-stormwater>

Time: Variable

Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor

Audrie Starsy is the Surface Water Program Manager and can speak to your class with emphasis on what you are currently talking about in the classroom.

Contact: Audrie Starsy at audries@ci.newcastle.wa.us or 425-649-4143x111

Link: http://newcastlewa.gov/departments/public_works/surface_water_management/

Time: Variable

Cost: No Cost

Eastside Audubon: Migration

This lesson plan focuses on the migration of birds between summer and winter habitats. Students will learn the benefits and challenges of migration and play a game to reinforce their knowledge.

Contact: youthprograms@eastsideaudubon.org

Link: <http://eastsideaudubon.org/education/youth-education-1/youth-workshops>

Time: 45-60 minutes

Cost: No cost

Note: Can be adapted by volunteer to address stormwater runoff effects on bird migration specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon

This popular presentation consists of a slide show discussing the definition and importance of watersheds, hatchery operations, salmon lifecycle, habitat requirements, and predators of Pacific salmonids and the challenges they face. After the slide show, teachers have the option of a watershed or Native American legend activity for their class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 45-90 minutes

Cost: \$50 per class request

Note: Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available September-June. FISH also offers field trips.

King Conservation District: Water on Wheels

The Water on Wheels (WOW) Program offers free lessons for K-6th grade, public and private schools, and informal presentations throughout King County. WOW lessons include lively, hands-on demonstrations, educational games, and grade-level appropriate materials to give students a better understanding of water and soil conservation as well as stormwater protection.

Contact: Kristen Reichardt at kristen.reichardt@kingcd.org or 425-282-1927

Link: <http://kingcd.org/programs-education-stormwater.htm>

Time: Variable

Cost: \$250 per lesson (KCD partners with city jurisdictions to help cover the cost of the lessons so there's no cost to teachers- ask when registering)

Note: Programs that apply for rebate: Exploring Habitats (K-2), Water Everywhere (K-3)

Mercer Slough Environmental Education Center: Soil Sleuths

What is soil? Examine a soil core from Mercer Slough Nature Park, experiment with a sedimentation tube and use sieves to separate soil parts. See the parts of soil up close with a Scope on a Rope projector.

Link:

<https://parksreg.bellevuewa.gov/Start/Start.asp?SCheck=238090596&SDT=42779.5114133102>

Time: 45 minutes

Cost: \$180 for one classroom lesson, \$110 for each additional lesson on the same day; plus mileage fee

Note: Compatible with Pebbles, Sand, and Silt FOSS Kit and the Soils STC Kit. Related Field Study Program: Soil Adventures. Mercer Slough EEC also offers field trips.

Nature Vision: Watershed Connections

A Nature Vision educator will visit your classroom to facilitate hands-on lessons that highlight the challenges our local watershed faces with stormwater runoff. Each hour long lesson focuses on specific concepts related to stormwater. Lessons can stand alone or be combined into units that offer a more complete picture of stormwater. Units can be for one grade level or used to scaffold throughout multiple grade levels at a school. Every lesson is designed to support WA State K-12 Learning Standards and help students understand what they can do to reduce the effects of stormwater runoff.

Link: <https://naturevision.org/school-programs/>

Time: 1 hour lessons

Cost: \$100 per lesson

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects.

Vashon Nature Center: Nature Presentations

Trained naturalists and scientists offer short in-class or outdoor programs designed to foster student awareness and understanding of environmental science topics by pinning these topics to real-life local examples on Vashon and Maury Islands. Students become engaged and excited about science through these programs because they see how science is tied to their own backyards and personal lives.

Contact: info@vashonnaturecenter.org or 206-755-5798

Link: <http://vashonnaturecenter.org/what-we-do/scientists-in-schools/>

Time: 30-90 minutes

Cost: \$50-\$150

Note: Vashon NC works with teachers to highlight topics of their choice (stormwater, surface water mgmt). Example: Salmon See-son-the life cycle of salmon and a discussion of how salmon populations are faring in our local streams and where to see them.

Field Trips

King County: Salmon SEEson

During the fall, salmon return to streams and rivers around the Puget Sound. Spot the spawners in the Lake Washington/Cedar/Sammamish and Green/Duwamish and Central Puget Sound watersheds from September to mid-December. Salmon SEEson provides information to help you spy these natural beauties at various times and locations as they make their seasonal journey home each year. Many locations have staff or volunteer naturalists on hand to point out salmon; some are self-guided locations.

Contact: Linda Grob at linda.grob@kingcounty.gov or 206-477-4704

Link: www.govlink.org/watersheds/8/action/salmon-seeson/default.aspx

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Flyers, poster, and a website are available to help you find the best time and location for you and your class to see spawning salmon. King County also offers teacher resources, in-class lessons, and projects.

Camp Solomon Schechter: Osprey Camp – Day-long

The social development aspects of OSPREY Camp set it apart from similar programs.

Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! Classes arrive in the morning and have the option to extend the school day. Day-long field trips give students the opportunity to open their imaginations in a rich, natural setting. Teachers select the environmental lessons that fit their class’ developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. A hot lunch is provided.

Contact: Sue Wattier, Osprey Camp Director, at swattier@campschechter.org or 206-447-2629

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Environmental Science Center: Beach Heroes

The Beach Heroes program introduces students to the local Puget Sound beach habitat and the organisms that live there. During the 1-hour classroom visit, students will learn proper beach etiquette and stewardship while learning about marine invertebrates and their relationship to the beach habitat and the other living things with whom they share their home. During this NGSS-correlated lesson, students will create field guides they will use during their field study. The 2-hour field study features both naturalist-led beach exploration and structured activities, during which students will learn all about the habitat restoration of Seahurst Beach! After participating in ESC's Beach Heroes program, students pledge to adopt three behaviors to protect, to conserve, and to educate others about our oceans and marine debris. To honor these students' commitment to environmental stewardship, they receive an Official Beach Hero identification card.

Registration form link:

https://docs.google.com/forms/d/e/1FAIpQLScTo3_c3cps0s72AZj-4lIS62138i7KIWWamG3C5aNWIOc7sQ/viewform

Time: 1 hour (in classroom) + 2 hours (field trip)

Cost: \$150 per class (sliding scale- see registration form; max 30 students)

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered March-June. For schools with a Free & Reduced Lunch Rate of 50% or greater, transportation subsidies and fee reductions and waivers are available. Sliding-scale fee structure is detailed on the registration form.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon - Hatchery Tours
Come see the salmon at Issaquah Creek! Watch spawning salmon, see the hatchery in action, and learn about challenges salmon face and what we can do to help them. Scheduled groups of students and adults are led through the hatchery by trained volunteer docents.

Contact: Contact Rachel Martin, Program Coordinator, FISH at education@issaquahfish.org or 425-392-1118

Time: Tours last 45 minutes to one hour and are available primarily mid-September though early November, though winter and spring/summer tours may also be scheduled.

Cost: FISH requests a fee of \$2 per student when possible.

Transportation: Please contact.

Note: The tour, ideally in conjunction with the Those Amazing Salmon classroom presentation, helps fulfill the state mandate to provide environmental education experiences to students and is aligned to Washington State standards in science and social studies.

Friends of Soos Creek (Kent): Interpretive Walk

Friends of Soos Creek Park is a non-profit organization comprised of volunteer members who take a pro-active role in preserving and extending the Soos Creek Trail Park and who sponsor and lead park clean-ups and interpretive walks for public education about the importance of wetlands specifically and undisturbed nature generally. Soos Creek Park is one of south King County's prized wetland habitats. An 8.5 mile trail follows the creek through cattail marshes, forested swamps, wet meadows and willow thickets. This trail is suited to all levels of fitness and is wheelchair accessible. Take any or all of these interpretive walks to learn more about this fascinating area and its wildlife residents. Volunteers from The Friends of Soos Creek Park lead these interpretive walks.

Contact: Kent Parks and Recreation at 253-856-5000

Time: Variable

Transportation: Please contact.

Note: All of these walks take place out of doors, so be sure to dress for the weather.

Mercer Slough Environmental Education Center: Soil Adventures

Roll up those sleeves – it's time to explore soils. During a wetland hike, examine the characteristics of different soils using soil probes and your senses as you look for signs

that new soil is being made. In the lab, use magnifying lenses to identify the soil recyclers that live in wetland soils and discover why soils are an important resource.

Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207

Link: <https://www.pacificsciencecenter.org/mercer-slough/teachers-school-groups/>

Time: 3 hours

Cost: \$160 for up to 16 students, \$259 for 17-32 students

Transportation: Please contact.

Note: Programs require a ratio of one chaperone per 16 students. Adults are free of charge. Limited financial assistance is available for qualifying schools!

Nature Bridge: Environmental Science Program

NatureBridge environmental science programs in Olympic National Park offer students in grades K-12 the opportunity to learn hands-on science in an International Biosphere Reserve. The three to five-day residential outdoor science programs are led by experienced educators and customized to enhance your school's curriculum. A classroom without walls: located on the shore of glacially carved Lake Crescent, students can investigate old growth forests, wilderness coasts, and alpine peaks. Inquiry-based learning: motivated by their own curiosity, students monitor the dynamic Elwha River system, collect and identify macroinvertebrates in Barnes Creek, and study the adaptations of local mammals in the skins and skulls lab. Responsible actions: students are inspired to make informed decisions about what constitutes a healthy relationship between natural and human communities, their role in that relationship and appropriate actions they can take to sustain it.

Request Information: <https://naturebridge.org/request-information-olympic> or contact Eva Foster at efoster@naturebridge.org and 206-382-6212x14 or call 206-300-6291

Link: <https://naturebridge.org/olympic/school-group>

Time: 3 or 5 days

Cost: Price range for programs can be found here:

<https://naturebridge.org/olympic/school-group/rates>

Rates are for 3 day/2 night program starting at \$234 per student, 3 day/3 night program starting at \$294 per student, 5 day/4 night program starting at \$340 per student, and 5 day/5 night program starting at \$400 per student. Need-based scholarships available and additional optional services available. Tuition includes quality customized environmental science education; on-site lodging in heated, dormitory cabins on the shores of Lake Crescent; and home-style all-you-can-eat buffet meals.

Transportation information:

<https://naturebridge.org/sites/default/files/Transportation%20-%20OLYM.pdf>

Nature Vision: Stream Connections

A Nature Vision educator will meet your class at your local stream and facilitate a variety

of activities related to salmon and the effects of stormwater. All activities support WA State K-12 Learning Standards and are customized to the watershed in which the stream is located. This allows students to make connections to their local environment and learn how they can become stewards where it matters to them most.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Nature Vision: Wetland Connections

A Nature Vision educator will meet your class at your local wetland, retention pond, or location of your choice to facilitate activities that show the importance of these unique ecosystems in helping manage the effects of stormwater runoff. All activities support WA State K-12 Learning Standards and are customized to be site specific. This allows students to observe real-world solutions to stormwater management and learn about ways they can have a positive impact on their local watershed.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Seattle Aquarium: Salmon Exploration

Learn about the life cycle of Seattle's most iconic animal, the salmon. With the use of storyboards and interactive activities, students will explore salmon from egg to adult and discuss the many different factors that affect these amazing fish.

Link: <http://www.seattleaquarium.org/education-programs/plan-a-visit>

Time: 60 minutes

Cost: \$10 each (This is the price of aquarium admission for adults and youth 4 and up)

Transportation: Please contact.

Seattle Parks and Recreation: Camp Long

Bringing science, environmental education, and experiential learning to your parks. Seattle Parks and Recreation's Environmental Education and Outdoor Learning staff provide opportunities for grades K-12 and organized groups, such as scouts and camps, to experience age-appropriate, hands-on adventures in learning about natural communities in an urban setting. Programs align with WA State Essential Academic Learning Requirements for core content areas and support science kits.

Ponds (spring and summer only): Experience the freshwater habitats of a city park at Camp Long or Discovery Park. Waddling ducks, wriggling tadpoles, and dancing dragonflies are some of the creatures they may see as they explore what makes these places so special.

Forest: Camp Long and Discovery Park have lots of forest habitat to explore. Venture through the trees looking for clues to animal habits, hiding places, and seasonal happenings. Forest programs empower participants to feel comfortable in the outdoors.

Link: <https://www.seattle.gov/parks/find/centers/camp-long/camps>

Transportation: Please contact.

Projects

Nature Vision: Blue Teams

Nature Vision offers Blue Teams, a student stewardship project funded by our water sponsors. Blue Teams are groups of kindergarden-12th grade students who commit to taking on and completing a watershed stewardship project. Students complete projects such as invasive plant removal, native plant restoration, planting water-wise gardens, finding and fixing leaks, and much more.

The Blue Team program was developed to educate local youth about water resources and related ecosystems, foster sustainable stewardship values and practices in the community through hands-on youth projects, and to empower youth to take positive steps to improve their local environment.

Blue Teams receive Nature Vision's help in planning, preparing for, and executing their projects at school or at an off-campus project site, as well as regular teacher consultations via phone or email. Teachers/Instructors may register their class or youth group to become a team, and Nature Vision staff will help each team to design a watershed stewardship project. Staff will visit the students multiple times to teach inquiry-based programs, giving the students the knowledge and help they will need to successfully complete and understand the value of their project.

Link: <https://naturevision.org/blue-teams>

Time: Variable

Cost: Free Blue Teams may be available, please email info@naturevision.org for more information.

Transportation: Must provide own transportation.

Note: Nature Vision also offers in-class lessons and field trips

2nd Grade

Teacher Resources

Department of Ecology: Discover Wetlands

A curriculum guide for grades K-12 which focuses on what wetlands are, why they are important, and how human actions affect them.

Unit I: Washington's Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816a.pdf>)

Unit II: Amazing Wetlands: Functions and Values

(<https://fortress.wa.gov/ecy/publications/documents/8816b.pdf>)

Unit III: People and Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816c.pdf>)

Unit IV: A Walk on the Wild Side

(<https://fortress.wa.gov/ecy/publications/documents/8816d.pdf>)

Time: Variable

Cost: No Cost

Earth Echo: Make a Splash: A Kid's Guide to Protecting Our Oceans, Lakes, Rivers, and Wetlands

This Leader's Guide provides a sequence of activities to support classroom teachers, youth group or club sponsors, or any adult invested in engaging youth in meaningful service learning that addresses the global water crisis as outlined in the stories of Make a Splash! The Leader's Guide helps harness the enthusiasm and energy to plan for positive change in their classroom, their community, and the wider world!

Link: <http://earthecho.org/educator-resources/a-leaders-guide-to-make-a-splash>

Time: Variable

Cost: Variable (Leaders Guide free-Student Guide online)

FOSS Kits: Pebbles, Sand, and Silt

This module provides grade 2 students with earth science core ideas dealing with the observable structures and properties of earth materials (rocks, soil, and water), weathering and erosion of Earth's surface, natural sources of water, and how to represent the shapes and kinds of land and bodies of water on Earth. Students explore

how wind and water change the shape of the land and compare ways to slow the process of erosion. Students learn about the important role that earth materials have as natural resources.

Link: <https://www.fossweb.com/foss-modules>

Cost: No Cost

Puget Sound Starts Here: Drain Rangers

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the *Drain Rangers!* and *Engineering Solutions* curricula and materials is to develop and cultivate an understanding of the serious issues facing our community from stormwater runoff and to share specific actions we can take to improve the quality of our water. In these units, students will utilize problem solving models to replicate the thinking process of engineers addressing polluted stormwater runoff.

Link: <http://www.pugetsoundstartshere.org/drain-rangers>

Time: Variable

Cost: No Cost

Note: Spanish version available.

Classroom Visitors

These programs are taught by an informal educator from various organizations in your classroom.

City of Duvall: Surface Water Management Classroom Visitor

Boyd Benson is the Public Works Director/City Engineer and Sara Ruhland is in the Engineering Department. Both can adapt their discussion to what you are teaching in the classroom.

Contact: Boyd E. Benson at boyd.benson@duvallwa.gov and 425-939-8042 or Sara Ruhland at sara.ruhland@duvallwa.gov and 425-788-3434x8042

Link: <http://www.duvallwa.gov/305/sewer-water-stormwater>

Time: Variable

Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor

Audrie Starsy is the Surface Water Program Manager and can speak to your class with emphasis on what you are currently talking about in the classroom.

Contact: Audrie Starsy at audries@ci.newcastle.wa.us or 425-649-4143x111

Link: http://newcastlewa.gov/departments/public_works/surface_water_management/

Time: Variable

Cost: No Cost

Eastside Audubon: Migration

This lesson plan focuses on the migration of birds between summer and winter habitats. Students will learn the benefits and challenges of migration and play a game to reinforce their knowledge.

Contact: youthprograms@eastsideaudubon.org

Link: <http://eastsideaudubon.org/education/youth-education-1/youth-workshops>

Time: 45-60 minutes

Cost: No cost

Note: Can be adapted by volunteer to address stormwater runoff effects on bird migration specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon

This popular presentation consists of a slide show discussing the definition and importance of watersheds, hatchery operations, salmon lifecycle, habitat requirements, and predators of Pacific salmonids and the challenges they face. After the slide show, teachers have the option of a watershed or Native American legend activity for their class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 45-90 minutes

Cost: \$50 per class request

Note: Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available September-June. FISH also offers field trips.

King Conservation District: Water on Wheels

The Water on Wheels (WOW) Program offers free lessons for K-6th grade, public and private schools, and informal presentations throughout King County. WOW lessons include lively, hands-on demonstrations, educational games, and grade-level appropriate materials to give students a better understanding of water and soil conservation as well as stormwater protection.

