Stormwater Runoff Education Resource Guide (Secondary)

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

More importantly, we hope these guides can help educators intrigue, inspire and engage all our communities in how we are connected to nature.
This guide was created by King County to aid teachers in finding environmental programs that show the relation of ecology, health, clean 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.

We have included resources for educators on inclusion, diversity, equity and accessibility to engage all students.

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6th Grade

Remote Learning

These are remote learning options for classrooms or home learning.

King County DNRP: Water Education – Wastewater and Stormwater Connected (grades 6-8)
Students will learn all about wastewater and stormwater and how these two water systems are connected. They will explore how humans are an integral part of the water cycle - where our water comes from, how we use it, and where it ends up after we are finished. Guided by an educator, students will work together to brainstorm and share creative engineering solutions to combined sewer system problems while also conducting simple, hands-on experiments at home.
Lesson 1 - Introduction to Water and Watersheds (Live synchronous)
Lesson 2 - What is Wastewater and How are You Connected to It? (Live synchronous)
Lesson 3 - What is Stormwater and How Does it Affect Humans and Ecosystems? (Live synchronous)
Lesson 4 - Engineering Solutions and How You Can Protect our Water Systems! (Live synchronous)
Contact: Katelyn.Leeuw@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Cost: No cost

King County: Virtual EcoConnections Workshops
The FREE virtual EcoConnections workshops described below can be adapted for different grade levels and class period lengths. Delivered through a variety of online platforms and featuring a live presenter, the EcoConnections workshops are designed to be interactive, engaging and offer a unique way to support remote learning. Supporting materials include integrated worksheets and an interactive follow up quiz. Topics include: Biodiversity in our World, Biospheres, Earth Impacts, and Four Rs for Our Climate.
Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: Presented “live” via Zoom and Microsoft Teams.
Burke Museum Virtual Education Programs: Virtual Field Trips
Web-based, virtual tours of the museum. Designed to support classroom curriculum, our Virtual Field Trips are interactive, self-paced experiences. All you need is an internet connection and web browser to get started.

Link: [https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs](https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs)
Time: 30 minutes
Cost: $40; cost assistance is available for qualifying schools, organizations, and groups.

Burke Museum Virtual Education Programs: Burke LIVE
Have a Burke educator join your class live from our learning studio. Each program includes an interactive discussion or activity related to the topic, a closer look at real Burke collections and a chance for Q&A! You’ll also receive pre- and post-program materials to help prepare your students for the live experience and extend their learning afterwards.

Link: [https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs](https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs)
Time: 45 minutes
Cost: $90, Cost assistance is available for qualifying schools, organizations, and groups.

Friends of the Issaquah Salmon Hatchery (FISH): Forest & Fins Online Learning
This online video series covers a variety of topics from elements of healthy salmon streams to the relationship between salmon and the forest ecosystem. Videos are broken into 8 lessons, some with downloadable worksheets as well.

Contact: education@issaquahfish.org or 425-393-1118
Link: [https://www.issaquahfish.org/educational-video-series/](https://www.issaquahfish.org/educational-video-series/)
Time: Varies
Cost: No cost
Note: FISH also offers field trips. [https://www.issaquahfish.org/teachers-school-programs/#presentation-form](https://www.issaquahfish.org/teachers-school-programs/#presentation-form)

Nature Vision: Student Packets
Nature Vision has developed seven science packets for K-12 students: Ecological Impacts, Water Quality, Human Systems, Invasive Plants, Ecosystems, Watersheds, and Humans and Water. Each free downloadable packet includes the following:

Contact: info@naturevision.org
Link: [https://naturevision.org/student-packets](https://naturevision.org/student-packets)
Cost: No cost
Nature Vision: Remote Learning and Video Call Programs

Nature Vision has adapted many of our most popular in-class programs into two virtual formats for increased accessibility! We now offer synchronous full-length video call programs and asynchronous remote curriculum program options for teachers, parents, and caregivers to use during the upcoming school year. These programs are designed to accommodate both fully remote and hybrid teaching options for each school district Nature Vision serves. The programs are flexible to best fit teachers’ schedules, student needs, and current WA State K-12 Learning Standards with Science Technology Engineering and Math (STEM) education as a central focus. Each full-length video call program is 45-60 minutes live with one of our educators. Each remote learning program includes videos of our engaging Nature Vision Educators, detailed instructions for teachers/parents/caregivers to lead interactive activities, and a live Q&A session with an educator.

Link: https://naturevision.org/remote-learning-programs

Time: Roughly 1 hour between videos, activities, and Q&A sessions
Cost: Free for most schools. Otherwise $85-$90
Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers classroom programs, field trips, and projects.

Pacific Marine Research: Marine Science Remote

Book our series of 3 one hour live sessions and join our naturalists as they guide you through Plankton Lab, our Live Dive and an Invertebrate Food Chains Lesson or a more advanced Invertebrate Taxonomy with live critters. Meet our divers and ask them questions in real time as they take you underwater during the Live Dive. We will also include Water Quality Data collected on the day of this live portion. The live stream will allow for students to ask questions and interact with naturalists and scuba divers in real-time.

Contact: fieldtrips@marinescienceafloat.org or 206-361-1919
Link: https://www.pacificmarineresearch.org/pages/marine-science-remote

Time: Three 1 hour sessions
Cost: $250, scholarships available

Seattle Aquarium: Digital Learning Opportunities

All of our programs focus on the marine ecosystems of the Pacific Northwest. Our educators will guide you and up to 32 of your students over video conferencing software through lessons that support Next Generation Science Standards while giving your students agency to influence the class based on their prior knowledge and interests. Each of our classes has a grade level range, and within that range our skilled educators
will tailor the class for your specific grade level. Many classes also include special live animal interactions with the tide pool creatures in our care.