Contact: Kristen Reichardt at kristen.reichardt@kingcd.org or 425-282-1927

Link: <http://kingcd.org/programs-education-stormwater.htm>

Time: Variable

Cost: \$250 per lesson (KCD partners with city jurisdictions to help cover the cost of the lessons so there's no cost to teachers- ask when registering)

Note: Programs that apply for rebate: Exploring Habitats (K-2), Water Everywhere (K-3)

Mercer Slough Environmental Education Center: Soil Sleuths

What is soil? Examine a soil core from Mercer Slough Nature Park, experiment with a sedimentation tube and use sieves to separate soil parts. See the parts of soil up close with a Scope on a Rope projector.

Link:

<https://parksreg.bellevuewa.gov/Start/Start.asp?SCheck=238090596&SDT=42779.5114133102>

Time: 45 minutes

Cost: \$180 for one classroom lesson, \$110 for each additional lesson on the same day; plus mileage fee

Note: Compatible with Pebbles, Sand, and Silt FOSS Kit and the Soils STC Kit. Related Field Study Program: Soil Adventures. Mercer Slough EEC also offers field trips.

Nature Vision: Watershed Connections

A Nature Vision educator will visit your classroom to facilitate hands-on lessons that highlight the challenges our local watershed faces with stormwater runoff. Each hour long lesson focuses on specific concepts related to stormwater. Lessons can stand alone or be combined into units that offer a more complete picture of stormwater. Units can be for one grade level or used to scaffold throughout multiple grade levels at a school. Every lesson is designed to support WA State K-12 Learning Standards and help students understand what they can do to reduce the effects of stormwater runoff.

Link: <https://naturevision.org/school-programs/>

Time: 1 hour lessons

Cost: \$100 per lesson

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects.

Sound Salmon Solutions: Hooks and Ladders

Students become spawning salmon in this fun, interactive game that teaches students about all of the obstacles salmon face throughout their life cycle.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45 minutes

Note: Can be done as a field trip.

Vashon Nature Center: Nature Presentations

Trained naturalists and scientists offer short in-class or outdoor programs designed to foster student awareness and understanding of environmental science topics by pinning these topics to real-life local examples on Vashon and Maury Islands. Students become engaged and excited about science through these programs because they see how science is tied to their own backyards and personal lives.

Contact: info@vashonnaturecenter.org or 206-755-5798

Link: <http://vashonnaturecenter.org/what-we-do/scientists-in-schools/>

Time: 30-90 minutes

Cost: \$50-\$150

Note: Vashon NC works with teachers to highlight topics of their choice (stormwater, surface water mgmt). Example: Salmon See-son-the life cycle of salmon and a discussion of how salmon populations are faring in our local streams and where to see them.

Field Trips

King County: Salmon SEEson

During the fall, salmon return to streams and rivers around the Puget Sound. Spot the spawners in the Lake Washington/Cedar/Sammamish and Green/Duwamish and Central Puget Sound watersheds from September to mid-December. Salmon SEEson provides information to help you spy these natural beauties at various times and locations as they make their seasonal journey home each year. Many locations have staff or volunteer naturalists on hand to point out salmon; some are self-guided locations.

Contact: Linda Grob at linda.grob@kingcounty.gov or 206-477-4704

Link: www.govlink.org/watersheds/8/action/salmon-seeson/default.aspx

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Flyers, poster, and a website are available to help you find the best time and location for you and your class to see spawning salmon. King County also offers teacher resources, in-class lessons, and projects.

Camp Solomon Schechter: Osprey Camp – Day-long

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school

requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! Classes arrive in the morning and have the option to extend the school day. Day-long field trips give students the opportunity to open their imaginations in a rich, natural setting. Teachers select the environmental lessons that fit their class' developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. A hot lunch is provided.

Contact: Sue Wattier, Osprey Camp Director, at swattier@campschechter.org or 206-447-2629

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Environmental Science Center: Beach Heroes

The Beach Heroes program introduces students to the local Puget Sound beach habitat and the organisms that live there. During the 1-hour classroom visit, students will learn proper beach etiquette and stewardship while learning about marine invertebrates and their relationship to the beach habitat and the other living things with whom they share their home. During this NGSS-correlated lesson, students will create field guides they will use during their field study. The 2-hour field study features both naturalist-led beach exploration and structured activities, during which students will learn all about the habitat restoration of Seahurst Beach! After participating in ESC's Beach Heroes program, students pledge to adopt three behaviors to protect, to conserve, and to educate others about our oceans and marine debris. To honor these students' commitment to environmental stewardship, they receive an Official Beach Hero identification card.

Registration form link:

https://docs.google.com/forms/d/e/1FAIpQLScTo3_c3cps0s72AZj-4lIS62138i7KIWWamG3C5aNWIOc7sQ/viewform

Time: 1 hour (in classroom) + 2 hours (field trip)

Cost: \$150 per class (sliding scale- see registration form; max 30 students)

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered March-June. For schools with a Free & Reduced Lunch Rate of 50% or greater, transportation subsidies and fee reductions and waivers are available. Sliding-scale fee structure is detailed on the registration form.

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Contact: Contact Rachel Martin, Program Coordinator, FISH at education@issaquahfish.org or 425-392-1118

Time: Tours last 45 minutes to one hour and are available primarily mid-September through early November, though winter and spring/summer tours may also be scheduled.

Cost: FISH requests a fee of \$2 per student when possible.

Transportation: Please contact.

Note: The tour, ideally in conjunction with the Those Amazing Salmon classroom presentation, helps fulfill the state mandate to provide environmental education experiences to students and is aligned to Washington State standards in science and social studies.

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Time: Variable

Transportation: Please contact.

Note: All of these walks take place out of doors, so be sure to dress for the weather.

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Link: <https://www.pacificsciencecenter.org/mercercreek/teachers-school-groups/>

Time: 3 hours

Cost: \$160 for up to 16 students, \$259 for 17-32 students

Transportation: Please contact.

Note: Programs require a ratio of one chaperone per 16 students. Adults are free of charge. Limited financial assistance is available for qualifying schools!

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Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

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Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

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Link: <http://www.seattleaquarium.org/education-programs/plan-a-visit>

Time: 60 minutes

Cost: \$10 each (This is the price of aquarium admission for adults and youth 4 and up)

Transportation: Please contact.

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Projects

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Link: <https://naturevision.org/blue-teams>

Time: Variable

Cost: Free Blue Teams may be available, please email info@naturevision.org for more information.

Transportation: Must provide own transportation.

Note: Nature Vision also offers in-class lessons and field trips

3rd Grade

Teacher Resources

King County: Protecting Our Liquid Assets

This course for Vashon Island provides students with the first steps along the path of ecological understanding, with the hope that their future steps will be considered and measured, serving the interests of all life.

Link: www.kingcounty.gov/environment/waterandland/groundwater/management-areas/vashon-maury-island-gwma/liquid-assets.aspx

Time: Variable

Cost: No Cost

Note: King County also offers in-class lessons, field trips, and projects.

King County: Online Publications

This web page is a useful resource for students doing research on local environmental issues. Online publications, including reports, newsletters, and brochures.

Link: www.kingcounty.gov/depts/dnrp/publications.aspx

Time: Variable

Cost: No Cost

Note: King County also offers in-class lessons, field trips, and projects.

King County: GIS Custom Map Products

King County GIS can prepare custom map products for curriculum support. For example, Sustainability Ambassadors, a non-profit organization empowering youth in community sustainability, engaged the King County GIS Center to help create a themed atlas of stormwater indicator maps for the Tahoma School District in suburban King County. The “Stormwater Neighborhood Atlas” serves as a community outreach tool to show students and the broader community the environmental conditions of their neighborhoods, highlighting unique project opportunities, such as pervious pavement installation and rainwater harvesting at the district’s own schools. Local student Sustainability Ambassadors worked with the school district, the Chamber of Commerce, the Rotary Club and the City of Maple Valley to distribute the “Stormwater

Neighborhood Atlas” in classrooms throughout the district, in the public library, and for casual viewing in doctor and dentist waiting rooms and in the lobbies of public spaces such as coffee shops and city buildings. The King County GIS Center’s unique cartographic and design capabilities, and its direct access to King County’s extensive

Contact: Dennis Higgins at dennis.higgins@kingcounty.gov or 206-477-4415

Link: <http://kingcounty.gov/services/gis/ClientServices/Services.aspx>

Time: Variable

Cost: No Cost

Note: King County also offers in-class lessons, field trips, and projects.

Department of Ecology: Discover Wetlands

A curriculum guide for grades K-12 which focuses on what wetlands are, why they are important, and how human actions affect them.

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(<https://fortress.wa.gov/ecy/publications/documents/8816c.pdf>)

Unit IV: A Walk on the Wild Side

(<https://fortress.wa.gov/ecy/publications/documents/8816d.pdf>)

Time: Variable

Cost: No Cost

Earth Echo: Make a Splash: A Kid's Guide to Protecting Our Oceans, Lakes, Rivers, and Wetlands

This Leader's Guide provides a sequence of activities to support classroom teachers, youth group or club sponsors, or any adult invested in engaging youth in meaningful service learning that addresses the global water crisis as outlined in the stories of Make a Splash! The Leader's Guide helps harness the enthusiasm and energy to plan for positive change in their classroom, their community, and the wider world!

Link: <http://earthecho.org/educator-resources/a-leaders-guide-to-make-a-splash>

Time: Variable

Cost: Variable (Leaders Guide free-Student Guide online)

FOSS Kits: Environments

The Environments Module has four investigations that focus on the concepts that organisms have structures and behaviors, including sensory receptors, that serve functions in growth, survival and reproduction, and living organisms depend on one another and on their environment for their survival and the survival of populations. Students design investigations to study preferred environments, range of tolerance, and

optimum conditions for growth and survival of specific organisms. They conduct controlled experiments by incrementally changing specific environmental conditions to determine the range of tolerance for early growth of seeds and hatching of brine shrimp, and use these data to develop and use models to understand the impact of changes to the environment. They graph and interpret data from multiple trials of experiments and build explanations from evidence. Students gain experiences that will contribute to the understanding of crosscutting concepts of patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and stability and change.

Link: <https://www.fossweb.com/foss-modules>

Cost: No Cost

Leaping Frog: Illahee: Saving Puget Sound One Watershed at a Time

This video [Illlahee] is an inspirational story of a community's effort to preserve and restore a forest, a salmon stream, and Puget Sound. Bordering on Washington State's Puget Sound is a little gem of a community known as Illahee. What makes it so unique is that while surrounded by development, much of Illahee's natural beauty has been preserved. Started modestly by forward-looking residents of the past, and carried on by succeeding generations, this extraordinary and sustained effort insures that Illahee's natural treasures will be its legacy to the future of Puget Sound.

Contact: shellysol@olyopen.com

Link: <http://www.leapingfrogfilms.com/>

Time: 30 minutes or less

Cost: No Cost (other videos available on sliding scale)

Nature Conservancy: Nature Works Everywhere: Garden Lesson: Water

By filtering rainwater and slowing the movement of water to rivers, lakes and oceans, your garden works as a mini-watershed. In this lesson, students calculate the permeable surface area of their garden and periodically measure rainfall amounts, acting as junior hydrologists. Using the collected data, students determine how much water their garden filters and explore the relationship between their garden and water quality in the surrounding watershed.

Link: <https://www.natureworkseverywhere.org/resources/activity-guide-water/>

Time: Variable

Cost: No Cost

Nature Conservancy: Nature Works Everywhere: How Dirt Works

Soil sustains plant and animal life, regulates water, filters pollutants, cycles nutrients and supports structures. In this lesson, students learn the value of soil and its role as a natural resource. Students investigate how humans and many other organisms rely on

soil and explore why it is important to monitor and maintain the health of soil. They also learn how agriculture, home building and road construction change the land in ways different from how nature changes the land.

Link: <https://www.natureworkseverywhere.org/resources/how-dirt-works/>

Time: 3 45-minute lessons

Cost: No Cost

Nature Conservancy: Nature Works Everywhere: City Habitats

Online teacher resource.

Link: <http://www.cityhabitats.org/>

Puget Sound Starts Here: Drain Rangers

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the *Drain Rangers!* and *Engineering Solutions* curricula and materials is to develop and cultivate an understanding of the serious issues facing our community from stormwater runoff and to share specific actions we can take to improve the quality of our water. In these units, students will utilize problem solving models to replicate the thinking process of engineers addressing polluted stormwater runoff.

Link: <http://www.pugetsoundstartshere.org/drain-rangers>

Time: Variable

Cost: No Cost

Note: Spanish version available.

Seattle Public Utilities: Lost and (Puget) Sound

This film follows three teens who lose a key down a storm drain. Must email Beth for CD with lessons.

Contact: Beth Miller at beth.miller@seattle.gov

Time: 29 minute video plus lesson

Cost: No Cost

STC Kits: Land and Water

Using a stream table, students explore different interactions between land and water, such as how runoff causes stream formation; how groundwater forms; how soil is eroded, transported, and deposited; and how water shapes land. Land and Water invites students to manipulate their model, create hills, build dams, and grow vegetation to observe how these things affect land and water interactions. They learn how water shapes the land and, in turn, the land directs the flow of water.

Link: <http://www.carolina.com/stem-science-technology-engineering-math-curriculum/smithsonians-stc-elementary-curriculum/10817.ct>

Time: Variable

Cost: No Cost

STC Kits: Ecosystems

In Ecosystems, students set up terrariums for crickets and isopods. Duckweed, algae, Elodea, guppies, and snails are introduced to an aquarium. Connecting the two habitats to create an "ecocolumn," students observe the relationship between the two environments and the organisms living within them. Students simulate the effects of pollutants; road salt, fertilizer, and acid rain on the environment.

Link: <http://www.carolina.com/stem-science-technology-engineering-math-curriculum/smithsonians-stc-elementary-curriculum/10817.ct>

Time: Variable

Cost: No Cost

Washington Stormwater Center: Supplemental Videos

Link:

https://www.youtube.com/user/StormwaterChannel/playlists?view=1&sort=dd&shelf_id=0

Cost: No Cost

Classroom Visitors

These programs are taught by an informal educator from various organizations in your classroom.

King County: Noxious Weeds

The King County Noxious Weed Control Program can provide presentations and other programs upon request for teachers and students of all levels customized to their curriculum needs. Contact the program for more information or to set up a presentation or field trip.

Link: <http://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/school.aspx>

Time: Variable

Cost: No Cost

Note: This program can be a presentation or a field trip.

City of Duvall: Surface Water Management Classroom Visitor

Boyd Benson is the Public Works Director/City Engineer and Sara Ruhland is in the Engineering Department. Both can adapt their discussion to what you are teaching in

the classroom.

Contact: Boyd E. Benson at boyd.benson@duvallwa.gov and 425-939-8042 or Sara Ruhland at sara.ruhland@duvallwa.gov and 425-788-3434x8042

Link: <http://www.duvallwa.gov/305/sewer-water-stormwater>

Time: Variable

Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor

Audrie Starsy is the Surface Water Program Manager and can speak to your class with emphasis on what you are currently talking about in the classroom.

Contact: Audrie Starsy at audries@ci.newcastle.wa.us or 425-649-4143x111

Link: http://newcastlewa.gov/departments/public_works/surface_water_management/

Time: Variable

Cost: No Cost

Eastside Audubon: Migration

This lesson plan focuses on the migration of birds between summer and winter habitats. Students will learn the benefits and challenges of migration and play a game to reinforce their knowledge.

Contact: youthprograms@eastsideaudubon.org

Link: <http://eastsideaudubon.org/education/youth-education-1/youth-workshops>

Time: 45-60 minutes

Cost: No cost

Note: Can be adapted by volunteer to address stormwater runoff effects on bird migration specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon

This popular presentation consists of a slide show discussing the definition and importance of watersheds, hatchery operations, salmon lifecycle, habitat requirements, and predators of Pacific salmonids and the challenges they face. After the slide show, teachers have the option of a watershed or Native American legend activity for their class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 45-90 minutes

Cost: \$50 per class request

Note: Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available September-June. FISH also offers field trips.

Friends of the Issaquah Salmon Hatchery (FISH): Enviroscape- a Watershed Model

Using a table-top watershed model, students “pollute” the land, make it “rain,” and watch how pollution can affect the watershed. They then come up with solutions to pollution problems and identify things they can do to keep our watersheds (and salmon!) healthy. The whole activity takes approximately one hour per class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 60 minutes

Cost: \$50 per class requested

Note: Offered December-June. FISH also offers field trips.

King Conservation District: Water on Wheels

The Water on Wheels (WOW) Program offers free lessons for K-6th grade, public and private schools, and informal presentations throughout King County. WOW lessons include lively, hands-on demonstrations, educational games, and grade-level appropriate materials to give students a better understanding of water and soil conservation as well as stormwater protection.

Contact: Kristen Reichardt at kristen.reichardt@kingcd.org or 425-282-1927

Link: <http://kingcd.org/programs-education-stormwater.htm>

Time: Variable

Cost: \$250 per lesson (KCD partners with city jurisdictions to help cover the cost of the lessons so there's no cost to teachers- ask when registering)

Note: Programs that apply for rebate: Exploring Habitats (K-2), Water Everywhere (K-3)

Mercer Slough Environmental Education Center: Watershed Hydrologists

What happens to water as it flows from the mountains to the sea? Learn to identify watershed parts and try out our Enviroscape watershed model. Discover some of the ways humans impact the watershed and how we can protect our local waterways.

Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207

Link: <https://www.pacificsciencecenter.org/mercero-slough/teachers-school-groups/>

Time: 4 hours

Cost: \$180 for one classroom lesson, \$110 for each additional lesson on the same day; plus mileage fee

Note: Can be used as an extension to the Water FOSS Kit and the Land and Water STC Kit. Mercer Slough EEC also offers field trips: related field study program: Wetland Naturalists.

Nature Vision: Watershed Connections

A Nature Vision educator will visit your classroom to facilitate hands-on lessons that highlight the challenges our local watershed faces with stormwater runoff. Each hour long lesson focuses on specific concepts related to stormwater. Lessons can stand alone

or be combined into units that offer a more complete picture of stormwater. Units can be for one grade level or used to scaffold throughout multiple grade levels at a school. Every lesson is designed to support WA State K-12 Learning Standards and help students understand what they can do to reduce the effects of stormwater runoff.

Link: <https://naturevision.org/school-programs/>

Time: 1 hour lessons

Cost: \$100 per lesson

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects.

Seattle Aquarium: Salmon Discovery Outreach

Learn about the life cycle of Pacific salmon and their unique journey from egg to adult to spawner. Students will explore what factors change salmon habitats and discuss the effect they have on salmon populations.

Link: <http://www.seattleaquarium.org/register/program-in-your-classroom>

Time: 60 minutes

Cost: \$168 per program

Note: Fees include up to 50 miles travel, one way. Max of four programs per day with 30-90 minutes between. Limit to 32 students per program.

Sound Salmon Solutions: Hooks and Ladders

Students become spawning salmon in this fun, interactive game that teaches students about all of the obstacles salmon face throughout their life cycle.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45 minutes

Note: Can be done as a field trip.

Vashon Nature Center: Nature Presentations

Trained naturalists and scientists offer short in-class or outdoor programs designed to foster student awareness and understanding of environmental science topics by pinning these topics to real-life local examples on Vashon and Maury Islands. Students become engaged and excited about science through these programs because they see how science is tied to their own backyards and personal lives.

Contact: info@vashonnaturecenter.org or 206-755-5798

Link: <http://vashonnaturecenter.org/what-we-do/scientists-in-schools/>

Time: 30-90 minutes

Cost: \$50-\$150

Note: Vashon NC works with teachers to highlight topics of their choice (stormwater, surface water mgmt). Example: Salmon See-son-the life cycle of salmon and a discussion of how salmon populations are faring in our local streams and where to see them.

Field Trips

King County: Brightwater Center Field Trips

IslandWood and King County provide educational field trips for students in grades 3-8 utilizing the many resources at the Brightwater Center. Field trips can accommodate up to 60 students per day, last 3-4 hours, and are free of charge. Teachers can choose from the following program options: Freshwater Ecosystem Investigation, Landforms Investigation, and Humans and the Water Cycle.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: <https://islandwood.org/educational-programming/brightwater-center/brightwater-school-day-programs>

Time: 3-4 hours

Cost: No Cost

Transportation: Free bus transportation through the [Wheels to Water program](#).

Note: King County also offers teacher resources, in-class lessons, and projects.

King County: Salmon SEEson

During the fall, salmon return to streams and rivers around the Puget Sound. Spot the spawners in the Lake Washington/Cedar/Sammamish and Green/Duwamish and Central Puget Sound watersheds from September to mid-December. Salmon SEEson provides information to help you spy these natural beauties at various times and locations as they make their seasonal journey home each year. Many locations have staff or volunteer naturalists on hand to point out salmon; some are self-guided locations.

Contact: Linda Grob at linda.grob@kingcounty.gov or 206-477-4704

Link: www.govlink.org/watersheds/8/action/salmon-seeson/default.aspx

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Flyers, poster, and a website are available to help you find the best time and location for you and your class to see spawning salmon. King County also offers teacher resources, in-class lessons, and projects.

King County: Noxious Weeds

The King County Noxious Weed Control Program can provide presentations and other programs upon request for teachers and students of all levels customized to their curriculum needs. Contact the program for more information or to set up a presentation or field trip.

Link: <http://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/school.aspx>

Time: Variable

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: This program can be a presentation or field trip. King County also offers teacher resources and projects.

Camp Solomon Schechter: Osprey Camp – Day-long

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! Classes arrive in the morning and have the option to extend the school day. Day-long field trips give students the opportunity to open their imaginations in a rich, natural setting. Teachers select the environmental lessons that fit their class’ developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. A hot lunch is provided.

Contact: Sue Wattier, Osprey Camp Director, at swattier@campschechter.org or 206-447-2629

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Environmental Science Center: Beach Heroes

The Beach Heroes program introduces students to the local Puget Sound beach habitat and the organisms that live there. During the 1-hour classroom visit, students will learn proper beach etiquette and stewardship while learning about marine invertebrates and their relationship to the beach habitat and the other living things with whom they share their home. During this NGSS-correlated lesson, students will create field guides they will use during their field study. The 2-hour field study features both naturalist-led

beach exploration and structured activities, during which students will learn all about the habitat restoration of Seahurst Beach! After participating in ESC's Beach Heroes program, students pledge to adopt three behaviors to protect, to conserve, and to educate others about our oceans and marine debris. To honor these students' commitment to environmental stewardship, they receive an Official Beach Hero identification card.

Registration form link:

https://docs.google.com/forms/d/e/1FAIpQLScTo3_c3cps0s72AZj-4lIS62138i7KIWWamG3C5aNWIOc7sQ/viewform

Time: 1 hour (in classroom) + 2 hours (field trip)

Cost: \$150 per class (sliding scale- see registration form; max 30 students)

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered March-June. For schools with a Free & Reduced Lunch Rate of 50% or greater, transportation subsidies and fee reductions and waivers are available. Sliding-scale fee structure is detailed on the registration form.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon - Hatchery Tours
Come see the salmon at Issaquah Creek! Watch spawning salmon, see the hatchery in action, and learn about challenges salmon face and what we can do to help them. Scheduled groups of students and adults are led through the hatchery by trained volunteer docents.

Contact: Contact Rachel Martin, Program Coordinator, FISH at education@issaquahfish.org or 425-392-1118

Time: Tours last 45 minutes to one hour and are available primarily mid-September through early November, though winter and spring/summer tours may also be scheduled.

Cost: FISH requests a fee of \$2 per student when possible.

Transportation: Please contact.

Note: The tour, ideally in conjunction with the Those Amazing Salmon classroom presentation, helps fulfill the state mandate to provide environmental education experiences to students and is aligned to Washington State standards in science and social studies.

Friends of Soos Creek (Kent): Interpretive Walk

Friends of Soos Creek Park is a non-profit organization comprised of volunteer members who take a pro-active role in preserving and extending the Soos Creek Trail Park and who sponsor and lead park clean-ups and interpretive walks for public education about the importance of wetlands specifically and undisturbed nature generally. Soos Creek Park is one of south King County's prized wetland habitats. An 8.5 mile trail follows the creek through cattail marshes, forested swamps, wet meadows and willow thickets. This

trail is suited to all levels of fitness and is wheelchair accessible. Take any or all of these interpretive walks to learn more about this fascinating area and its wildlife residents. Volunteers from The Friends of Soos Creek Park lead these interpretive walks.

Contact: Kent Parks and Recreation at 253-856-5000

Time: Variable

Transportation: Please contact.

Note: All of these walks take place out of doors, so be sure to dress for the weather.

IslandWood (at Brightwater): Freshwater Ecosystem Investigation

In this field experience, students engage in the scientific process by comparing aquatic macroinvertebrates from two pond ecosystems in the Brightwater Center natural area. This experience is designed for elementary classes studying ecosystems, habitats, or microorganisms.

Contact: Derek Jones at dereki@islandwood.org or 206-263-8866

Link: www.islandwood.org/brightwater

Time: 4 hours

Cost: No Cost

Transportation: Free transportation is available to qualifying schools within King County.

Note: Can accommodate up to 60 students per day, runs from 10am to 2pm.

Mercer Slough Environmental Education Center: Wetland Naturalists

Experience the secrets of the wetland and make the earth move under your feet. As a naturalist, observe the soil, plants and animals as you hike through the wetland. Along the way you will encounter the challenges of a migrating bird and discover the importance of wetlands. In the lab, collect pond samples and use microscopes and other scientific tools to examine aquatic macroinvertebrates.

Contact: Elley Vanderline at evanderline@pacsci.org

Link: <https://www.pacificsciencecenter.org/mercero-slough/teachers-school-groups/>

Time: 4 hours

Cost: \$182 for up to 16 students, \$309 for 17-32 students.

Transportation: Please contact.

Note: Mercer Slough EEC also offer in-class lessons.

NatureBridge: Environmental Science Program

NatureBridge environmental science programs in Olympic National Park offer students in grades K-12 the opportunity to learn hands-on science in an International Biosphere Reserve. Our three- to five-day residential outdoor science programs are led by experienced educators and customized to enhance your school's curriculum. A classroom without walls: located on the shore of glacially carved Lake Crescent, students can investigate old growth forests, wilderness coasts, and alpine peaks.

Inquiry-based learning: motivated by their own curiosity, students monitor the dynamic

Elwha River system, collect and identify macroinvertebrates in Barnes Creek, and study the adaptations of local mammals in our skins and skulls lab. Responsible actions: students are inspired to make informed decisions about what constitutes a healthy relationship between natural and human communities, their role in that relationship and appropriate actions they can take to sustain it.

Link: <https://naturebridge.org/olympic/school-group>

Request Information: <https://naturebridge.org/request-information-olympic> or call Eva Foster at efoster@naturebridge.org and (206) 382-6212x14 or call (206) 300-6291

Time: 3 or 5 days

Cost: Price range for programs can be found here:

<https://naturebridge.org/olympic/school-group/rates>

Rates are for 3 day/2 night program starting at \$234 per student, 3 day/3 night program starting at \$294 per student, 5 day/4 night program starting at \$340 per student, and 5 day/5 night program starting at \$400 per student. Need-based scholarships available and additional optional services available. Tuition includes quality customized environmental science education; on-site lodging in heated, dormitory cabins on the shores of Lake Crescent; and home-style all-you-can-eat buffet meals.

Transportation Information:

<https://naturebridge.org/sites/default/files/Transportation%20-%20OLYM.pdf>

Nature Vision: Stream Connections

A Nature Vision educator will meet your class at your local stream and facilitate a variety of activities related to salmon and the effects of stormwater. All activities support WA State K-12 Learning Standards and are customized to the watershed in which the stream is located. This allows students to make connections to their local environment and learn how they can become stewards where it matters to them most.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Nature Vision: Wetland Connections

A Nature Vision educator will meet your class at your local wetland, retention pond, or location of your choice to facilitate activities that show the importance of these unique ecosystems in helping manage the effects of stormwater runoff. All activities support WA State K-12 Learning Standards and are customized to be site specific. This allows students to observe real-world solutions to stormwater management and learn about ways they can have a positive impact on their local watershed.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Pacific Marine Research: Marine Science Afloat

Students learn to love and appreciate Puget Sound on our scientific expedition aboard the *Spirit of 76* floating classroom. Haul in the plankton nets! Spy into the invisible watery world in the microscope lab! Meet your slimy and squishy underwater neighbors! Follow along with a team of scientific divers as they explore the depths beneath the boat and introduce students to the animals below with a LIVE underwater video system. And most importantly, learn how your daily actions can help protect this magnificent, but delicate ecosystem that we all share.

Contact: fieldtrips@marinescienceafloat.org or 206-361-1919

Link: <https://marine-science-afloat.myshopify.com/>

Time: 5 ½ hour

Cost: \$40 per person for the first 15 people; plus one complimentary chaperone per every 10 additional students. (scholarships available)

Transportation: Must provide own transportation.

Note: Trips take place from mid-March to mid-June but occasionally fall trips are run.

Seattle Aquarium: Salmon Exploration

Learn about the life cycle of Seattle's most iconic animal, the salmon. With the use of storyboards and interactive activities, students will explore salmon from egg to adult and discuss the many different factors that affect these amazing fish.

Link: <http://www.seattleaquarium.org/education-programs/plan-a-visit>

Time: 60 minutes

Cost: \$10 each (This is the price of aquarium admission for adults and youth 4 and up)

Transportation: Please contact.

Seattle Parks and Recreation: Camp Long

Bringing science, environmental education, and experiential learning to your parks. Seattle Parks and Recreation's Environmental Education and Outdoor Learning staff provide opportunities for grades K-12 and organized groups, such as scouts and camps, to experience age-appropriate, hands-on adventures in learning about natural communities in an urban setting. Programs align with WA State Essential Academic Learning Requirements for core content areas and support science kits.

Ponds (spring and summer only): Experience the freshwater habitats of a city park at Camp Long or Discovery Park. Waddling ducks, wriggling tadpoles, and

dancing dragonflies are some of the creatures they may see as they explore what makes these places so special.

Forest: Camp Long and Discovery Park have lots of forest habitat to explore. Venture through the trees looking for clues to animal habits, hiding places, and seasonal happenings. Forest programs empower participants to feel comfortable in the outdoors.

Link: <https://www.seattle.gov/parks/find/centers/camp-long/camps>

Transportation: Please contact.

Sound Experience: Sound Studies Program

The goal of a Sound Studies program, as with all programs offered by Sound Experience, can be summarized in a single word: awareness. We believe that people will protect what they learn to value. The most effective way to have a lasting impact is to meet the following goals for every program. Our goals for participants: Leave with a heightened awareness of Puget Sound as a fragile ecosystem, understand the concept of a whole system, and understand how *Adventuress* and the earth both illustrate this concept. Recognize the interrelationships that exist between all life. Identify the positive and negative impacts that they as individuals have on the Puget Sound ecosystem. Recognize their ability to take action by raising others' awareness and by making responsible choices. Understand the necessity of cooperation as a course to action. Learn that Puget Sound is an incredible, diverse, and productive ecosystem and that the waterways we all share are fragile and need our care. Most importantly, students learn that they can make a difference. Experience working together to raise sails and learn about all the factors that help make a traditional sailing vessel function.

When you join us for a day trip, your group will take part in an active learning and working voyage. On board our vessel, participants are able to experience how community, nature, culture, and infrastructure all interact and shape each other.

Contact: Amy Kovacs at amy@soundexp.org or 360-379-0438

Link: <https://www.soundexp.org/sail-with-us/schoolsyouth-groups/day-program-sound-studies/>

Time: 3 or 5 hours

Cost: Off Peak Rates (October 1-April 30): \$1150 for 3 hours, \$1675 for 5 hours. Peak Rates (May 1-September 30): \$1210 for 3 hours, \$1760 for 5 hours

Transportation: Please contact.

Note: The *Adventuress* sails out of many ports, including: Everett, Olympia, Seattle, and Tacoma.

Sound Salmon Solutions: Macroinvertebrates

Identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.

Time: 45-120 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Projects

Nature Vision: Blue Teams

Nature Vision offers Blue Teams, a student stewardship project funded by our water sponsors. Blue Teams are groups of kindergarten-12th grade students who commit to taking on and completing a watershed stewardship project. Students complete projects such as invasive plant removal, native plant restoration, planting water-wise gardens, finding and fixing leaks, and much more.

The Blue Team program was developed to educate local youth about water resources and related ecosystems, foster sustainable stewardship values and practices in the community through hands-on youth projects, and to empower youth to take positive steps to improve their local environment.

Blue Teams receive Nature Vision's help in planning, preparing for, and executing their projects at school or at an off-campus project site, as well as regular teacher consultations via phone or email. Teachers/Instructors may register their class or youth group to become a team, and Nature Vision staff will help each team to design a watershed stewardship project. Staff will visit the students multiple times to teach inquiry-based programs, giving the students the knowledge and help they will need to successfully complete and understand the value of their project.

Link: <https://naturevision.org/blue-teams>

Time: Variable

Cost: Free Blue Teams may be available, please email info@naturevision.org for more information.

Transportation: Must provide own transportation.

Note: Nature Vision also offers in-class lessons and field trips

Sound Salmon Solutions: Tree Planting

Students are given an opportunity to plant native trees and shrubs on an active habitat restoration site.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 60-90 minutes

Transportation: Please contact.

Cost: Sound Salmon Solutions also offers in-class lessons and field trips.

4th Grade

Teacher Resources

King County: Protecting Our Liquid Assets

This course for Vashon Island provides students with the first steps along the path of ecological understanding, with the hope that their future steps will be considered and measured, serving the interests of all life.

Link: www.kingcounty.gov/environment/waterandland/groundwater/management-areas/vashon-maury-island-gwma/liquid-assets.aspx

Time: Variable

Cost: No Cost

Note: King County also offers in-class lessons, field trips, and projects.

King County: Online Publications

This web page is a useful resource for students doing research on local environmental issues. Online publications, including reports, newsletters, and brochures.

Link: www.kingcounty.gov/depts/dnrp/publications.aspx

Time: Variable

Cost: No Cost

Note: King County also offers in-class lessons, field trips, and projects.

King County: GIS Custom Map Products

King County GIS can prepare custom map products for curriculum support. For example, Sustainability Ambassadors, a non-profit organization empowering youth in community sustainability, engaged the King County GIS Center to help create a themed atlas of stormwater indicator maps for the Tahoma School District in suburban King County. The “Stormwater Neighborhood Atlas” serves as a community outreach tool to show students and the broader community the environmental conditions of their neighborhoods, highlighting unique project opportunities, such as pervious pavement

installation and rainwater harvesting at the district's own schools. Local student Sustainability Ambassadors worked with the school district, the Chamber of Commerce, the Rotary Club and the City of Maple Valley to distribute the "Stormwater Neighborhood Atlas" in classrooms throughout the district, in the public library, and for casual viewing in doctor and dentist waiting rooms and in the lobbies of public spaces such as coffee shops and city buildings. The King County GIS Center's unique cartographic and design capabilities, and its direct access to King County's extensive

Contact: Dennis Higgins at dennis.higgins@kingcounty.gov or 206-477-4415

Link: <http://kingcounty.gov/services/gis/ClientServices/Services.aspx>

Time: Variable

Cost: No Cost

Note: King County also offers in-class lessons, field trips, and projects.