**Link**: [https://www.seattleaquarium.org/distance-learning](https://www.seattleaquarium.org/distance-learning)

**Time**: 45 minutes  
**Cost**: $150, Scholarships available for those eligible.

### Classroom Visitors

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

*K* **King County DNRP: Water Education (grades 6-8)**

These programs are 60-90-minute long programs led by educators at your school. The lessons are Next Generation Science Standards (NGSS) aligned and focus on our local wastewater system.

- **Stormwater Solutions Program**: What happens to all that water when it rains? Can this water cause problems for our environment? How can we solve these problems? Students will investigate how stormwater moves, identify stormwater problems, and collaborate with their peers to think about solutions.

- **Wastewater Engineers Program**: How do we impact the water in our communities? What are we doing to clean it up? What actions can we take to keep our water clean? Students will explore the impacts that humans have on our water system and will learn how the choices they make on a daily basis impact our water system.

**Contact**: Katelyn.Leeuw@kingcounty.gov  
**Link**: [https://kingcounty.gov/services/environment/wastewater/education/school.aspx](https://kingcounty.gov/services/environment/wastewater/education/school.aspx)  
**Cost**: No cost  

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

**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.

**Contact**: noxious.weeds@kingcounty.gov  
**Time**: Variable
Cost: No Cost
Transportation: Qualifying schools can 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.

King County: EcoConnections Classroom Workshops
The FREE in-person EcoConnections workshops described below can be adapted for different grade levels and class period lengths. They include engaging instruction and hands-on activities, as well as discussion of both environmental issues and human considerations such as equity and social justice. EcoConnections workshops are designed to be interactive, dynamic and engaging and offer a unique way to support in-class learning. Topics include: life science and ecosystems, earth systems and human activity, and environmental action.
Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: New virtual workshop offerings, presented “live” via Zoom and Microsoft Teams. All in person workshop activities are modified to reduce contact with materials, and new cleaning protocols have been instituted, to sanitize between school visits.

City of Duvall: Surface Water Management Classroom Visitor
Larissa Polanco, Assistant City Engineer. Discussion adapted to what you are teaching in the classroom.
Contact: Larissa Polanco at larissa.polanco@duvallwa.gov and 425-788-3434 ext. 8040
Link: http://www.duvallwa.gov/305/sewer-water-stormwater
Time: Variable
Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor
The Surface Water Program Manager can speak to your class about surface water management, with an emphasis on what you are currently talking about in the classroom.
Contact: Audrie Starsy at audries@newcastlewa.gov or 425-649-4444 ext. 111
Link: http://newcastlewa.gov/departments/public_works/surface_water_management/
Time: Variable
EarthGen: Stormwater Stewards

EarthGen provides tailored classroom resource support for schools around watersheds, stormwater problems and stormwater solutions. Students engage in a co-design process with a landscape designer to develop and install green stormwater infrastructure on their campus. Additionally, students learn from various professionals in their region who engage with stormwater management. Stormwater Stewards is a program for middle and high school students to learn about watersheds and how to reduce the impact of stormwater. Students investigate their local watersheds, and then design and implement green stormwater infrastructure projects to improve water quality in their community. EarthGen facilitates connections to stormwater professionals who introduce students to pathways into environmental careers.

Link: https://earthgenwa.org/
Contact: Becky Bronstein at becky@earthgenwa.org
Cost: No cost
Transportation: EarthGen visits the school and corresponds via email/phone
Note: Contact Becky for more information on how to get involved with this program

Eastside Audubon: Classroom Workshops

These workshops teach K-12 students what makes a bird a bird and how to identify common birds seen in our area. Each workshop is on a different topic and has specific activities included. Workshop topics include: Introduction to Birds, Bird Identification, Using Binoculars, Bird Beaks and Food, and more!
Contact: youthprograms@eastsideaudubon.org
Link: https://www.eastsideaudubon.org/youth-education
Time: Depends on workshop topic
Cost: No cost
Note: Can be adapted by the volunteer to address stormwater runoff effects specifically. Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

*Environmental Science Center: Salmon Heroes

The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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:** programs@environmentalsciencecenter.org or 206-248-4266  
**Link:** https://envsciencecenter.org/salmon-heroes/  
**Time:** 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)  
**Cost:** Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students  
**Transportation:** Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals  
**Note:** Offered September-December. In-person and virtual program offerings available in 2021.  
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

Friends of the Issaquah Salmon Hatchery (FISH): Those Amazing Salmon  
This popular presentation consists of a 45- to 60-minute slide show, discussion, and question-and-answer session. After the slide show, teachers have the option of a watershed activity, quiz game, or Native American legend activity for their class.  
**Contact:** education@issaquahfish.org or 425-393-1118  
**Link:** https://www.issaquahfish.org/  
**Time:** 45-80 minutes  
**Cost:** $50 per class request in King County, $75 request out of King County  
**Note:** Will still accept schools that cannot afford the fees. Ideally, a class receives the presentation prior to a visit to the hatchery. The program is available year round. 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.  
**Contact:** education@issaquahfish.org or 425-393-1118
**The Jellyfish Project: School Presentations**

The Jellyfish Project provides students with a unique experience to learn about ocean health and the climate crisis, motivating them to become active environmental stewards. What makes our presentation unique is that the presenters are musicians and their vibrant, live music performance is used as a means to engage the attention of the students and set the stage for the captivating slideshow that follows.

Our intention is to deliver a message of hope to help mitigate the fear and helplessness students may be feeling by empowering them with the knowledge that they, as youth, can become instruments of change and that every individual action, no matter how big or small, is impactful.

The Jellyfish Project presentation is geared towards middle and high school students grades 6-12. The performance time depends on the amount of block time we are allotted by each school as well as the age range of the audience. Generally, the presentations are 45-60 minutes which includes the musical performance, slide presentation by the musicians, and a 5-10 minute Q&A.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

### Nature Vision: Watershed Programs

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.

*Note: As of April 2021, the Jellyfish Project will be offering a live-streamed presentation to students; and as of September 2021, hopes to resume live, in-school presentations to reduced-size audiences where COVID safety and physical distancing guidelines can be effectively met.*

**Link:** [https://www.thejellyfishproject.org/](https://www.thejellyfishproject.org/)
**Contact:** info@thejellyfishproject.org
**Cost:** No cost

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Secondary Education Resource Guide
Created April 2017 – Updated November 2021
Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects. Nature Vision can also provide classroom programs virtually over video call at 45-60 minutes.

*Salish Sea Expeditions: SOURCE Program
Salish Sea Expeditions invites students to become scientists, facilitating student-led research and applied Science Technology Engineering and Math (STEM) 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 or 206-780-7848
Link: https://www.salish.org/programs/source/
Time: 10 hours total (multiple classes)
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.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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.
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 45 minutes
Cost: Varies depending on funding, contact for more information
Note: Can be done as a field trip

Sound Salmon Solutions: Macroinvertebrates (Lab option)
Students identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 45-120 minutes
Cost: Varies depending on funding, contact for more information
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.
Contact: http://www.soundsalmonsolutions.org/education
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 120 minutes
Cost: Varies, possibly free depending on funding, contact for more information
Note: Can be done as a field trip

Vashon Nature Center: Nature Presentations
Trained scientists and naturalists offer in-class and outdoor programs designed to foster student awareness and understanding of environmental science topics relevant to their community and tied to global issues. Programs are tailored to suit teachers' classroom teaching goals and align with Next Generation Science Standards.
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: Areas of focus address the natural history of the Salish Sea and Pacific Northwest. Examples include: watershed education, stormwater management, phenology, freshwater macroinvertebrates, salmon, amphibians, intertidal studies, forage fish, shoreline restoration, biodiversity studies, and methods in field research.

Field Trips
*King County DNRP: Water Education: Field Trips and Treatment Plant tours
King County provides water educational field trips for students in grades 6-8 located at both Brightwater and South Treatment Plant. Field trips last 2-4 hours, and are free of charge. Teachers can choose from programs that focus on stormwater or wastewater.
Contact: Katelyn.Leeuw@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Time: 2-4 hours
Cost: No Cost
Transportation: Qualifying schools can access free bus transportation through the Wheels to Water transportation program
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.
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: Laura West at lwest@kingcounty.gov or 206-477-7574

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

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can 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.

Contact: noxious.weeds@kingcounty.gov


Time: Variable

Cost: No Cost

Transportation: Qualifying schools can 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 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 their mission, core values, and programs. We believe in the power of nature to awaken a child’s senses, curiosity, and desire to learn. With a 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. Camp Sealth serves grades K-12 for our Outdoor Education, Retreats, and Day Programs and can create customizable schedules that meet current educational standards by grade level.

Contact: Josh Cunningham at joshc@campfireseattle.org
Link: https://campfireseattle.org/outdoor-education/
Time: Program offered September-June. Typical program is 3 days, 2 nights. Can do both 1 night and week-long programs as well.
Cost: $56 per student per night, $48 per adult per night
Transportation: https://campfireseattle.org/camp-sealth-overnight-camp/all-about-camp-sealth/transportation/

Note: In addition to the Outdoor Education program, Camp Sealth and Camp Fire Central Puget Sound offers rentals of our site for other non-profit groups, over ten community based day camps in various locations in King County during the summer months, summer resident camp at our Camp Sealth site, and community based group programing at various locations in King County. For more information about these programs please contact Michael McGrath at the Seattle office at michaelm@campfireseattle.org.

*Environmental Science Center: Salmon Heroes

The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@environmentalsciencecenter.org or 206-248-4266
Link: https://envsciencecenter.org/salmon-heroes/
Time: 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)
Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per
class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

Transportation: Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

Note: Offered September-December. In-person and virtual program offerings available in 2021.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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: education@issaquahfish.org or 425-392-1118
Link: https://www.issaquahfish.org/
Time: Tours last 45 minutes to one hour and are available primarily mid-September though early November
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.