Department of Ecology: Discover Wetlands

A curriculum guide for grades K-12 which focuses on what wetlands are, why they are important, and how human actions affect them.

Unit I: Washington's Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816a.pdf>)

Unit II: Amazing Wetlands: Functions and Values

(<https://fortress.wa.gov/ecy/publications/documents/8816b.pdf>)

Unit III: People and Wetlands

(<https://fortress.wa.gov/ecy/publications/documents/8816c.pdf>)

Unit IV: A Walk on the Wild Side

(<https://fortress.wa.gov/ecy/publications/documents/8816d.pdf>)

Time: Variable

Cost: No Cost

Earth Echo: Make a Splash: A Kid's Guide to Protecting Our Oceans, Lakes, Rivers, and Wetlands

This Leader's Guide provides a sequence of activities to support classroom teachers, youth group or club sponsors, or any adult invested in engaging youth in meaningful service learning that addresses the global water crisis as outlined in the stories of Make a Splash! The Leader's Guide helps harness the enthusiasm and energy to plan for positive change in their classroom, their community, and the wider world!

Link: <http://earthecho.org/educator-resources/a-leaders-guide-to-make-a-splash>

Time: Variable

Cost: Variable (Leaders Guide free-Student Guide online)

FOSS Kits: Water and Climate

Water is the most important substance on Earth. Water dominates the surface of our planet, changes the face of the land, and defines life. Weather is driven by the Sun and

involves the movement of water over the earth through evaporation, condensation, precipitation, and runoff—the water cycle. Climate is determined in part by the amount of precipitation in a region and by temperature fluctuations. Human societies depend on water, and new technologies are being engineered to conserve and protect this natural resource, to provide for the needs of people around the world.

Link: <https://www.fossweb.com/foss-modules>

Cost: No Cost

Leaping Frog: Illahee: Saving Puget Sound One Watershed at a Time

This video [Illlahee] is an inspirational story of a community's effort to preserve and restore a forest, a salmon stream, and Puget Sound. Bordering on Washington State's Puget Sound is a little gem of a community known as Illahee. What makes it so unique is that while surrounded by development, much of Illahee's natural beauty has been preserved. Started modestly by forward-looking residents of the past, and carried on by succeeding generations, this extraordinary and sustained effort insures that Illahee's natural treasures will be its legacy to the future of Puget Sound.

Contact: shellysol@olypen.com

Link: <http://www.leapingfrogfilms.com/>

Time: 30 minutes or less

Cost: No Cost (other videos available on sliding scale)

Mercer Slough Environmental Education Center: Watershed Hydrologists

What happens to water as it flows from the mountains to the sea? Learn to identify watershed parts and try out our Enviroscape watershed model. Discover some of the ways humans impact the watershed and how we can protect our local waterways.

Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207

Link: <https://www.pacificsciencecenter.org/mercser-slough/teachers-school-groups/>

Time: 4 hours

Cost: \$180 for one classroom lesson, \$110 for each additional lesson on the same day; plus mileage fee

Note: Can be used as an extension to the Water FOSS Kit and the Land and Water STC Kit. Mercer Slough EEC also offers field trips: related field study program: Wetland Naturalists.

Nature Conservancy: Nature Works Everywhere: Garden Lesson: Water

By filtering rainwater and slowing the movement of water to rivers, lakes and oceans, your garden works as a mini-watershed. In this lesson, students calculate the permeable surface area of their garden and periodically measure rainfall amounts, acting as junior hydrologists. Using the collected data, students determine how much water their

garden filters and explore the relationship between their garden and water quality in the surrounding watershed.

Link: <https://www.natureworkseverywhere.org/resources/activity-guide-water/>

Time: Variable

Cost: No Cost

Nature Conservancy: Nature Works Everywhere: How Dirt Works

Soil sustains plant and animal life, regulates water, filters pollutants, cycles nutrients and supports structures. In this lesson, students learn the value of soil and its role as a natural resource. Students investigate how humans and many other organisms rely on soil and explore why it is important to monitor and maintain the health of soil. They also learn how agriculture, home building and road construction change the land in ways different from how nature changes the land.

Link: <https://www.natureworkseverywhere.org/resources/how-dirt-works/>

Time: 3 45-minute lessons

Cost: No Cost

Nature Conservancy: Nature Works Everywhere: City Habitats

Online teacher resource

Link: <http://www.cityhabitats.org/>

Time: Variable

Cost: No Cost

Puget Sound Starts Here: Drain Rangers

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the *Drain Rangers!* and *Engineering Solutions* curricula and materials is to develop and cultivate an understanding of the serious issues facing our community from stormwater runoff and to share specific actions we can take to improve the quality of our water. In these units, students will utilize problem solving models to replicate the thinking process of engineers addressing polluted stormwater runoff.

Link: <http://www.pugetsoundstartshere.org/drain-rangers>

Time: Variable

Cost: No Cost

Note: Spanish version available.

Seattle Public Utilities: Lost and (Puget) Sound

This film follows three teens who lose a key down a storm drain. Must email Beth for CD with lessons

Contact: Beth Miller at beth.miller@seattle.gov

Time: 29 minute video plus lesson

Cost: No Cost

STC Kits: Land and Water

Using a stream table, students explore different interactions between land and water, such as how runoff causes stream formation; how groundwater forms; how soil is eroded, transported, and deposited; and how water shapes land. Land and Water invites students to manipulate their model, create hills, build dams, and grow vegetation to observe how these things affect land and water interactions. They learn how water shapes the land and, in turn, the land directs the flow of water.

Link: <http://www.carolina.com/stem-science-technology-engineering-math-curriculum/smithsonians-stc-elementary-curriculum/10817.ct>

Time: Variable

Cost: No Cost

STC Kits: Ecosystems

In Ecosystems, students set up terrariums for crickets and isopods. Duckweed, algae, Elodea, guppies, and snails are introduced to an aquarium. Connecting the two habitats to create an "ecocolumn," students observe the relationship between the two environments and the organisms living within them. Students simulate the effects of pollutants; road salt, fertilizer, and acid rain on the environment.

Link: <http://www.carolina.com/stem-science-technology-engineering-math-curriculum/smithsonians-stc-elementary-curriculum/10817.ct>

Time: Variable

Cost: No Cost

Washington Stormwater Center: Supplemental Videos

Link:

https://www.youtube.com/user/StormwaterChannel/playlists?view=1&sort=dd&shelf_id=0

Cost: No Cost

Classroom Visitors

These programs are taught by an informal educator from various organizations in your classroom.

King County: Noxious Weeds

The King County Noxious Weed Control Program can provide presentations and other programs upon request for teachers and students of all levels customized to their curriculum needs. Contact the program for more information or to set up a presentation or field trip.

Link: <http://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/school.aspx>

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: This program can be a presentation or a field trip. King County also offers teacher resources and projects.

City of Duvall: Surface Water Management Classroom Visitor

Boyd Benson is the Public Works Director/City Engineer and Sara Ruhland is in the Engineering Department. Both can adapt their discussion to what you are teaching in the classroom.

Contact: Boyd E. Benson at boyd.benson@duvallwa.gov and 425-939-8042 or Sara Ruhland at sara.ruhland@duvallwa.gov and 425-788-3434x8042

Link: <http://www.duvallwa.gov/305/sewer-water-stormwater>

Time: Variable

Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor

Audrie Starsy is the Surface Water Program Manager and can speak to your class with emphasis on what you are currently talking about in the classroom.

Contact: Audrie Starsy at audries@ci.newcastle.wa.us or 425-649-4143x111

Link: http://newcastlewa.gov/departments/public_works/surface_water_management/

Time: Variable

Cost: No Cost

Eastside Audubon: Migration

This lesson plan focuses on the migration of birds between summer and winter habitats. Students will learn the benefits and challenges of migration and play a game to reinforce their knowledge.

Contact: youthprograms@eastsideaudubon.org

Link: <http://eastsideaudubon.org/education/youth-education-1/youth-workshops>

Time: 45-60 minutes

Cost: No cost

Note: Can be adapted by volunteer to address stormwater runoff effects on bird migration specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon

This popular presentation consists of a slide show discussing the definition and importance of watersheds, hatchery operations, salmon lifecycle, habitat requirements, and predators of Pacific salmonids and the challenges they face. After the slide show, teachers have the option of a watershed or Native American legend activity for their class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 45-90 minutes

Cost: \$50 per class request

Note: Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available September-June. FISH also offers field trips.

Friends of the Issaquah Salmon Hatchery (FISH): Enviroscape- a Watershed Model

Using a table-top watershed model, students “pollute” the land, make it “rain,” and watch how pollution can affect the watershed. They then come up with solutions to pollution problems and identify things they can do to keep our watersheds (and salmon!) healthy. The whole activity takes approximately one hour per class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 60 minutes

Cost: \$50 per class requested

Note: Offered December-June. FISH also offers field trips.

King Conservation District: Water on Wheels

The Water on Wheels (WOW) Program offers free lessons for K-6th grade, public and private schools, and informal presentations throughout King County. WOW lessons include lively, hands-on demonstrations, educational games, and grade-level appropriate materials to give students a better understanding of water and soil conservation as well as stormwater protection.

Contact: Kristen Reichardt at kristen.reichardt@kingcd.org or 425-282-1927

Link: <http://kingcd.org/programs-education-stormwater.htm>

Time: Variable

Cost: \$250 per lesson (KCD partners with city jurisdictions to help cover the cost of the lessons so there's no cost to teachers- ask when registering)

Nature Vision: Watershed Connections

A Nature Vision educator will visit your classroom to facilitate hands-on lessons that highlight the challenges our local watershed faces with stormwater runoff. Each hour

long lesson focuses on specific concepts related to stormwater. Lessons can stand alone or be combined into units that offer a more complete picture of stormwater. Units can be for one grade level or used to scaffold throughout multiple grade levels at a school. Every lesson is designed to support WA State K-12 Learning Standards and help students understand what they can do to reduce the effects of stormwater runoff.

Link: <https://naturevision.org/school-programs/>

Time: 1 hour lessons

Cost: \$100 per lesson

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects.

Seattle Aquarium: Salmon Discovery Outreach

Learn about the life cycle of Pacific salmon and their unique journey from egg to adult to spawner. Students will explore what factors change salmon habitats and discuss the effect they have on salmon populations.

Link: <http://www.seattleaquarium.org/register/program-in-your-classroom>

Time: 60 minutes

Cost: \$168 per program

Note: Fees include up to 50 miles travel, one way. Max of four programs per day with 30-90 minutes between. Limit to 32 students per program.

Sound Salmon Solutions: Hooks and Ladders

Students become spawning salmon in this fun, interactive game that teaches students about all of the obstacles salmon face throughout their life cycle.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45 minutes

Note: Can be done as a field trip.

Sound Salmon Solutions: Erosion Modeling

Students will understand the scientific method by conducting an investigation that explores the factors that increase or decrease erosion using a model they build.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 120 minutes

Cost: Sound Salmon Solutions also offers field trips and projects.

Sound Salmon Solutions: The 5 C's of Salmon Habitat

Learn about the critical habitat components necessary for salmon survival!

Link: <http://www.soundsalmonsolutions.org/education>

Time: 25 minutes

Note: This lesson can also be added on to a field trip. Sound Salmon Solution also offers projects.

Vashon Nature Center: Nature Presentations

Trained naturalists and scientists offer short in-class or outdoor programs designed to foster student awareness and understanding of environmental science topics by pinning these topics to real-life local examples on Vashon and Maury Islands. Students become engaged and excited about science through these programs because they see how science is tied to their own backyards and personal lives.

Contact: info@vashonnaturecenter.org or 206-755-5798

Link: <http://vashonnaturecenter.org/what-we-do/scientists-in-schools/>

Time: 30-90 minutes

Cost: \$50-\$150

Note: Vashon NC works with teachers to highlight topics of their choice (stormwater, surface water mgmt). Example: Salmon See-son-the life cycle of salmon and a discussion of how salmon populations are faring in our local streams and where to see them.

Field Trips

King County: Brightwater Center Field Trips

IslandWood and King County provide educational field trips for students in grades 3-8 utilizing the many resources at the Brightwater Center. Field trips can accommodate up to 60 students per day, last 3-4 hours, and are free of charge. Teachers can choose from the following program options: Freshwater Ecosystem Investigation, Landforms Investigation, and Humans and the Water Cycle.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: <https://islandwood.org/educational-programming/brightwater-center/brightwater-school-day-programs>

Time: 3-4 hours

Cost: No Cost

Transportation: Free bus transportation through the [Wheels to Water program](#).

Note: King County also offers teacher resources, in-class lessons, and projects.

King County: South Plant Field Trips

King County's South Plant provides educational field trips for students. Tours and programs focus on the following topics: water cycle and nutrient cycle, wastewater treatment and human health, human impacts to water systems, pollution prevention and water conservation, stormwater problems and solutions.

Contact: Katelyn Hunt at katelyn.hunt@kingcounty.gov or 206-263-1008

Link:

<http://www.kingcounty.gov/services/environment/wastewater/education/locations/south-plant/school.aspx>

Time: 2-4 hours

Cost: No Cost

Transportation: Free bus transportation through the [Wheels to Water program](#).

Note: King County also offers teacher resources, in-class lessons, and projects.

King County: Salmon SEEson

During the fall, salmon return to streams and rivers around the Puget Sound. Spot the spawners in the Lake Washington/Cedar/Sammamish and Green/Duwamish and Central Puget Sound watersheds from September to mid-December. Salmon SEEson provides information to help you spy these natural beauties at various times and locations as they make their seasonal journey home each year. Many locations have staff or volunteer naturalists on hand to point out salmon; some are self-guided locations.

Contact: Linda Grob at linda.grob@kingcounty.gov or 206-477-4704

Link: www.govlink.org/watersheds/8/action/salmon-seeson/default.aspx

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Flyers, poster, and a website are available to help you find the best time and location for you and your class to see spawning salmon. King County also offers teacher resources, in-class lessons, and projects.

King County: Noxious Weeds

The King County Noxious Weed Control Program can provide presentations and other programs upon request for teachers and students of all levels customized to their curriculum needs. Contact the program for more information or to set up a presentation or field trip.

Link: <http://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/school.aspx>

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: This program can be a presentation or a field trip. King County also offers projects.

Camp Solomon Schechter: Osprey Camp – Day-long

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began

over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! Classes arrive in the morning and have the option to extend the school day. Day-long field trips give students the opportunity to open their imaginations in a rich, natural setting. Teachers select the environmental lessons that fit their class' developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. A hot lunch is provided.

Contact: Sue Wattier, Osprey Camp Director, at swattier@campschechter.org or 206-447-2629

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Camp Solomon Schechter: Osprey Camp – 1 or 2 night

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! After a day-long field trip, many students don't want to leave! The overnight experience allows them to extend their stay. The camp staff provide evening activities from line dancing to owl calling, night hikes to campfires. Teachers select the environmental lessons that fit their class' developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. All meals are provided.

Contact: Sue Wattier, Osprey Camp Director, at (206) 447-2629 and swattier@campschechter.org

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Cedar River Watershed Center: Seeing the Source

This field trip journeys to the heart of the Cedar River Municipal Watershed. Naturalist-led, hands-on activities encourage understanding of water cycles, watersheds, water quality, erosion, cultural history, riparian areas, and wildlife. Students See-the-Source of their mountain-fed drinking water supply, plus discover the importance of protecting and conserving it for fish and people.

Contact: crwprograms@seattle.gov

Time: 3 ½ hours

Cost: No Cost

Transportation: Please contact.

Cedar River Watershed Center: Land and Water

This field trip explores features and highlights of the award winning Education Center and its surroundings. Students participate in naturalist-led, hands-on activities that help students make the connections between land, water, and people. Students experience the Water is Magic exhibits and travel through the water cycle, listening to stories of the past and present while learning about their mountain fed drinking water source. They will also walk the shores of Rattlesnake Lake with water testing kits and return to the learning labs to closely examine the natural world with high quality microscopes.

Contact: crwprograms@seattle.gov

Time: 3 ½ hours

Cost: No Cost

Transportation: Please contact.

Environmental Science Center: Beach Heroes

The Beach Heroes program introduces students to the local Puget Sound beach habitat and the organisms that live there. During the 1-hour classroom visit, students will learn proper beach etiquette and stewardship while learning about marine invertebrates and their relationship to the beach habitat and the other living things with whom they share their home. During this NGSS-correlated lesson, students will create field guides they will use during their field study. The 2-hour field study features both naturalist-led beach exploration and structured activities, during which students will learn all about the habitat restoration of Seahurst Beach! After participating in ESC's Beach Heroes program, students pledge to adopt three behaviors to protect, to conserve, and to educate others about our oceans and marine debris. To honor these students' commitment to environmental stewardship, they receive an Official Beach Hero identification card.

Registration form link:

https://docs.google.com/forms/d/e/1FAIpQLScTo3_c3cps0s72AZi-4lIS62138i7KIWWamG3C5aNWIOc7sQ/viewform

Time: 1 hour (in classroom) + 2 hours (field trip)

Cost: \$150 per class (sliding scale- see registration form; max 30 students)

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered March-June. For schools with a Free & Reduced Lunch Rate of 50% or greater, transportation subsidies and fee reductions and waivers are available. Sliding-scale fee structure is detailed on the registration form.