*Hatchery grounds are currently closed to the public. Guided tours are permitted with a reservation. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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 and undisturbed nature. 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 the 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: 253-856-5000 or Covington Parks and Recreation: 253-480-2480
Link: https://www.facebook.com/FriendsOfSoosCreekPark/
Time: Variable
Transportation: Please contact for details
Note: All of the walks take place outdoors, so be sure to dress for the weather

*Mercer Slough Environmental Education Center: Environmental Engineers
Lab: Students learn about the engineering design process before being presented with their biggest environmental engineering challenge of the day. Students then need to do research on past designs and test their own designs in our stream tables to engineer the best city-plan along the edge of a river. Along the way, your students might encounter unforeseen events and angry stakeholders that could make them reconsider their design before submitting their final model for approval.
Hike: Students learn more about Green Stormwater Infrastructure by exploring our LEED Gold Facilities onsite. In the nature park, they get hands-on experience with wetland delineation to decide if a proposed site is good for building on. With their new background knowledge, students then practice building their own Environmental Education Center out of natural materials along the trail. If there is enough time, students can run around and play an engineering game of tag.
Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207
Link: https://www.pacificsciencecenter.org/mercer-slough/teachers-school-groups/
Time: 4 hours, including a 30 min lunch
Cost: $210 for up to 16 students, $385 for 17-32 students. See website for other pricing.
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!
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Mercer Slough Environmental Education Center: Wetland Ecologists
Lab: Groups spend the day answering the questions: is the wetland healthy, and how can we tell? Students collect water and samples from the pond to bring back to the lab for testing. We perform pH and DO water quality tests to start shaping our view of wetland health. The lab session wraps up with Benthic Macroinvertebrate collecting and reporting to see what the smallest pond creatures can tell us about the health of the wetland. If there is enough time, students can use the video microscope to learn more about each Aquatic Macro up close.
Hike: Depending on the group’s interest, students can enjoy a mile walk through the wetland doing a range of different activities to learn how real Wetland Ecologists conduct wetland delineations in the field. Students practice using a dichotomous key to learn how to identify plants, and which plants are indicative of wetland ecosystems. They use soil corers to understand more about the soils in wetlands and what makes the
soils unique. Students also learn to read the landscape and gather clues about the hydrology of the place in order to understand the full picture of the ecosystem. At the end, students play a migrating bird game and can discuss the effects of human-caused climate change on their migrating patterns.

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

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

Time: 4-5 hour option, including a 30 min lunch

Cost: $235-$248 for up to 16 students, $408-$429 for 17-32 students. See website for other pricing.

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!

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Mount Rainier Institute: FieldSCOPES Day Programs

After months of on-line distance education, the need for hands-on, experiential learning is greater than ever. Mount Rainier Institute (MRI) is now offering FieldSCOPES, a series of day-long field experiences and outreach programs. Our goal is to continue to partner with schools to provide experiences that enhance curriculum, enrich science, and build community. We will work directly with schools to accommodate needs and provide safe and innovative solutions to school re-opening plans. FieldSCOPES programs are designed to provide students with a hands-on education experience in a safe outdoor classroom. FieldSCOPES has options for every grade level. FieldSCOPES also includes Outreach programs where Mount Rainier Institute instructors come to your school.

Contact: John Hayes, Mount Rainier Institute Director, at jhayes90@uw.edu or 253-692-4161.

Cost: Costs range from $20 per person. Mount Rainier Institute, the National Park Service and our partners are committed to providing scholarships to ensure students from all backgrounds have the opportunity to participate.

Link: http://www.rainierinstitute.org/day-programs.html

*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 Kenedburg at becca.kenedburg@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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*Mountains to Sound Greenway Trust: Forests 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](http://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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*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: olympicreservations@naturebridge.org or 206-382-6212

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

Time: 3-5 days
Cost: Price range for programs can be found here: https://naturebridge.org/programs/olympic-school-environmental-science#rates-and-availability

Rates vary based on time of year. For the standard season (March-August) 3 days/2 nights starts at $298 per student. For off-peak season (February-March) 3 days/2 nights starts at $267 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 homestyle all-you-can-eat buffet meals.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Stream and Wetland Connections
These are 2-part programs. Stream Connections: a Nature Vision educator will lead an in-class discussion and field trip at your local stream while facilitating a variety of activities related to salmon and the effects of stormwater. Wetland Connections: a Nature Vision educator will lead an in-class discussion and field trip 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 the watershed in which the stream or wetland 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: 1-2 hours
Cost: $220 per 2 part program. May also register for one part for $110.
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:** 5.5 hours
**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:** Fall season runs from Labor Day to mid-November. Spring season takes place from mid-March to mid-June.

*Program fieldtrips currently on hold. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*Salish Sea Expeditions: SOUND Program*

Salish Sea Expeditions invites students to become scientists and mariners, facilitating student-led research and applied Science Technology Engineering and Math (STEM) skill development that focuses on the health of Puget Sound and its connected waterways aboard the 61' research sailing vessel, Carlyn. 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/
**Time:** 1-2 days
**Cost:** $440/hour for 5+ hour sail; $4800 for two-day overnight, including food and equipment (scholarships may be available)
**Transportation:** Please contact.

**Note:** 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, but willing to explore alternative arrangements for larger groups. Salish Sea Expeditions also offers customized classroom-based watershed lessons.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Sea Otter Conservation Research
Did you know that the Seattle Aquarium conducts research on wild sea otter populations on the outer coast of Washington state? Join an Aquarium instructor in the classroom to find out how Dr. Shawn Larson, our curator of conservation research, plans and conducts fieldwork investigating the foraging success of sea otter populations. The story of Shawn’s research is embedded in discussions, video clips of Shawn, and data collected by the students who will act as Shawn’s research assistants. Students will participate in hands-on activities, touch live invertebrates from Puget Sound, and have rich discussion about what story their data tells and how it can be used in sea otter conservation efforts (Max class size 32)

**Link:** [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

**Time:** 60 minutes

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

**Transportation:** Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Oysters and Ocean Chemistry Research
Ocean chemistry is rapidly changing as excess carbon dioxide from burning fossil fuels is absorbed into the water. Students will discover how this affects larval oysters and oyster farmers in Puget Sound, and how Dr. Simone Alin, oceanographer at NOAA, helps the farmers monitor ocean chemistry to maintain healthy hatchery conditions. Video clips integrated throughout the class allow students to hear Simone’s story directly from the source. Students will conduct two different pH tests to understand the relationship between CO2 and pH in the ocean; analyze graphs of real data from local ocean moorings to identify patterns in ocean chemistry; discuss solutions to the oyster farmers’ challenges; and get hands-on with live oysters (Max class size 32)

**Link:** [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

**Time:** 60 minutes

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

**Transportation:** Please contact.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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](https://www.seattle.gov/parks/find/centers/camp-long/camps)

*Transportation:* Please contact.

*Not offering Nature Camps for the 2021 season, planning to reopen in 2022. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*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. They 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. 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 *Adventures* 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.

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Secondary Education Resource Guide
Created April 2017 – Updated November 2021  24
Contact: Amy Kovacs at amy@soundexp.org or 360-379-0438 ext. 2
Link: https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

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; inquire about scholarship opportunities that may be available
Transportation: Please contact.

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

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*Sound Experience: Sound Experience Program

The goal of a Sound Experience 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 lives. 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 and 360-379-0439
Link: https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

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.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Sound Salmon Solutions: Macroinvertebrates
Students identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 45-120 minutes
Cost: Varies depending on funding, contact for more information
Note: Can be done as an in-class lab

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
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 45-60 minutes
Cost: Varies, possibly free depending on funding, contact for more information

Sound Salmon Solutions: The 5 C's of Salmon Habitat (Field Trip Add-On)
Students learn about the critical habitat components necessary for salmon survival! This lesson can be added on to any field trip.
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 30 minutes
Cost: Varies, possibly free depending on funding, contact for more information

Waskowitz Outdoor Education Center: 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 meredith.vontrapp@highlineschools.org or 425-277-7195
Link: https://www.highlineschools.org/academic-programs/waskowitz-outdoor-education/outdoor-school
Cost: $175 for 4 days per student, $195 for 5 days per students
Transportation: Please contact. Geographic Information System (GIS) Custom Map Products

Note: If your 6th grade students go to outdoor camp, please see the 5th grade section of the Elementary Education Guide

Projects

City of Burien: StormFest Toolkit
Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the StormFest Toolkit and curricula is to develop and promote an understanding of the serious issues facing our community from stormwater runoff through a hands-on experience. The curricula meets Next Generation Science Standards (NGSS) and Common Core science standards and was developed to serve a highly diverse school district, intentionally designed as an equitable education opportunity for all students regardless of race, ethnicity, or English language learning status. The toolkit details how districts or teachers can adapt and host StormFest to serve your own community. Curriculum can be modified for grades 4th through 8th, and education materials are provided in both English and Spanish.

Link: https://www.pugetsoundstartshere.org/Resources.aspx

Contact: Paige Morris at Paigem@burienwa.gov or 206-248-5511

Time: Variable

Cost: No Cost

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: Blue Teams now have a virtual option. Nature Vision also offers in-class and virtual lessons and field trips.

Nature Vision: Community Science

Community science is a process by which members of the public can participate in important scientific research. Under the guidance of a Nature Vision educator, students will work as scientists and help record data on the health of their local waterways. Students start their programs with a brief introduction to community science and the scientific method, before learning and practicing how to collect valuable data on water quality. Using these new skills, they can then investigate a local body of water and analyze real-world data in order to help local scientists monitor the health of their watershed.

These programs can be arranged either as a stand-alone series of classes, or as a part of a longer Blue Team module. We encourage teachers to schedule the programs at regular intervals each year in order to collect a body of data that can be referenced by each new class. Every year students may add their findings to the classes that came before, providing an even better sense of the health of their local waterways over time.

Link: https://naturevision.org/community-science

Contact: info@naturevision.org

Time: Variable

Cost: Free for most schools. Inquire about free programs with info@naturevision.org

Transportation: Must provide own transportation.

Note: Community Science now has a virtual option.

Sound Salmon Solutions: Tree Planting

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

Contact: http://www.soundsalmonsolutions.org/contact-us

Link: http://www.soundsalmonsolutions.org/education-lessons

Time: 60-90 minutes

Cost: Varies, possibly free depending on funding, contact for more information
Remote Learning

These are remote learning options for classrooms or home learning.

King County DNRP: Water Education – Wastewater and Stormwater Connected (grades 6-8)

Students will learn all about wastewater and stormwater and how these two water systems are connected. They will explore how humans are an integral part of the water cycle - where our water comes from, how we use it, and where it ends up after we are finished. Guided by an educator, students will work together to brainstorm and share creative engineering solutions to combined sewer system problems while also conducting simple, hands-on experiments at home.

Lesson 1 - Introduction to Water and Watersheds (Live synchronous)
Lesson 2 - What is Wastewater and How are You Connected to It? (Live synchronous)
Lesson 3 - What is Stormwater and How Does it Affect Humans and Ecosystems? (Live synchronous)
Lesson 4 - Engineering Solutions and How You Can Protect our Water Systems! (Live synchronous)

Contact: Katelyn.Leeuw@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Cost: No cost

King County: Virtual EcoConnections Workshops

The FREE virtual EcoConnections workshops described below can be adapted for different grade levels and class period lengths. Delivered through a variety of online platforms and featuring a live presenter, the EcoConnections workshops are designed to be interactive, engaging and offer a unique way to support remote learning. Supporting materials include integrated worksheets and an interactive follow up quiz. Topics include: Biodiversity in our World, Biospheres, Earth Impacts, and Four Rs for Our Climate.

Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: Presented “live” via Zoom and Microsoft Teams.
Burke Museum Virtual Education Programs: Virtual Field Trips
    Web-based, virtual tours of the museum. Designed to support classroom curriculum, our Virtual Field Trips are interactive, self-paced experiences. All you need is an internet connection and web browser to get started.
    Link: https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs
    Time: 30 minutes
    Cost: $40; cost assistance is available for qualifying schools, organizations, and groups.

Burke Museum Virtual Education Programs: Burke LIVE
    Have a Burke educator join your class live from our learning studio.
    Each program includes an interactive discussion or activity related to the topic, a closer look at real Burke collections and a chance for Q&A! You’ll also receive pre- and post-program materials to help prepare your students for the live experience and extend their learning afterwards.
    Link: https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs
    Time: 45 minutes
    Cost: $90, Cost assistance is available for qualifying schools, organizations, and groups.

Friends of the Issaquah Salmon Hatchery (FISH): Forest & Fins Online Learning
    This online video series covers a variety of topics from elements of healthy salmon streams to the relationship between salmon and the forest ecosystem. Videos are broken into 8 lessons, some with downloadable worksheets as well.
    Contact: education@issaquahfish.org or 425-393-1118
    Link: https://www.issaquahfish.org/educational-video-series/
    Time: Varies
    Cost: No cost
    Note: FISH also offers field trips. https://www.issaquahfish.org/teachers-school-programs/#presentation-form

Nature Vision: Student Packets
    Nature Vision has developed seven science packets for K-12 students: Ecological Impacts, Water Quality, Human Systems, Invasive Plants, Ecosystems, Watersheds, and Humans and Water. Each free downloadable packet includes the following:
    Contact: info@naturevision.org
    Link: https://naturevision.org/student-packets
    Cost: No cost
Nature Vision: Remote Learning and Video Call Programs

Nature Vision has adapted many of our most popular in-class programs into two virtual formats for increased accessibility! We now offer synchronous full-length video call programs and asynchronous remote curriculum program options for teachers, parents, and caregivers to use during the upcoming school year. These programs are designed to accommodate both fully remote and hybrid teaching options for each school district Nature Vision serves. The programs are flexible to best fit teachers’ schedules, student needs, and current WA State K-12 Learning Standards with Science Technology Engineering and Math (STEM) education as a central focus. Each full-length video call program is 45-60 minutes live with one of our educators. Each remote learning program includes videos of our engaging Nature Vision Educators, detailed instructions for teachers/parents/caregivers to lead interactive activities, and a live Q&A session with an educator.

Link: [https://naturevision.org/remote-learning-programs](https://naturevision.org/remote-learning-programs)

**Time:** Roughly 1 hour between videos, activities, and Q&A sessions

**Cost:** Free for most schools. Otherwise $85-$90

**Note:** Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers classroom programs, field trips, and projects.

Pacific Marine Research: Marine Science Remote

Book our series of 3 one hour live sessions and join our naturalists as they guide you through Plankton Lab, our Live Dive and an Invertebrate Food Chains Lesson or a more advanced Invertebrate Taxonomy with live critters. Meet our divers and ask them questions in real time as they take you underwater during the Live Dive. We will also include Water Quality Data collected on the day of this live portion. The live stream will allow for students to ask questions and interact with naturalists and scuba divers in real-time.

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

**Link:** [https://www.pacificmarineresearch.org/pages/marine-science-remote](https://www.pacificmarineresearch.org/pages/marine-science-remote)

**Time:** Three 1 hour sessions

**Cost:** $250, scholarships available

Seattle Aquarium: Digital Learning Opportunities

All of our programs focus on the marine ecosystems of the Pacific Northwest. Our educators will guide you and up to 32 of your students over video conferencing software through lessons that support Next Generation Science Standards while giving your students agency to influence the class based on their prior knowledge and interests. Each of our classes has a grade level range, and within that range our skilled educators...
will tailor the class for your specific grade level. Many classes also include special live animal interactions with the tide pool creatures in our care.

Link: https://www.seattleaquarium.org/distance-learning

**Time:** 45 minutes

**Cost:** $150, Scholarships available for those eligible.

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**Classroom Visitors**

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

*King County DNRP: Water Education (grades 6-8)*

These programs are 60-90-minute long programs led by educators at your school. The lessons are Next Generation Science Standards (NGSS) aligned and focus on our local wastewater system.

Stormwater Solutions Program: What happens to all that water when it rains? Can this water cause problems for our environment? How can we solve these problems? Students will investigate how stormwater moves, identify stormwater problems, and collaborate with their peers to think about solutions.

Wastewater Engineers Program: How do we impact the water in our communities? What are we doing to clean it up? What actions can we take to keep our water clean? Students will explore the impacts that humans have on our water system and will learn how the choices they make on a daily basis impact our water system.

**Contact:** Katelyn.Leeuw@kingcounty.gov

**Link:** https://kingcounty.gov/services/environment/wastewater/education/school.aspx

**Cost:** No cost

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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**King County: EcoConnections Classroom Workshops**

The FREE in-person EcoConnections workshops described below can be adapted for different grade levels and class period lengths. They include engaging instruction and hands-on activities, as well as discussion of both environmental issues and human considerations such as equity and social justice. EcoConnections workshops are designed to be interactive, dynamic and engaging and offer a unique way to support in-class learning. Topics include: life science and ecosystems, earth systems and human activity, and environmental action.
Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: New virtual workshop offerings, presented “live” via Zoom and Microsoft Teams. All in person workshop activities are modified to reduce contact with materials, and new cleaning protocols have been instituted, to sanitize between school visits.