Environmental Science Center: Salmon Heroes

Classroom Lessons & Field Study Investigation: During the 1-hour classroom lesson, students will engage in hands-on, NGSS-correlated activities that explore the habitat needs of salmon – as well as the challenges to survival that salmon face – during each stage of the salmon life cycle. During the 3-hour field study, students review the salmon life cycle, learn external and internal anatomy, collect water quality data, learn about the changes that the local community made to their behaviors in order to make the Creek better habitat for salmon, and then play a large-group game that mimics the challenges salmon face in making it back to their spawning grounds. During the post-visit, students analyze the water quality data they collected in the field and compare it to previous year’s data, and to data collected from a different local creek. Students will then evaluate different actions that people can take in order to lessen their impact on salmon population health.

Contact: Joanna Stodden at Joanna@EnvScienceCenter.org or (206) 248-4266

Link:

<https://docs.google.com/forms/d/e/1FAIpQLSd4aBr9E8gH3NWTDhm5EZ41UdixbYEnc0eiHpeuFCWSZ5Bodw/viewform>

Time: 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)

Cost: \$350 per class of 30 students (If your school has 50% or greater free/reduced lunch rate, you will pay a reduced program fee of \$70 per class of 30 students. If your school has 80% or greater free/reduced lunch rate, your program fees will be waived.

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered September-November. Includes 1-hour classroom lesson, a 3-hour guided field study investigation, and a 1-hour post-field study classroom lesson. You need to arrange and pay for transportation for this field trip. Registering multiple classes within a grade level is strongly encouraged. There is an opportunity for bus reimbursement for schools that have a 50% or greater free/reduced lunch rate. Please contact Programs

Manager Joanna Stodden for more information regarding bus subsidies. You will need to provide 4 chaperons for each class' field study.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon - Hatchery Tours
Come see the salmon at Issaquah Creek! Watch spawning salmon, see the hatchery in action, and learn about challenges salmon face and what we can do to help them. Scheduled groups of students and adults are led through the hatchery by trained volunteer docents.

Contact: Contact Rachel Martin, Program Coordinator, FISH at education@issaquahfish.org or 425-392-1118

Time: Tours last 45 minutes to one hour and are available primarily mid-September through early November, though winter and spring/summer tours may also be scheduled.

Cost: FISH requests a fee of \$2 per student when possible.

Transportation: Please contact.

Note: The tour, ideally in conjunction with the Those Amazing Salmon classroom presentation, helps fulfill the state mandate to provide environmental education experiences to students and is aligned to Washington State standards in science and social studies.

Friends of Soos Creek (Kent): Interpretive Walk

Friends of Soos Creek Park is a non-profit organization comprised of volunteer members who take a pro-active role in preserving and extending the Soos Creek Trail Park and who sponsor and lead park clean-ups and interpretive walks for public education about the importance of wetlands specifically and undisturbed nature generally. Soos Creek Park is one of south King County's prized wetland habitats. An 8.5 mile trail follows the creek through cattail marshes, forested swamps, wet meadows and willow thickets. This trail is suited to all levels of fitness and is wheelchair accessible. Take any or all of these interpretive walks to learn more about this fascinating area and its wildlife residents. Volunteers from The Friends of Soos Creek Park lead these interpretive walks.

Contact: Kent Parks and Recreation at 253-856-5000

Time: Variable

Transportation: Please contact.

Note: All of these walks take place out of doors, so be sure to dress for the weather.

IslandWood (at Brightwater): Freshwater Ecosystem Investigation

In this field experience, students engage in the scientific process by comparing aquatic macroinvertebrates from two pond ecosystems in the Brightwater Center natural area. This experience is designed for elementary classes studying ecosystems, habitats, or microorganisms.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: www.islandwood.org/brightwater

Time: 4 hours

Cost: No Cost

Transportation: Free transportation is available to qualifying schools within King County.

Note: Can accommodate up to 60 students per day, runs from 10am to 2pm.

IslandWood (at Brightwater): Landforms Investigation

This field experience helps students make connections to concepts learned in the classroom-based Landforms Science Unit. Students will conduct field investigation in the Brightwater Center natural area, studying erosion, deposition, properties of streams, and run-off.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: www.islandwood.org/brightwater

Time: 4 hours

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Can accommodate up to 60 students per day, runs from 10am to 2pm. Free transportation is available to qualifying schools within King County.

Mercer Slough Environmental Education Center: Wetland Naturalists

Experience the secrets of the wetland and make the earth move under your feet. As a naturalist, observe the soil, plants and animals as you hike through the wetland. Along the way you will encounter the challenges of a migrating bird and discover the importance of wetlands. In the lab, collect pond samples and use microscopes and other scientific tools to examine aquatic macroinvertebrates.

Contact: Elley Vanderline at evanderline@pacsci.org

Link: <https://www.pacificsciencecenter.org/mercero-slough/teachers-school-groups/>

Time: 4 hours

Cost: \$182 for up to 16 students, \$309 for 17-32 students.

Transportation: Please contact.

Note: Mercer Slough EEC also offer in-class lessons.

Mountains to Sound Greenway Trust: Earth Underfoot

Inspects the impact of invasive plants on the landscape. Students identify native and invasive plants found in Pacific Northwest forests in preparation for a stewardship event. At the stewardship event students may remove invasive plant species, plant native and shrubs, or work in our native plant nursery.

Contact: Becca Kedenburg at becca.kedenburg@mtsgreenway.org

Link: www.mtsgreenway.org/education

Time: Variable

Transportation: King County Metro provides a limited number of [Wheels to Water](#) buses to transport students on their field trip.

Note: Each curriculum includes an introductory lesson (taught by the classroom teacher), an in-class lesson, a field study trip to a nearby forest, and an optional stewardship event. Depending on the season, a stewardship event might involve removing blackberry, planting native trees and shrubs, or working in our native plant nursery. Eligible schools have a free and reduced lunch percentage of at least 25 percent. Financial assistance is available for a limited number of buses to the stewardship event.

NatureBridge: Environmental Science Program

NatureBridge environmental science programs in Olympic National Park offer students in grades K-12 the opportunity to learn hands-on science in an International Biosphere Reserve. Our three- to five-day residential outdoor science programs are led by experienced educators and customized to enhance your school's curriculum. A classroom without walls: located on the shore of glacially carved Lake Crescent, students can investigate old growth forests, wilderness coasts, and alpine peaks. Inquiry-based learning: motivated by their own curiosity, students monitor the dynamic Elwha River system, collect and identify macroinvertebrates in Barnes Creek, and study the adaptations of local mammals in our skins and skulls lab. Responsible actions: students are inspired to make informed decisions about what constitutes a healthy relationship between natural and human communities, their role in that relationship and appropriate actions they can take to sustain it.

Link: <https://naturebridge.org/olympic/school-group>

Request Information: <https://naturebridge.org/request-information-olympic> or call Eva Foster at efoster@naturebridge.org and (206) 382-6212x14 or call (206) 300-6291

Time: 3 or 5 days

Cost: Price range for programs can be found here:

<https://naturebridge.org/olympic/school-group/rates>

Rates are for 3 day/2 night program starting at \$234 per student, 3 day/3 night program starting at \$294 per student, 5 day/4 night program starting at \$340 per student, and 5 day/5 night program starting at \$400 per student. Need-based scholarships available and additional optional services available. Tuition includes quality customized environmental science education; on-site lodging in heated, dormitory cabins on the shores of Lake Crescent; and home-style all-you-can-eat buffet meals.

Transportation Information:

<https://naturebridge.org/sites/default/files/Transportation%20-%20OLYM.pdf>

Nature Vision: Stream Connections

A Nature Vision educator will meet your class at your local stream and facilitate a variety of activities related to salmon and the effects of stormwater. All activities support WA State K-12 Learning Standards and are customized to the watershed in which the stream is located. This allows students to make connections to their local environment and learn how they can become stewards where it matters to them most.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Nature Vision: Wetland Connections

A Nature Vision educator will meet your class at your local wetland, retention pond, or location of your choice to facilitate activities that show the importance of these unique ecosystems in helping manage the effects of stormwater runoff. All activities support WA State K-12 Learning Standards and are customized to be site specific. This allows students to observe real-world solutions to stormwater management and learn about ways they can have a positive impact on their local watershed.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Pacific Marine Research: Marine Science Afloat

Students learn to love and appreciate Puget Sound on our scientific expedition aboard the *Spirit of 76* floating classroom. Haul in the plankton nets! Spy into the invisible watery world in the microscope lab! Meet your slimy and squishy underwater neighbors! Follow along with a team of scientific divers as they explore the depths beneath the boat and introduce students to the animals below with a LIVE underwater video system. And most importantly, learn how your daily actions can help protect this magnificent, but delicate ecosystem that we all share.

Contact: fieldtrips@marinescienceafloat.org or 206-361-1919

Link: <https://marine-science-afloat.myshopify.com/>

Time: 5 ½ hour

Cost: \$40 per person for the first 15 people; plus one complimentary chaperone per every 10 additional students. (scholarships available)

Transportation: Must provide own transportation.

Note: Trips take place from mid-March to mid-June but occasionally fall trips are run.

Seattle Aquarium: Salmon Exploration

Learn about the life cycle of Seattle's most iconic animal, the salmon. With the use of storyboards and interactive activities, students will explore salmon from egg to adult and discuss the many different factors that affect these amazing fish.

Link: <http://www.seattleaquarium.org/education-programs/plan-a-visit>

Time: 60 minutes

Cost: \$10 each (This is the price of aquarium admission for adults and youth 4 and up)

Transportation: Please contact.

Seattle Parks and Recreation: Camp Long

Bringing science, environmental education, and experiential learning to your parks. Seattle Parks and Recreation's Environmental Education and Outdoor Learning staff provide opportunities for grades K-12 and organized groups, such as scouts and camps, to experience age-appropriate, hands-on adventures in learning about natural communities in an urban setting. Programs align with WA State Essential Academic Learning Requirements for core content areas and support science kits.

Ponds (spring and summer only): Experience the freshwater habitats of a city park at Camp Long or Discovery Park. Waddling ducks, wriggling tadpoles, and dancing dragonflies are some of the creatures they may see as they explore what makes these places so special.

Forest: Camp Long and Discovery Park have lots of forest habitat to explore. Venture through the trees looking for clues to animal habits, hiding places, and seasonal happenings. Forest programs empower participants to feel comfortable in the outdoors.

Link: <https://www.seattle.gov/parks/find/centers/camp-long/camps>

Transportation: Please contact.

Sound Experience: Sound Studies Program

The goal of a Sound Studies program, as with all programs offered by Sound Experience, can be summarized in a single word: awareness. We believe that people will protect what they learn to value. The most effective way to have a lasting impact is to meet the following goals for every program. Our goals for participants: Leave with a heightened awareness of Puget Sound as a fragile ecosystem, understand the concept of a whole system, and understand how *Adventuress* and the earth both illustrate this concept. Recognize the interrelationships that exist between all life. Identify the positive and negative impacts that they as individuals have on the Puget Sound ecosystem. Recognize their ability to take action by raising others' awareness and by making responsible choices. Understand the necessity of cooperation as a course to action. Learn that Puget Sound is an incredible, diverse, and productive ecosystem and that the waterways we all share are fragile and need our care. Most importantly, students learn that they can make a difference. Experience working together to raise sails and learn about all the factors that help make a traditional sailing vessel function.

When you join us for a day trip, your group will take part in an active learning and working voyage. On board our vessel, participants are able to experience how community, nature, culture, and infrastructure all interact and shape each other.

Contact: Amy Kovacs at amy@soundexp.org or 360-379-0438

Link: <https://www.soundexp.org/sail-with-us/schoolsyouth-groups/day-program-sound-studies/>

Time: 3 or 5 hours

Cost: Off Peak Rates (October 1-April 30): \$1150 for 3 hours, \$1675 for 5 hours. Peak Rates (May 1-September 30): \$1210 for 3 hours, \$1760 for 5 hours

Transportation: Please contact.

Note: The *Adventuress* sails out of many ports, including: Everett, Olympia, Seattle, and Tacoma.

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Contact: Amy Kovacs at amy@soundexp.org and 360-379-0439

Link: <https://www.soundexp.org/sail-with-us/schoolsyouth-groups/overnight-programs-sound-explorations/>

Time: 2-7 days

Cost: Off Peak Rates (October 1- April 30): \$2780 per day, groups between 14-18 people can come for \$149/person/day and includes adults. Peak Rates (May 1-September 30): \$2900 per day, groups between 14-18 people can come aboard for \$159/person/day and includes adults

Transportation: Please contact.

Note: The Adventuress sails out of many ports, including: Everett, Olympia, Seattle, and Tacoma.

Sound Salmon Solutions: Ecosystems

Learn about a food chain and why it is important in an engaging and hands-on way

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45-60 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Sound Salmon Solutions: Water Quality Testing

Students become scientists by collecting water samples and using testing kits to measure and collect data on the health of a local stream. They will understand the value of clean water and how that is defined.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45-60 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Sound Salmon Solutions: Macroinvertebrates

Identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality

Time: 45-120 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Projects

Nature Vision: Blue Teams

Nature Vision offers Blue Teams, a student stewardship project funded by our water sponsors. Blue Teams are groups of kindergarden-12th grade students who commit to taking on and completing a watershed stewardship project. Students complete projects such as invasive plant removal, native plant restoration, planting water-wise gardens, finding and fixing leaks, and much more.

The Blue Team program was developed to educate local youth about water resources and related ecosystems, foster sustainable stewardship values and practices in the community through hands-on youth projects, and to empower youth to take positive steps to improve their local environment.

Blue Teams receive Nature Vision’s help in planning, preparing for, and executing their projects at school or at an off-campus project site, as well as regular teacher consultations via phone or email. Teachers/Instructors may register their class or youth group to become a team, and Nature Vision staff will help each team to design a watershed stewardship project. Staff will visit the students multiple times to teach inquiry-based programs, giving the students the knowledge and help they will need to successfully complete and understand the value of their project.

Link: <https://naturevision.org/blue-teams>

Time: Variable

Cost: Free Blue Teams may be available, please email info@naturevision.org for more information.

Transportation: Must provide own transportation.

Note: Nature Vision also offers in-class lessons and field trips

Sound Salmon Solutions: Tree Planting

Students are given an opportunity to plant native trees and shrubs on an active habitat restoration site.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 60-90 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and field trips.

5th Grade

Teacher Resources

King County: Protecting Our Liquid Assets

This course for Vashon Island provides students with the first steps along the path of ecological understanding, with the hope that their future steps will be considered and measured, serving the interests of all life.

Link: www.kingcounty.gov/environment/waterandland/groundwater/management-areas/vashon-maury-island-gwma/liquid-assets.aspx

Time: Variable

Cost: No Cost

King County: Online Publications

This web page is a useful resource for students doing research on local environmental issues. Online publications, including reports, newsletters, and brochures.

Link: www.kingcounty.gov/depts/dnrp/publications.aspx

Time: Variable

Cost: No Cost

King County: GIS Custom Map Products

King County GIS can prepare custom map products for curriculum support. For example, Sustainability Ambassadors, a non-profit organization empowering youth in community sustainability, engaged the King County GIS Center to help create a themed atlas of stormwater indicator maps for the Tahoma School District in suburban King County. The

“Stormwater Neighborhood Atlas” serves as a community outreach tool to show students and the broader community the environmental conditions of their neighborhoods, highlighting unique project opportunities, such as pervious pavement installation and rainwater harvesting at the district’s own schools. Local student Sustainability Ambassadors worked with the school district, the Chamber of Commerce, the Rotary Club and the City of Maple Valley to distribute the “Stormwater Neighborhood Atlas” in classrooms throughout the district, in the public library, and for casual viewing in doctor and dentist waiting rooms and in the lobbies of public spaces such as coffee shops and city buildings. The King County GIS Center’s unique cartographic and design capabilities, and its direct access to King County’s extensive

Contact: Dennis Higgins at dennis.higgins@kingcounty.gov or 206-477-4415
Link: <http://kingcounty.gov/services/gis/ClientServices/Services.aspx>
Time: Variable
Cost: No Cost
Note: King County also offers in-class lessons, field trips, and projects.

Department of Ecology: Discover Wetlands

A curriculum guide for grades K-12 which focuses on what wetlands are, why they are important, and how human actions affect them.

Unit I: Washington’s Wetlands

<https://fortress.wa.gov/ecy/publications/documents/8816a.pdf>

Unit II: Amazing Wetlands: Functions and Values

<https://fortress.wa.gov/ecy/publications/documents/8816b.pdf>

Unit III: People and Wetlands

<https://fortress.wa.gov/ecy/publications/documents/8816c.pdf>

Unit IV: A Walk on the Wild Side

<https://fortress.wa.gov/ecy/publications/documents/8816d.pdf>

Time: Variable

Cost: No Cost

Earth Echo: Make a Splash: A Kid's Guide to Protecting Our Oceans, Lakes, Rivers, and Wetlands

This Leader's Guide provides a sequence of activities to support classroom teachers, youth group or club sponsors, or any adult invested in engaging youth in meaningful service learning that addresses the global water crisis as outlined in the stories of Make a Splash! The Leader's Guide helps harness the enthusiasm and energy to plan for positive change in their classroom, their community, and the wider world!

Link: <http://earthecho.org/educator-resources/a-leaders-guide-to-make-a-splash>

Time: Variable

Cost: Variable (Leaders Guide free-Student Guide online)

Leaping Frog: Illahee: Saving Puget Sound One Watershed at a Time

This video [Illlahee] is an inspirational story of a community's effort to preserve and restore a forest, a salmon stream, and Puget Sound. Bordering on Washington State's Puget Sound is a little gem of a community known as Illahee. What makes it so unique is that while surrounded by development, much of Illahee's natural beauty has been preserved. Started modestly by forward-looking residents of the past, and carried on by succeeding generations, this extraordinary and sustained effort insures that Illahee's natural treasures will be its legacy to the future of Puget Sound.