City of Duvall: Surface Water Management Classroom Visitor
Larissa Polanco, Assistant City Engineer. Discussion adapted to what you are teaching in the classroom.
Contact: Larissa Polanco at larissa.polanco@duvallwa.gov and 425-788-3434 ext. 8040
Link: http://www.duvallwa.gov/305/sewer-water-stormwater
Time: Variable
Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor
The Surface Water Program Manager can speak to your class about surface water management, with an emphasis on what you are currently talking about in the classroom.
Contact: Audrie Starsy at audries@newcastlewa.gov or 425-649-4444 ext. 111
Link: http://newcastlewa.gov/departments/public_works/surface_water_management/
Time: Variable
Cost: No Cost

EarthGen: Stormwater Stewards
EarthGen provides tailored classroom resource support for schools around watersheds, stormwater problems and stormwater solutions. Students engage in a co-design process with a landscape designer to develop and install green stormwater infrastructure on their campus. Additionally, students learn from various professionals in their region who engage with stormwater management. Stormwater Stewards is a program for middle and high school students to learn about watersheds and how to reduce the impact of stormwater. Students investigate their local watersheds, and then design and implement green stormwater infrastructure projects to improve water quality in their community. EarthGen facilitates connections to stormwater professionals who introduce students to pathways into environmental careers.
Link: https://earthgenwa.org/
Eastside Audubon: Classroom Workshops
These workshops teach K-12 students what makes a bird a bird and how to identify common birds seen in our area. Each workshop is on a different topic and has specific activities included. Workshop topics include: Introduction to Birds, Bird Identification, Using Binoculars, Bird Beaks and Food, and more!
Contact: youthprograms@eastsideaudubon.org
Link: https://www.eastsideaudubon.org/youth-education
Time: Depends on workshop topic
Cost: No cost
Note: Can be adapted by the volunteer to address stormwater runoff effects specifically.
Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

*Environmental Science Center: Salmon Heroes
The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@environmentalsciencecenter.org or 206-248-4266
Link: https://envsciencecenter.org/salmon-heroes/
Time: 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)
Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per
class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

**Transportation:** Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

**Note:** Offered September-December. In-person and virtual program offerings available in 2021.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

**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.

**Contact:** education@issaquahfish.org or 425-393-1118

**Link:** [https://www.issaquahfish.org/](https://www.issaquahfish.org/)

**Time:** 60 minutes

**Cost:** $50 per class requested

**Note:** Offered November-June. FISH also offers field trips.

*The Jellyfish Project: School Presentations*

The Jellyfish Project provides students with a unique experience to learn about ocean health and the climate crisis, motivating them to become active environmental stewards. What makes our presentation unique is that the presenters are musicians and their vibrant, live music performance is used as a means to engage the attention of the students and set the stage for the captivating slideshow that follows.

Our intention is to deliver a message of hope to help mitigate the fear and helplessness students may be feeling by empowering them with the knowledge that they, as youth, can become instruments of change and that every individual action, no matter how big or small, is impactful.

The Jellyfish Project presentation is geared towards middle and high school students grades 6-12. The performance time depends on the amount of block time we are allotted by each school as well as the age range of the audience. Generally, the presentations are 45-60 minutes which includes the musical performance, slide presentation by the musicians, and a 5-10 minute Q&A.

**Link:** [https://www.thejellyfishproject.org/](https://www.thejellyfishproject.org/)

**Contact:** info@thejellyfishproject.org

**Cost:** No cost

**Note:** As of April 2021, the Jellyfish Project will be offering a live-streamed presentation to students; and as of September 2021, hopes to resume live, in-school presentations to
reduced-size audiences where COVID safety and physical distancing guidelines can be effectively met.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Watershed Programs
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: 45-60 minutes
Cost: Free for most schools. Otherwise $110 per in-person lesson, $85-90 for remote
Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects. Nature Vision can also provide classroom programs virtually over video call at 45-60 minutes.

Salish Sea Expeditions: SOURCE Program
Salish Sea Expeditions invites students to become scientists, facilitating student-led research and applied Science Technology Engineering and Math (STEM) 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 or 206-780-7848
Link: https://www.salish.org/programs/source/
Time: 10 hours total (multiple classes)
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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.
Sound Salmon Solutions: Macroinvertebrates (Lab option)
Students identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 45-120 minutes
Cost: Varies depending on funding, contact for more information
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.
Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 120 minutes
Cost: Varies, possibly free depending on funding, contact for more information
Note: Can be done as a field trip

Vashon Nature Center: Nature Presentations
Trained scientists and naturalists offer in-class and outdoor programs designed to foster student awareness and understanding of environmental science topics relevant to their community and tied to global issues. Programs are tailored to suit teachers' classroom teaching goals and align with Next Generation Science Standards.
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: Areas of focus address the natural history of the Salish Sea and Pacific Northwest. Examples include: watershed education, stormwater management, phenology, freshwater macroinvertebrates, salmon, amphibians, intertidal studies, forage fish, shoreline restoration, biodiversity studies, and methods in field research.