Contact: shellysol@olypen.com

Link: <http://www.leapingfrogfilms.com/>

Time: 30 minutes or less

Cost: No Cost (other videos available on sliding scale)

Nature Conservancy Nature Works Everywhere; Garden Lesson "Water"

By filtering rainwater and slowing the movement of water to rivers, lakes and oceans, your garden works as a mini-watershed. In this lesson, students calculate the permeable surface area of their garden and periodically measure rainfall amounts, acting as junior hydrologists. Using the collected data, students determine how much water their garden filters and explore the relationship between their garden and water quality in the surrounding watershed.

Link: <https://www.natureworkseverywhere.org/resources/activity-guide-water/>

Time: Variable

Cost: No Cost

Nature Conservancy Nature Works Everywhere; How Dirt Works

Soil sustains plant and animal life, regulates water, filters pollutants, cycles nutrients and supports structures. In this lesson, students learn the value of soil and its role as a natural resource. Students investigate how humans and many other organisms rely on soil and explore why it is important to monitor and maintain the health of soil. They also learn how agriculture, home building and road construction change the land in ways different from how nature changes the land.

Link: <https://www.natureworkseverywhere.org/resources/how-dirt-works/>

Time: 3 45-minute lessons

Cost: No Cost

Nature Conservancy Nature Works Everywhere; City Habitats

Online teacher resource.

Link: <http://www.cityhabitats.org/>

Cost: No Cost

Puget Sound Starts Here: Drain Rangers

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the *Drain Rangers!* and *Engineering Solutions* curricula and materials is to develop and cultivate an understanding of the serious issues facing our community from stormwater runoff and to share specific actions we can take to improve the quality of our water. In these units, students will utilize problem solving models to replicate the thinking process of engineers addressing polluted stormwater runoff.

Link: <http://www.pugetsoundstartshere.org/drain-rangers>

Time: Variable

Cost: No Cost

Note: Spanish version available.

Seattle Public Utilities: Lost and (Puget) Sound

This film follows three teens who lose a key down a storm drain. Must email Beth for CD with lessons

Contact: Beth Miller at beth.miller@seattle.gov

Time: 29 minute video plus lesson

Cost: No Cost

Washington Stormwater Center: Supplemental Videos

Link:

https://www.youtube.com/user/StormwaterChannel/playlists?view=1&sort=dd&shelf_id=0

Cost: No Cost

Classroom Visitors

These programs are taught by an informal educator from various organizations in your classroom.

King County: Noxious Weeds

The King County Noxious Weed Control Program can provide presentations and other programs upon request for teachers and students of all levels customized to their curriculum needs. Contact the program for more information or to set up a presentation or field trip.

Link: <http://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/school.aspx>

Note: This program can be a presentation or a field trip.

City of Duvall: Surface Water Management Classroom Visitor

Boyd Benson is the Public Works Director/City Engineer and Sara Ruhland is in the Engineering Department. Both can adapt their discussion to what you are teaching in the classroom.

Contact: Boyd E. Benson at boyd.benson@duvallwa.gov and 425-939-8042 or Sara Ruhland at sara.ruhland@duvallwa.gov and 425-788-3434x8042

Link: <http://www.duvallwa.gov/305/sewer-water-stormwater>

Time: Variable

Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor

Audrie Starsy is the Surface Water Program Manager and can speak to your class with emphasis on what you are currently talking about in the classroom.

Contact: Audrie Starsy at audries@ci.newcastle.wa.us and 425-649-4143x111

Link: http://newcastlewa.gov/departments/public_works/surface_water_management/

Time: Variable

Cost: No Cost

Eastside Audubon: Migration

This lesson plan focuses on the migration of birds between summer and winter habitats. Students will learn the benefits and challenges of migration and play a game to reinforce their knowledge.

Contact: youthprograms@eastsideaudubon.org

Link: <http://eastsideaudubon.org/education/youth-education-1/youth-workshops>

Time: 45-60 minutes

Cost: No cost

Note: Can be adapted by volunteer to address stormwater runoff effects on bird migration specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon

This popular presentation consists of a slide show discussing the definition and importance of watersheds, hatchery operations, salmon lifecycle, habitat requirements, and predators of Pacific salmonids and the challenges they face. After the slide show, teachers have the option of a watershed or Native American legend activity for their class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 45-90 minutes

Cost: \$50 per class request

Note: Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available September-June. FISH also offers field trips.

Friends of the Issaquah Salmon Hatchery (FISH): Enviroscape- a Watershed Model

Using a table-top watershed model, students “pollute” the land, make it “rain,” and watch how pollution can affect the watershed. They then come up with solutions to pollution problems and identify things they can do to keep our watersheds (and salmon!) healthy. The whole activity takes approximately one hour per class.

Contact: Rachel Martin at education@issaquahfish.org or 425-393-1118

Link: www.issaquahfish.org

Time: 60 minutes

Cost: \$50 per class requested

Note: Offered December-June. FISH also offers field trips.

King Conservation District: Water on Wheels

The Water on Wheels (WOW) Program offers free lessons for K-6th grade, public and private schools, and informal presentations throughout King County. WOW lessons include lively, hands-on demonstrations, educational games, and grade-level appropriate materials to give students a better understanding of water and soil conservation as well as stormwater protection.

Contact: Kristen Reichardt at kristen.reichardt@kingcd.org or 425-282-1927

Link: <http://kingcd.org/programs-education-stormwater.htm>

Time: Variable

Cost: \$250 per lesson (KCD partners with city jurisdictions to help cover the cost of the lessons so there's no cost to teachers- ask when registering)

Mercer Slough Environmental Education Center: Watershed Hydrologists

What happens to water as it flows from the mountains to the sea? Learn to identify watershed parts and try out our Enviroscape watershed model. Discover some of the ways humans impact the watershed and how we can protect our local waterways.

Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207

Link: <https://www.pacificsciencecenter.org/mercero-slough/teachers-school-groups/>

Time: 4 hours

Cost: \$180 for one classroom lesson, \$110 for each additional lesson on the same day; plus mileage fee

Note: Can be used as an extension to the Water FOSS Kit and the Land and Water STC Kit. Mercer Slough EEC also offers field trips: related field study program: Wetland Naturalists.

Nature Vision: Watershed Connections

A Nature Vision educator will visit your classroom to facilitate hands-on lessons that highlight the challenges our local watershed faces with stormwater runoff. Each hour long lesson focuses on specific concepts related to stormwater. Lessons can stand alone or be combined into units that offer a more complete picture of stormwater. Units can be for one grade level or used to scaffold throughout multiple grade levels at a school. Every lesson is designed to support WA State K-12 Learning Standards and help students understand what they can do to reduce the effects of stormwater runoff.

Link: <https://naturevision.org/school-programs/>

Time: 1 hour lessons

Cost: \$100 per lesson

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects.

Salish Sea Expeditions: SOURCE Program

Salish Sea Expeditions invites students to become scientists, facilitating student-led research and applied STEM (Science Technology Engineering and Math) skill development that focuses on the health of Puget Sound and its connected waterways. This land-based program is focused on supporting students in investigation of their local watershed, building awareness about water quality and stormwater issues in the Puget Sound region. Salish staff visit school campuses, leading classroom-based activities and instruction, and water quality sampling and analysis on school grounds to help students learn how human activity can impact the health of the Puget Sound ecosystem.

Contact: educationdirector@salish.org

Link: <https://www.salish.org/programs/source/>

Time: 8-10 hours

Cost: \$1200/initial classroom (additional classes \$250 each) - email for complete pricing and scheduling options. Scholarship opportunities are often available.

Note: Offered October-February. Class size up to 30 students. Salish Sea Expeditions also offers single and multi-day boat-based field trips.

Sound Salmon Solutions: Hooks and Ladders

Students become spawning salmon in this fun, interactive game that teaches students about all of the obstacles salmon face throughout their life cycle.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45 minutes

Note: Can be done as a field trip.

Sound Salmon Solutions: Erosion Modeling

Understand the scientific method by conducting an investigation that explores the factors that increase or decrease erosion using a model they build.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 120 minutes

Sound Salmon Solutions: The 5 C's of Salmon Habitat

Learn about the critical habitat components necessary for salmon survival!

Link: <http://www.soundsalmonsolutions.org/education>

Time: 25 minutes

Note: This lesson can also be added on to a field trip

STC Kit: Land and Water

Using a stream table, students explore different interactions between land and water, such as how runoff causes stream formation; how groundwater forms; how soil is eroded, transported, and deposited; and how water shapes land. Land and Water invites students to manipulate their model, create hills, build dams, and grow vegetation to observe how these things affect land and water interactions. They learn how water shapes the land and, in turn, the land directs the flow of water.

Link: <http://www.carolina.com/stem-science-technology-engineering-math-curriculum/smithsonians-stc-elementary-curriculum/10817.ct>

Time: Variable

Cost: No Cost

STC Kit: Ecosystems

In Ecosystems, students set up terrariums for crickets and isopods. Duckweed, algae, Elodea, guppies, and snails are introduced to an aquarium. Connecting the 2 habitats to create an "ecocolumn," students observe the relationship between the 2 environments and the organisms living within them. Students simulate the effects of pollutants -road salt, fertilizer, and acid rain - on the environment.

Link: <http://www.carolina.com/stem-science-technology-engineering-math-curriculum/smithsonians-stc-elementary-curriculum/10817.ct>

Time: Variable

Cost: No Cost

Vashon Nature Center: Nature Presentations

Trained naturalists and scientists offer short in-class or outdoor programs designed to foster student awareness and understanding of environmental science topics by pinning these topics to real-life local examples on Vashon and Maury Islands. Students become engaged and excited about science through these programs because they see how science is tied to their own backyards and personal lives.

Contact: info@vashonnaturecenter.org or 206-755-5798

Link: <http://vashonnaturecenter.org/what-we-do/scientists-in-schools/>

Time: 30-90 minutes

Cost: \$50-\$150

Note: Vashon NC works with teachers to highlight topics of their choice (stormwater, surface water mgmt). Example: Salmon See-son-the life cycle of salmon and a discussion of how salmon populations are faring in our local streams and where to see them.

Seattle Aquarium: Salmon Discovery Outreach

Learn about the life cycle of Pacific salmon and their unique journey from egg to adult to spawner. Students will explore what factors change salmon habitats and discuss the effect they have on salmon populations.

Link: <http://www.seattleaquarium.org/register/program-in-your-classroom>

Time: 60 minutes

Cost: \$168 per program

Note: Fees include up to 50 miles travel, one way. Max of four programs per day with 30-90 minutes between. Limit to 32 students per program.

Field Trips

King County: Brightwater Center Field Trips

IslandWood and King County provide educational field trips for students in grades 3-8 utilizing the many resources at the Brightwater Center. Field trips can accommodate up to 60 students per day, last 3-4 hours, and are free of charge. Teachers can choose from the following program options: Freshwater Ecosystem Investigation, Landforms Investigation, and Humans and the Water Cycle.

Contact: Derek Jones at dereki@islandwood.org or 206-263-8866

Link: <https://islandwood.org/educational-programming/brightwater-center/brightwater-school-day-programs>

Time: 3-4 hours

Cost: No Cost

Transportation: Free bus transportation through the [Wheels to Water program](#).

Note: King County also offers teacher resources, in-class lessons, and projects.

King County: South Plant Field Trips

King County's South Plant provides educational field trips for students. Tours and programs focus on the following topics: water cycle and nutrient cycle, wastewater treatment and human health, human impacts to water systems, pollution prevention and water conservation, stormwater problems and solutions.

Contact: Katelyn Hunt at katelyn.hunt@kingcounty.gov or 206-263-1008

Link:

<http://www.kingcounty.gov/services/environment/wastewater/education/locations/south-plant/school.aspx>

Time: 2-4 hours

Cost: No Cost

Transportation: Free bus transportation through the [Wheels to Water program](#).

Note: King County also offers teacher resources, in-class lessons, and projects.

King County: Salmon SEEson

During the fall, salmon return to streams and rivers around the Puget Sound. Spot the spawners in the Lake Washington/Cedar/Sammamish and Green/Duwamish and Central Puget Sound watersheds from September to mid-December. Salmon SEEson provides information to help you spy these natural beauties at various times and locations as they make their seasonal journey home each year. Many locations have staff or volunteer naturalists on hand to point out salmon; some are self-guided locations.

Contact: Linda Grob at linda.grob@kingcounty.gov or 206-477-4704

Link: www.govlink.org/watersheds/8/action/salmon-season/default.aspx

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Flyers, poster, and a website are available to help you find the best time and location for you and your class to see spawning salmon. King County also offers teacher resources, in-class lessons, and projects.

Camp Auburn

Camp Auburn provides an overnight opportunity for students to learn many useful things about their environment, make new friends, deepen current friendships, and learn to live as members of a large group. It is the sincere desire of the Auburn School District administration that your fifth grade student have many positive experiences as a result of the Camp Auburn program.

Link: <http://auburnsd.schoolwires.net/Page/463>

Transportation: Please contact.

Camp Fire Seattle: Camp Sealth

Encompassing 400 incredible acres including an extensive trail system, a private beach and numerous diverse ecosystems, Camp Sealth is the perfect venue for experiential education.

Camp Fire was established with a strong foundation in providing positive outdoor experiences for youth and it is fundamental to our mission, core values, and programs.

We believe in the power of nature to awaken a child’s senses, curiosity, and desire to learn. With our completely inquiry-based program, our students are taught to study and evaluate the natural world. Through hands-on learning, they develop a deeper understanding of the scientific method and we hope – a curiosity and love for the environment.

Contact: Meaghan Baumgartner at meaghanb@campfireseattle.org

Link: <https://campfireseattle.org/camp-sealth-overnight-camp/>

Cost: \$54 per student

Transportation: <https://campfireseattle.org/camp-sealth-overnight-camp/all-about-camp-sealth/transportation/>

Note: Program offered September-June. Typical program is 3 days, 2 nights. Can do both 1 night and week-long programs as well.

Camp Solomon Schechter: Osprey Camp – 1 or 2 night

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! After a day-long field trip, many students don’t want to leave! The overnight experience allows them to extend their stay. The camp staff provide evening activities from line dancing to owl calling, night hikes to campfires. Teachers select the environmental lessons that fit their class’ developmental level and learning needs. Trained facilitators have a passion for connecting students to the outdoors through hands-on science lessons. All meals are provided.

Contact: Sue Wattier, Osprey Camp Director, at (206) 447-2629 and swattier@campschechter.org

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Camp Solomon Schechter: Osprey Camp – 3, 4, or 5 day Full Experience

The social development aspects of OSPREY Camp set it apart from similar programs. Students unplug and take a break from cell phones, computers and electronic games to focus on relationships with peers, mentors, teachers and even themselves. Outside of class, students enjoy structured down-time, including skits, songs and team-building activities. The theme of “respect for the environment and youth” is woven throughout all aspects of camp, encouraging students to be their best selves. OSPREY Camp began over 40 years ago when environmental education became a focus in elementary schools in the Pacific Northwest. The program is designed to provide students a powerful application of science concepts as they live and learn in the outdoors. It continues to evolve and improve, adjusting to reflect changes in scientific understanding and school requirements. Lessons are aligned with the Common Core and Next Generation Science Standards. At OSPREY Camp, students learn hands-on science in an outdoor school! The best environmental education experience Camp Solomon Schechter has to offer! From academics aligned with Common Core and Next Generation Science Standards to an emphasis on social development, OSPREY Camp helps teach the whole child. Selectively chosen and thoroughly trained high school mentors allow teachers to break their classes into small groups for hands-on instruction. Mentor pairs provide leadership in cabin activities to ensure “down time” is productive, positive and as enriching as class time. Your students will have the time of their lives! Teachers select the environmental lessons that fit their class’ developmental level and learning needs. All meals are provided.

Contact: Sue Wattier, Osprey Camp Director, at swattier@campschechter.org or 206-447-2629

Link: http://www.campschechter.org/ospreycamp/osprey_home/

Cost: \$50 per day

Transportation: Please contact.

Cedar River Watershed Center: Seeing the Source

This field trip journeys to the heart of the Cedar River Municipal Watershed. Naturalist-led, hands-on activities encourage understanding of water cycles, watersheds, water quality, erosion, cultural history, riparian areas, and wildlife. Students See-the-Source of their mountain-fed drinking water supply, plus discover the importance of protecting and conserving it for fish and people.

Contact: crwprograms@seattle.gov

Time: 3 ½ hours

Cost: No Cost

Transportation: Please contact.

Cedar River Watershed Center: Land and Water

This field trip explores features and highlights of the award winning Education Center and its surroundings. Students participate in naturalist-led, hands-on activities that help students make the connections between land, water, and people. Students experience the Water is Magic exhibits and travel through the water cycle, listening to stories of the past and present while learning about their mountain fed drinking water source. They will also walk the shores of Rattlesnake Lake with water testing kits and return to the learning labs to closely examine the natural world with high quality microscopes.

Contact: crwprograms@seattle.gov

Time: 3 ½ hours

Cost: No Cost

Transportation: Please contact.

Environmental Science Center: Beach Heroes

The Beach Heroes program introduces students to the local Puget Sound beach habitat and the organisms that live there. During the 1-hour classroom visit, students will learn proper beach etiquette and stewardship while learning about marine invertebrates and their relationship to the beach habitat and the other living things with whom they share their home. During this NGSS-correlated lesson, students will create field guides they will use during their field study. The 2-hour field study features both naturalist-led beach exploration and structured activities, during which students will learn all about the habitat restoration of Seahurst Beach! After participating in ESC's Beach Heroes program, students pledge to adopt three behaviors to protect, to conserve, and to educate others about our oceans and marine debris. To honor these students' commitment to environmental stewardship, they receive an Official Beach Hero identification card.

Registration form link:

https://docs.google.com/forms/d/e/1FAIpQLScTo3_c3cps0s72AZj-4lIS62138i7KIWWamG3C5aNWIOc7sQ/viewform

Time: 1 hour (in classroom) + 2 hours (field trip)

Cost: \$150 per class (sliding scale- see registration form; max 30 students)

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered March-June. For schools with a Free & Reduced Lunch Rate of 50% or greater, transportation subsidies and fee reductions and waivers are available. Sliding-scale fee structure is detailed on the registration form.

Environmental Science Center: Salmon Heroes

Classroom Lessons & Field Study Investigation: During the 1-hour classroom lesson, students will engage in hands-on, NGSS-correlated activities that explore the habitat needs of salmon – as well as the challenges to survival that salmon face – during each

stage of the salmon life cycle. During the 3-hour field study, students review the salmon life cycle, learn external and internal anatomy, collect water quality data, learn about the changes that the local community made to their behaviors in order to make the Creek better habitat for salmon, and then play a large-group game that mimics the challenges salmon face in making it back to their spawning grounds. During the post-visit, students analyze the water quality data they collected in the field and compare it to previous year's data, and to data collected from a different local creek. Students will then evaluate different actions that people can take in order to lessen their impact on salmon population health.

Contact: Joanna Stodden at Joanna@EnvScienceCenter.org or (206) 248-4266

Link:

<https://docs.google.com/forms/d/e/1FAIpQLSd4aBr9E8gH3NWTdHm5EZ41UdixbYEnocEiHpeuFCWSZ5Bodw/viewform>

Time: 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)

Cost: \$350 per class of 30 students (If your school has 50% or greater free/reduced lunch rate, you will pay a reduced program fee of \$70 per class of 30 students. If your school has 80% or greater free/reduced lunch rate, your program fees will be waived.

Transportation: Partial transportation reimbursements are available for schools with >50% Free and Reduced Lunch Rate.

Note: Offered September-November. Includes 1-hour classroom lesson, a 3-hour guided field study investigation, and a 1-hour post-field study classroom lesson. You need to arrange and pay for transportation for this field trip. Registering multiple classes within a grade level is strongly encouraged. There is an opportunity for bus reimbursement for schools that have a 50% or greater free/reduced lunch rate. Please contact Programs Manager Joanna Stodden for more information regarding bus subsidies. You will need to provide 4 chaperons for each class' field study.

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon - Hatchery Tours

Come see the salmon at Issaquah Creek! Watch spawning salmon, see the hatchery in action, and learn about challenges salmon face and what we can do to help them. Scheduled groups of students and adults are led through the hatchery by trained volunteer docents.

Contact: Contact Rachel Martin, Program Coordinator, FISH at education@issaquahfish.org or 425-392-1118

Time: Tours last 45 minutes to one hour and are available primarily mid-September though early November, though winter and spring/summer tours may also be scheduled.

Cost: FISH requests a fee of \$2 per student when possible.

Transportation: Please contact.

Note: The tour, ideally in conjunction with the Those Amazing Salmon classroom presentation, helps fulfill the state mandate to provide environmental education

experiences to students and is aligned to Washington State standards in science and social studies.

Friends of Soos Creek (Kent): Interpretive Walk

Friends of Soos Creek Park is a non-profit organization comprised of volunteer members who take a pro-active role in preserving and extending the Soos Creek Trail Park and who sponsor and lead park clean-ups and interpretive walks for public education about the importance of wetlands specifically and undisturbed nature generally. Soos Creek Park is one of south King County's prized wetland habitats. An 8.5 mile trail follows the creek through cattail marshes, forested swamps, wet meadows and willow thickets. This trail is suited to all levels of fitness and is wheelchair accessible. Take any or all of these interpretive walks to learn more about this fascinating area and its wildlife residents. Volunteers from The Friends of Soos Creek Park lead these interpretive walks.

Contact: Kent Parks and Recreation at 253-856-5000

Time: Variable

Transportation: Please contact.

Note: All of these walks take place out of doors, so be sure to dress for the weather.

IslandWood: Student Overnight Program SOP

IslandWood's four-day three night School Overnight Program immerses students and teachers in a naturally diverse 255-acre outdoor campus located on Bainbridge Island (just across Puget Sound from downtown Seattle). The curriculum, faculty, and staff support schools and teachers to raise achievement levels for all students by using the environment as a catalyst for learning. Through learning adventures at IslandWood, students gain a greater understanding of the: ecological concepts and practices, including ecosystems, investigations, habitats, adaptations, and biodiversity; the joys of exploration, discovery, and wonder; the interconnectedness of natural and cultural communities; how each person can contribute to natural and cultural communities; and the benefits of working together cooperatively.

Contact: Joan Hutchinson at joanh@islandwood.org and 206-855-4305.

Link: <https://islandwood.org/educational-programming/school-overnight-program>

Time: 4 days

Cost: \$315 per student. One teacher per 25 attending students is free, all others pay the chaperone fee (\$210 per chaperone). Tuition for 3-day programs (offered during holiday weeks only): \$250 per students and \$170 per chaperone. Scholarship funds available to help public schools that meet scholarship criteria. Tuition includes lodging, meals, curriculum, instructors, and evening programs. Pre and post-classroom visits to your school and professional development opportunities for your teachers are also included in the price.

Transportation: Please contact.

Note: Topics during SOP can be customized.

IslandWood (at Brightwater): Freshwater Ecosystem Investigation

In this field experience, students engage in the scientific process by comparing aquatic macroinvertebrates from two pond ecosystems in the Brightwater Center natural area. This experience is designed for elementary classes studying ecosystems, habitats, or microorganisms.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: www.islandwood.org/brightwater

Time: 4 hours

Cost: No Cost

Transportation: Free transportation is available to qualifying schools within King County.

Note: Can accommodate up to 60 students per day, runs from 10am to 2pm.

IslandWood (at Brightwater): Landforms Investigation

This field experience helps students make connections to concepts learned in the classroom-based Landforms Science Unit. Students will conduct field investigation in the Brightwater Center natural area, studying erosion, deposition, properties of streams, and run-off.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: www.islandwood.org/brightwater

Time: 4 hours

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Can accommodate up to 60 students per day, runs from 10am to 2pm. Free transportation is available to qualifying schools within King County.

IslandWood (at Brightwater): Humans and the Water Cycle

In this field experience, students explore how humans are connected to the water cycle. They observe what happens to the water used in their homes once it arrives at Brightwater and discover how their daily actions influence the Puget Sound watershed. This program includes hands-on lab activities, a guided study of the Brightwater treatment plant, and time to explore the engaging exhibit hall.

Contact: Derek Jones at derekj@islandwood.org or 206-263-8866

Link: www.islandwood.org/brightwater

Time: 4 hours

Cost: No Cost

Transportation: Qualifying schools can also access free bus transportation through the [Wheels to Water program](#).

Note: Can accommodate up to 60 students per day, runs from 10am to 2pm.

Mercer Slough Environmental Education Center: Wetland Naturalists

Experience the secrets of the wetland and make the earth move under your feet. As a naturalist, observe the soil, plants and animals as you hike through the wetland. Along the way you will encounter the challenges of a migrating bird and discover the importance of wetlands. In the lab, collect pond samples and use microscopes and other scientific tools to examine aquatic macroinvertebrates.

Contact: Elley Vanderline at evanderline@pacsci.org

Link: <https://www.pacificsciencecenter.org/mercser-slough/teachers-school-groups/>

Time: 4 hours

Cost: \$182 for up to 16 students, \$309 for 17-32 students.

Transportation: Please contact.

Note: Mercer Slough EEC also offer in-class lessons.

Mt Rainier Institute: School Overnight Program

In partnership with Mount Rainier National Park, University of Washington created the Mount Rainier Institute. Located at Pack Forest, Mount Rainier Institute is a residential environmental learning center that uses the natural and cultural resources of Mount Rainier National Park and Pack Forest to achieve its mission. Mount Rainier Institute provides schools in our region with in-depth, multi-day programs focusing on science/STEM education. Mount Rainier Institute also helps connect students and teachers to Mount Rainier National Park, and uses the park and Pack Forest as its “classroom.” We partner with schools to provide experiences that enhance curriculum, enrich science, and build community.

Contact: John Hayes, Mount Rainier Institute Director, at jhayes90@uw.edu or 253-692-4161. Please view information requirements before contacting:

<http://www.packforest.org/mtrainierinstitute/howtoregister.html#howto2>

Link: <http://www.packforest.org/mtrainierinstitute/overview.html>

Cost: Mount Rainier Institute serves all schools: public, private, and home school groups. Scholarships are provided based on need. Mount Rainier Institute, the National Park Service, and their partners are committed to subsidizing cost to ensure students from all backgrounds have the opportunity to participate. Please call (253) 692-4161 for current tuition rates and scholarship information.

Mount Rainier Institute tuition includes: Help in program coordination and customization; food & lodging; transportation during the program; program instruction

3-day program - 6 meals, 2 nights of lodging

4-day program - 9 to 10 meals, 3 nights of lodging

5-day program - 12 to 13 meals, 4 nights of lodging

Transportation: Must provide own transportation.

Note: One teacher per 30 students is free. Additional chaperones are charged a reduced fee.

Mountains to Sound Greenway Trust: Earth Underfoot

Inspects the impact of invasive plants on the landscape. Students identify native and invasive plants found in Pacific Northwest forests in preparation for a stewardship event. At the stewardship event students may remove invasive plant species, plant native and shrubs, or work in our native plant nursery.

Contact: Becca Kedenburg at becca.kedenburg@mtsgreenway.org

Link: www.mtsgreenway.org/education

Time: Variable

Transportation: King County Metro provides a limited number of [Wheels to Water](#) buses to transport students on their field trip.

Note: Each curriculum includes an introductory lesson (taught by the classroom teacher), an in-class lesson, a field study trip to a nearby forest, and an optional stewardship event. Depending on the season, a stewardship event might involve removing blackberry, planting native trees and shrubs, or working in our native plant nursery. Eligible schools have a free and reduced lunch percentage of at least 25 percent. Financial assistance is available for a limited number of buses to the stewardship event.

Mountains to Sound Greenway Trust: Forests and Fins

Forest and fins focuses on stream/forest ecology and the life cycle of salmon. Students complete a mock stream survey in the classroom in preparation to do a real stream survey on the field study trip. Participants analyze the riparian zone, look for macro-invertebrates, test water quality, and evaluate the stream channel. Teams of students present their results.

Contact: Becca Kedenburg at becca.kedenburg@mtsgreenway.org

Link: www.mtsgreenway.org/education

Time: Variable

Cost: No Cost

Transportation: King County Metro provides a limited number of [Wheels to Water](#) buses to transport students on their field trip.

Note: Each curriculum includes an introductory lesson (taught by the classroom teacher), an in-class lesson, a field study trip to a nearby forest, and an optional stewardship event. Depending on the season, a stewardship event might involve removing blackberry, planting native trees and shrubs, or working in our native plant nursery. Eligible schools have a free and reduced lunch percentage of at least 25 percent. Financial assistance is available for a limited number of buses to the stewardship event.

Nature Bridge: Environmental Science Program

NatureBridge environmental science programs in Olympic National Park offer students in grades K-12 the opportunity to learn hands-on science in an International Biosphere Reserve. The three to five-day residential outdoor science programs are led by experienced educators and customized to enhance your school's curriculum. A classroom without walls: located on the shore of glacially carved Lake Crescent, students can investigate old growth forests, wilderness coasts, and alpine peaks. Inquiry-based learning: motivated by their own curiosity, students monitor the dynamic Elwha River system, collect and identify macroinvertebrates in Barnes Creek, and study the adaptations of local mammals in the skins and skulls lab. Responsible actions: students are inspired to make informed decisions about what constitutes a healthy relationship between natural and human communities, their role in that relationship and appropriate actions they can take to sustain it.

Request Information: <https://naturebridge.org/request-information-olympic> or contact Eva Foster at efoster@naturebridge.org and 206-382-6212x14 or call 206-300-6291

Link: <https://naturebridge.org/olympic/school-group>

Time: 3 or 5 days

Cost: Price range for programs can be found here:

<https://naturebridge.org/olympic/school-group/rates>

Rates are for 3 day/2 night program starting at \$234 per student, 3 day/3 night program starting at \$294 per student, 5 day/4 night program starting at \$340 per student, and 5 day/5 night program starting at \$400 per student. Need-based scholarships available and additional optional services available. Tuition includes quality customized environmental science education; on-site lodging in heated, dormitory cabins on the shores of Lake Crescent; and home-style all-you-can-eat buffet meals.

Transportation information:

<https://naturebridge.org/sites/default/files/Transportation%20-%20OLYM.pdf>

Nature Vision: Stream Connections

A Nature Vision educator will meet your class at your local stream and facilitate a variety of activities related to salmon and the effects of stormwater. All activities support WA State K-12 Learning Standards and are customized to the watershed in which the stream is located. This allows students to make connections to their local environment and learn how they can become stewards where it matters to them most.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Nature Vision: Wetland Connections

A Nature Vision educator will meet your class at your local wetland, retention pond, or location of your choice to facilitate activities that show the importance of these unique ecosystems in helping manage the effects of stormwater runoff. All activities support WA State K-12 Learning Standards and are customized to be site specific. This allows students to observe real-world solutions to stormwater management and learn about ways they can have a positive impact on their local watershed.

Link: <https://naturevision.org/school-programs/>

Time: Variable

Cost: \$100 per hour

Transportation: Must provide own transportation.

Note: Free programs may be available, please email info@naturevision.org for more information. Nature Vision also offers in-class lessons and projects.

Pacific Marine Research: Marine Science Afloat

Students learn to love and appreciate Puget Sound on our scientific expedition aboard the *Spirit of 76* floating classroom. Haul in the plankton nets! Spy into the invisible watery world in the microscope lab! Meet your slimy and squishy underwater neighbors! Follow along with a team of scientific divers as they explore the depths beneath the boat and introduce students to the animals below with a LIVE underwater video system. And most importantly, learn how your daily actions can help protect this magnificent, but delicate ecosystem that we all share.

Contact: fieldtrips@marinescienceafloat.org or 206-361-1919

Link: <https://marine-science-afloat.myshopify.com/>

Time: 5 ½ hour

Cost: \$40 per person for the first 15 people; plus one complimentary chaperone per every 10 additional students. (scholarships available)

Transportation: Must provide own transportation.

Note: Trips take place from mid-March to mid-June but occasionally fall trips are run.

Salish Sea Expeditions: SOUND Program

Salish Sea Expeditions invites students to become scientists and mariners, facilitating student-led research and applied STEM (Science Technology Engineering and Math) skill development that focuses on the health of Puget Sound and its connected waterways aboard the 61' research sailing vessel, Carlyn.

1-2 day programs: One-day and two-day (overnight) boat-based expeditions that engage students in exploring water quality issues, deploying oceanographic research tools, and practicing applied STEM skills used in maritime trades.

Cost: \$400/hour for 5+-hour sail; \$4800 for two-day overnight, which includes food and equipment (scholarships may be available)

3-5 day programs: This boat-based program provides 3-5 day expeditions of oceanographic research, nautical science and seamanship aboard the 61-foot sailing

research vessel, Carlyn. Students lead and conduct marine science research under the careful guidance of Salish educators.

Contact: educationdirector@salish.org

Link: <https://www.salish.org/programs/sound/>

Cost: \$2800/day (scholarships may be available)

Transportation: Please contact.

Note: Dates: Spring season March-June; fall season September-October. All programs include four phases: 1) pre-trip classroom instruction to develop a student science question 2) the 3-5 day boat program 3) a post-trip into the classroom to synthesize information from the trip into a student presentation 4) Student Science Symposium (optional). All science equipment, safety gear, food, and camping equipment included. Class size up to 28 students and 2 chaperones, although we're willing to explore alternative arrangements for larger groups. Salish Sea Expeditions also offers customized classroom-based watershed lessons.

Seattle Aquarium: Salmon Exploration

Learn about the life cycle of Seattle's most iconic animal, the salmon. With the use of storyboards and interactive activities, students will explore salmon from egg to adult and discuss the many different factors that affect these amazing fish.

Link: <http://www.seattleaquarium.org/education-programs/plan-a-visit>

Time: 60 minutes

Cost: \$10 each (This is the price of aquarium admission for adults and youth 4 and up)

Transportation: Please contact.

Seattle Parks and Recreation: Camp Long

Bringing science, environmental education, and experiential learning to your parks. Seattle Parks and Recreation's Environmental Education and Outdoor Learning staff provide opportunities for grades K-12 and organized groups, such as scouts and camps, to experience age-appropriate, hands-on adventures in learning about natural communities in an urban setting. Programs align with WA State Essential Academic Learning Requirements for core content areas and support science kits.

Ponds (spring and summer only): Experience the freshwater habitats of a city park at Camp Long or Discovery Park. Waddling ducks, wriggling tadpoles, and dancing dragonflies are some of the creatures they may see as they explore what makes these places so special.

Forest: Camp Long and Discovery Park have lots of forest habitat to explore. Venture through the trees looking for clues to animal habits, hiding places, and seasonal happenings. Forest programs empower participants to feel comfortable in the outdoors.

Link: <https://www.seattle.gov/parks/find/centers/camp-long/camps>

Transportation: Please contact.

Sound Experience: Sound Studies Program

The goal of a Sound Studies program, as with all programs offered by Sound Experience, can be summarized in a single word: awareness. We believe that people will protect what they learn to value. The most effective way to have a lasting impact is to meet the following goals for every program. Our goals for participants: Leave with a heightened awareness of Puget Sound as a fragile ecosystem, understand the concept of a whole system, and understand how *Adventuress* and the earth both illustrate this concept. Recognize the interrelationships that exist between all life. Identify the positive and negative impacts that they as individuals have on the Puget Sound ecosystem. Recognize their ability to take action by raising others' awareness and by making responsible choices. Understand the necessity of cooperation as a course to action. Learn that Puget Sound is an incredible, diverse, and productive ecosystem and that the waterways we all share are fragile and need our care. Most importantly, students learn that they can make a difference. Experience working together to raise sails and learn about all the factors that help make a traditional sailing vessel function.

When you join us for a day trip, your group will take part in an active learning and working voyage. On board our vessel, participants are able to experience how community, nature, culture, and infrastructure all interact and shape each other.

Contact: Amy Kovacs at amy@soundexp.org or 360-379-0438

Link: <https://www.soundexp.org/sail-with-us/schoolsyouth-groups/day-program-sound-studies/>

Time: 3 or 5 hours

Cost: Off Peak Rates (October 1-April 30): \$1150 for 3 hours, \$1675 for 5 hours. Peak Rates (May 1-September 30): \$1210 for 3 hours, \$1760 for 5 hours

Transportation: Please contact.

Note: The *Adventuress* sails out of many ports, including: Everett, Olympia, Seattle, and Tacoma.

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action; Learn that Puget Sound is an incredible, diverse, and productive ecosystem and that the waterways we all share are fragile and need our care. Most importantly, students learn that they can make a difference; Experience working together to raise sails and learn about all the factors that help make a traditional sailing vessel function. When you join us for a day trip, your group will take part in an active learning and working voyage. On board our vessel, participants are able to experience how community, nature, culture, and infrastructure all interact and shape each other.

Contact: Amy Kovacs at amy@soundexp.org and 360-379-0439

Link: <https://www.soundexp.org/sail-with-us/schoolsyouth-groups/overnight-programs-sound-explorations/>

Time: 2-7 days

Cost: Off Peak Rates (October 1- April 30): \$2780 per day, groups between 14-18 people can come for \$149/person/day and includes adults. Peak Rates (May 1-September 30): \$2900 per day, groups between 14-18 people can come aboard for \$159/person/day and includes adults

Transportation: Please contact.

Note: The Adventuress sails out of many ports, including: Everett, Olympia, Seattle, and Tacoma.

Sound Salmon Solutions: Ecosystems

Learn about a food chain and why it is important in an engaging and hands-on way

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45-60 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Sound Salmon Solutions: Water Quality Testing

Students become scientists by collecting water samples and using testing kits to measure and collect data on the health of a local stream. They will understand the value of clean water and how that is defined.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 45-60 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Sound Salmon Solutions: Macroinvertebrates

Identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality

Time: 45-120 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lessons and projects.

Tacoma Nature Center: Water Sleuths

Discover how systems connect as students investigate a wetland habitat, then search out the links between human activity and watershed quality. Students use technology to gather data on the watershed and draw conclusions about its quality.

Contact: tnc@tacomaparks.com or 253-591-6439

Link: <http://www.metroparkstacoma.org/school-groups-nature-center/>

Time: 2- 2 ½ hours

Cost: \$6 per student

Transportation: Please contact.

Waskowitz Outdoor School: 4-day or 5-day program

Waskowitz Outdoor School Programs are a magical journey of discovery exploring the diversity of people and nature! For over 59 years Waskowitz has been welcoming classes from throughout the Puget Sound region to investigate the beauty of the Pacific Northwest through classes in forest and river ecology as well as forming bonds with new friends from different school.

Contact: Meredith von Trapp at (425) 277-7195 and meredith.vontrapp@highlineschools.org or 425-277-7195

Link: <https://www.highlineschools.org/waskowitz>

Cost: \$175 for 4 days per student, \$195 for 5 days per students

Transportation: Please contact. GIS Custom Map Products

Projects

Nature Vision: Blue Teams

Nature Vision offers Blue Teams, a student stewardship project funded by our water sponsors. Blue Teams are groups of kindergarden-12th grade students who commit to taking on and completing a watershed stewardship project. Students complete projects such as invasive plant removal, native plant restoration, planting water-wise gardens, finding and fixing leaks, and much more.

The Blue Team program was developed to educate local youth about water resources and related ecosystems, foster sustainable stewardship values and practices in the community through hands-on youth projects, and to empower youth to take positive steps to improve their local environment.

Blue Teams receive Nature Vision's help in planning, preparing for, and executing their

projects at school or at an off-campus project site, as well as regular teacher consultations via phone or email. Teachers/Instructors may register their class or youth group to become a team, and Nature Vision staff will help each team to design a watershed stewardship project. Staff will visit the students multiple times to teach inquiry-based programs, giving the students the knowledge and help they will need to successfully complete and understand the value of their project.

Link: <https://naturevision.org/blue-teams>

Time: Variable

Cost: Free Blue Teams may be available, please email info@naturevision.org for more information.

Transportation: Must provide own transportation.

Note: Nature Vision also offers in-class lessons and field trips

Sound Salmon Solutions: Tree Planting

Students are given an opportunity to plant native trees and shrubs on an active habitat restoration site.

Link: <http://www.soundsalmonsolutions.org/education>

Time: 60-90 minutes

Transportation: Please contact.

Note: Sound Salmon Solutions also offers in-class lesson.

Grant Opportunities for Teachers

Private & Corporate Foundation Grants

3M Community Giving Program/3M Foundation

http://solutions.3m.com/wps/portal/3M/en_US/CommunityAffairs/CommunityGiving/

The foundation gives in areas of company operations. In WA: Bainbridge Island

Address: 600 Ericksen Avenue N.E., Suite 200, Bainbridge Island, WA 98110

Check website above for current guidelines and application procedures.

Paul G. Allen Family Foundation

<http://www.pgafoundations.com/>

Does not accept unsolicited proposals. Beginning in 2012, the foundation will partner with public schools and districts in Washington State and Oregon to implement sustainable, research-based improvements that lead to measurable improvements in student achievement. The foundation supports projects at the school and district level that integrate rigorous academics, real-world learning, direct impact on student achievement, and community engagement. Check with your school or district for existing partnerships. For more information, go to:

<http://www.pgafoundations.com/TemplateMain.aspx?contentId=13>

Bank of America Charitable Foundation, Inc.

<http://www.bankofamerica.com/foundation/>

Funds Washington State University Foundation, nonprofit education foundations. Funds in

Seattle: <http://about.bankofamerica.com/en-us/partnering-locally/seattle-wa.html?sort=FEATURED&page=3#fbid=-aSXdtiDGkx>

Bezos Family Foundation

<http://www.bezosfamilyfoundation.org/>

Located on Mercer Island, the foundation supports private colleges, universities, and nonprofit education organizations nationally. The foundation's purpose is to support children and youth as well as sports and recreation. Supports reading programs, capital, programs, general operating, and scholarships.

Boeing Company

Northwest guidelines:

<http://www.boeing.com/principles/community-engagement.page#/seeking-support>

Community investments for the region.

Cathay Bank Foundation

<https://www.cathaybank.com/Cathay-Foundation/Home/>

Focus on low to moderate income individuals. Nonprofits may submit letters of inquiry (as directed on website) for review, pending request for full proposal.

Dimmer Family Foundation

<http://dimmerfoundation.org/>

Funds some schools and universities in Tacoma, Seattle and Lakewood, WA; mostly small grants (under \$5,000).

Bill & Melinda Gates Foundation

<http://www.gatesfoundation.org>

Funds education extensively. A current focus is college-ready education

<http://www.gatesfoundation.org/college-ready-education/Pages/default.aspx>. Check website for current funding opportunities.

GenCorp Foundation

<http://www.genCorp.com/pages/gcfound.html>

The Foundation's primarily focus is education, with emphasis on Science, Technology, Engineering and Mathematics (STEM) education. Funds in areas of company operations: Redmond, WA.

Elizabeth A Lynn Foundation

<http://elizabethalynnfoundation.org/>

Funds Catholic schools, and higher education. Interested in helping the disabled.

Charlotte Y. Martin Charitable Foundation

<http://www.charlottemartin.org/>

Funds educational programs in and out of the classroom, aims to help underserved populations achieve success. Funds public and private schools, focus on rural schools.

The Medina Foundation

<http://www.medinafoundation.org>

The foundation's purpose is to aid in improving the human condition in the greater Puget Sound community by fostering positive change, growth, and the improvement of people. Funds many private schools and nonprofit education organizations.

JPMorgan Chase Foundation

<http://www.jpmpmorganchase.com/corporate/Corporate-Responsibility/corporate-philanthropy.htm>

(Scroll down page to find education focus area). Only funds 501(c) (3) organizations; no private schools or higher education. Funds public schools working in partnership with a 501(c) (3) organization. Funds statewide in Washington. Submit online application at:

http://www.cybergrants.com/pls/cybergrants/ao_login.login?x_gm_id=2608&x_proposal_type_id=10400

Lowe's

<http://toolboxforeducation.com/>

Funds school technology upgrades, tools for STEM programs, facility renovations and safety improvements.

Nesholm Family Foundation

http://www.nesholmfamilyfoundation.org/Nesholm_Foundation/Home.html

Funds human services, education, and the performing arts in the city of Seattle, and occasionally, in other parts of King's County. Its aim is to develop human potential, enhance quality of life, deal with important community issues and problems, affect significant numbers of people, encourage the involvement of others and leverage foundation assets to increase a project's long-term impact. Request an application by emailing:

grants@nesholmfoundation.org. Strong supporter of the Alliance for Education (\$250,000 in 2011 for the Middle School initiative). Funds Seattle public schools, and individual schools.

The Norcliffe Foundation

<http://www.thenorcliffefoundation.com>

Funds K-12 and higher education. Primarily supports capital projects. Some new project and scholarship support also available.

Stuart Foundation

<http://www.stuartfoundation.org>

Funds colleges and universities, school districts, and nonprofit organizations in California and Washington State. Focus on system-wide change:

<http://www.stuartfoundation.org/BecomeOurPartner.aspx>

Subaru of America Foundation

<http://www.subaru.com/csr/soa-foundation.html>

Makes partnership grants to Seattle nonprofit organizations. Interested in youth development and education.

Target

<https://corporate.target.com/corporate-responsibility/grants>

Funds educational field trips for K-12 schools.

Washington STEM

<http://www.washingtonstem.org/>

Funds innovative education programs across Washington State.

Community Foundations

King County

<http://www.kingcounty.gov/services/environment/grants-and-awards/waterworks.aspx>

WaterWorks provides funding for projects that improve water quality in the [service area](#) for King County's regional wastewater system. This grant program complements the water quality mission of the Wastewater Treatment Division.

In addition to the WaterWorks competitive grants, water quality project funding is available through King County [Council allocated funding](#).

Approximately \$2 million are awarded every two years for organizations carrying out a variety of projects. Non-profits, schools and educational institutions, cities, counties, tribes, and special purpose districts are eligible to apply, and partnerships are encouraged.

Renton Community Foundation

<http://www.rentonfoundation.org/>

Serves the greater Renton area. All grants are donor advised. Scholarships are available.

The Seattle Foundation

<http://www.seattlefoundation.org>

Serves King County. Provides a variety of community-based grants.

The Nature Conservancy

<https://www.natureworkseverywhere.org/grants/>

The Nature Conservancy are awarding grants to support projects that implement green infrastructure to address local environmental challenges. These include: access to healthy food, air quality, heat island effect, climate change, and storm water collection. Young people will

work as social innovators to help their communities through project design and implementation.

Grants of \$2,000 will be awarded to 60 public or charter schools across the United States. See the [detailed grant description](#) linked on this page for full requirements, guidelines, important dates, and online application information. Samples of an [application](#), an [applicant commitment letter](#), and an [administration letter of support](#) are also available.

Highline Schools Foundation

<http://www.highlineschoolsfoundation.org/grants/>

For 15 years, Highline Schools Foundation has awarded grants directly to pre-K through 12th grade educators (including teachers, counselors, librarians, and other staff) throughout all Highline Public Schools to support innovative teaching and learning. The foundation acts as a bridge between need and opportunity in many ways – through college scholarships, college campus field trips, sports participation fees, band and orchestra instruments, and backpacks and school supplies; but one of the most impactful ways the foundation supports students is with grants.

The goal of the Excel Grant program is to fund innovative ideas and programs that school budgets can't provide. We strive to support activities and experiences that expand the learning process and actively engage students.

The foundation's Impact Grant awards \$10,000 to one school or program in the district for an opportunity that aligns with the Highline Public Schools strategic plan in a way that impacts a large number of students.

The Issaquah Schools Foundation

<http://isfdn.org/our-purpose/advancing-academic-achievement/classroom-enrichment-grants/>

The Issaquah Schools Foundation recognizes that school budgets are limited and classroom demands are high. Each year, the foundation awards Classroom Enrichment Grants to enhance the learning environment of individual classrooms, libraries, computer labs, resource centers and schools. Grants in this program are funded up to \$1,000.

Youth Garden Grant

https://kidsgardening.org/2018-youth-garden-grant/?utm_source=KidsGardening+Friends&utm_campaign=1dd68ba043-EMAIL_CAMPAIGN_2017_10_03&utm_medium=email&utm_term=0_0a82c9a42d-1dd68ba043-366393945&mc_cid=1dd68ba043&mc_eid=35b83a2731

The 2018 Youth Garden Grant is an award designed to support school and youth educational garden projects that enhance the quality of life for students and their communities. Any nonprofit organization, public or private school, or youth program in the United States planning a new garden program or expanding an established one that serves at least 15 youth between the ages of 3 and 18 is eligible to apply. The selection of winners is based on demonstrated program impact and sustainability.

Kent Community Foundation

<http://www.kentcf.org/>

Provides community group and school grants.

Snoqualmie Valley Schools Foundation

<http://www.svsfoundation.org/>

Provides community support for schools to fund meaningful and essential programs in the Snoqualmie Valley.

Professional Development for Teachers

Click the links below for a list of fluctuating professional development and adult courses available for teachers.

IslandWood:

NGSS In Action: A Professional Development Series

Next Generation Science Standards (NGSS) have rolled out across the state, and classroom teachers and informal educators alike are exploring the implications for curriculum and approaches to teaching. The Standards call for using local phenomena that are relevant to students, but national curricula can be hard to adapt to local communities. Join the IslandWood education team and King County for a professional development series aimed at exploring ways to use all the dimensions of the new Standards and incorporate culturally responsive approaches as we help students understand and solve real world problems. The content of these workshops is appropriate for any K-8 teacher (or 4-12 for our "Understanding Local Water Systems" session).

Each session dives more deeply into a different dimension of the standards and, while the sessions can stand alone, each one is designed to build upon the ones that come before. Participants who attend multiple sessions will benefit from the progression and have opportunities to discuss successes and challenges with the group. Registering for and attending all sessions is not required.

<https://islandwood.org/brightwater-center/teacher-professional-development>

Pacific Education Institute:

PEI welcomes participation in their expert-designed, NGSS aligned, experiential workshops and institutes. They aim to increase educators' knowledge, skills, and confidence in taking students outdoors to learn locally relevant, real-world science that is connected to careers in environmental science, natural resources, and agriculture sectors.

<https://pacifieducationinstitute.org/work/#catalog>

Project WET:

Workshops to understand the Project WET Curriculum.

<http://www.projectwet.org/teach-and-learn>

King County Stormwater Elementary Education Resource Guide

Created April 2017 – Last Updated Jan 2018

Seattle Aquarium:

Field guides, resources, and general information.

<http://www.seattleaquarium.org/teacher-resources>

Seattle Public Schools:

The School and Community Partnerships Department is committed to offering supports that build the capacity of community based organizations and schools to align their work and

effectively and authentically partner.

Guided by our Professional Development Advisory Committee, which includes community based organizations, the City of Seattle, Seattle Public Schools (SPS), and feedback from partners and 2016-2017 attendees, we are excited to unveil our 2017-18 professional learning opportunities. Some opportunities are designed only for community-based organization staff and volunteers, while others are open to both to school staff and partners.

The first two pages provide an overview, and the subsequent pages have full details, including location, timing, and registration links.

<http://www.seattleschools.org/cms/one.aspx?pageId=1709268>

Snohomish County Public Utility District PUD:

Teacher workshops are offered throughout the year for educators in the PUD's service area. All classes are offered with clock hours (some offer college credit) and are aligned with Washington State's *Grade Level Expectations*.

<http://www.snopud.com/Education/educators/educwkshp.ashx?p=1398>

University of Washington:

Deepen your instructional expertise, develop your leadership skills and rekindle your educational passion in one of our expert-led programs.

<https://www.pce.uw.edu/areas-of-study/education>

Woodland Park Zoo:

Courses are open to all educators and other professionals. These courses are presented as part of the Advanced Inquiry Program Master's degree (AIP). Students enrolled in AIP or other students taking the courses for credit will be given priority enrollment. If there is space in the course, Washington state-approved clock hours will be available to those participants not taking the course for credit. The courses are held at Woodland Park Zoo (unless otherwise noted) and include presentations by guest speakers, tours of zoo grounds, group discussions and hands-on activities.

https://www.zoo.org/aip/courses#.We_mSDBrziU