Field Trips

*King County DNRP: Water Education: Field Trips and Treatment Plant tours
King County provides water educational field trips for students in grades 6-8 located at both Brightwater and South Treatment Plant. Field trips last 2-4 hours, and are free of charge. Teachers can choose from programs that focus on stormwater or wastewater.
Contact: Katelyn.Leeuw@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Time: 2-4 hours
Cost: No Cost
Transportation: Qualifying schools can access free bus transportation through the Wheels to Water transportation program
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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: Laura West at lwest@kingcounty.gov or 206-477-7574
Link: www.govlink.org/watersheds/8/action/salmon-seeson/default.aspx
Time: 15-60 minutes
Cost: No Cost
Transportation: Qualifying schools can 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 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 their mission, core values, and programs. We believe in the power of nature to awaken a child’s senses, curiosity, and desire to learn. With a 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. Camp Sealth serves grades K-12 for our Outdoor Education, Retreats, and Day Programs and can create customizable schedules that meet current educational standards by grade level.
Contact: Josh Cunningham at joshc@campfireseattle.org
Link: https://campfireseattle.org/outdoor-education/
Time: Program offered September-June. Typical program is 3 days, 2 nights. Can do both 1 night and week-long programs as well.

Cost: $56 per student per night, $48 per adult per night

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

Note: In addition to the Outdoor Education program, Camp Sealth and Camp Fire Central Puget Sound offers rentals of our site for other non-profit groups, over ten community based day camps in various locations in King County during the summer months, summer resident camp at our Camp Sealth site, and community based group programing at various locations in King County. For more information about these programs please contact Michael McGrath at the Seattle office at michaelm@campfireseattle.org.

*Environmental Science Center: Salmon Heroes
The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@environmentalsciencecenter.org or 206-248-4266

Link: https://envsciencecenter.org/salmon-heroes/

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

Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

Transportation: Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

Note: Offered September-December. In-person and virtual program offerings available in 2021.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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: education@issaquahfish.org or 425-392-1118
Link: https://www.issaquahfish.org/
Time: Tours last 45 minutes to one hour and are available primarily mid-September through early November
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.
*Hatchery grounds are currently closed to the public. Guided tours are permitted with a reservation. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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 and undisturbed nature. 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 the 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: 253-856-5000 or Covington Parks and Recreation: 253-480-2480
Link: https://www.facebook.com/FriendsOfSoosCreekPark/
Time: Variable
Transportation: Please contact for details
Note: All of the walks take place outdoors, so be sure to dress for the weather
*Mercer Slough Environmental Education Center: Environmental Engineers
Lab: Students learn about the engineering design process before being presented with their biggest environmental engineering challenge of the day. Students then need to do research on past designs and test their own designs in our stream tables to engineer the best city-plan along the edge of a river. Along the way, your students might encounter unforeseen events and angry stakeholders that could make them reconsider their design before submitting their final model for approval.
Hike: Students learn more about Green Stormwater Infrastructure by exploring our LEED Gold Facilities onsite. In the nature park, they get hands-on experience with wetland delineation to decide if a proposed site is good for building on. With their new background knowledge, students then practice building their own Environmental Education Center out of natural materials along the trail. If there is enough time, students can run around and play an engineering game of tag.
Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207
Link: https://www.pacificsciencecenter.org/mercer-slough/teachers-school-groups/
Time: 4 hours, including a 30 min lunch
Cost: $210 for up to 16 students, $385 for 17-32 students. See website for other pricing.
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!
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Mercer Slough Environmental Education Center: Wetland Ecologists
Lab: Groups spend the day answering the questions: is the wetland healthy, and how can we tell? Students collect water and samples from the pond to bring back to the lab for testing. We perform pH and DO water quality tests to start shaping our view of wetland health. The lab session wraps up with Benthic Macroinvertebrate collecting and reporting to see what the smallest pond creatures can tell us about the health of the wetland. If there is enough time, students can use the video microscope to learn more about each Aquatic Macro up close.
Hike: Depending on the group’s interest, students can enjoy a mile walk through the wetland doing a range of different activities to learn how real Wetland Ecologists conduct wetland delineations in the field. Students practice using a dichotomous key to learn how to identify plants, and which plants are indicative of wetland ecosystems. They use soil corers to understand more about the soils in wetlands and what makes the soils unique. Students also learn to read the landscape and gather clues about the hydrology of the place in order to understand the full picture of the ecosystem. At the end, students play a migrating bird game and can discuss the effects of human-caused climate change on their migrating patterns.
Mount Rainier Institute: FieldSCOPES Day Programs

After months of on-line distance education, the need for hands-on, experiential learning is greater than ever. Mount Rainier Institute (MRI) is now offering FieldSCOPES, a series of day-long field experiences and outreach programs. Our goal is to continue to partner with schools to provide experiences that enhance curriculum, enrich science, and build community. We will work directly with schools to accommodate needs and provide safe and innovative solutions to school re-opening plans. FieldSCOPES programs are designed to provide students with a hands-on education experience in a safe outdoor classroom. FieldSCOPES has options for every grade level. FieldSCOPES also includes Outreach programs where Mount Rainier Institute instructors come to your school.

Contact: John Hayes, Mount Rainier Institute Director, at jhayes90@uw.edu or 253-692-4161.

Cost: Costs range from $20 per person. Mount Rainier Institute, the National Park Service and our partners are committed to providing scholarships to ensure students from all backgrounds have the opportunity to participate.

Link: http://www.rainierinstitute.org/day-programs.html

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 or 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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Mountains to Sound Greenway Trust: Forests 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: olympicreservations@naturebridge.org or 206-382-6212

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

Time: 3-5 days

Cost: Price range for programs can be found here: https://naturebridge.org/programs/olympic-school-environmental-science#rates-and-availability

Rates vary based on time of year. For the standard season (March-August) 3 days/2 nights starts at $298 per student. For off-peak season (February-March) 3 days/2 nights starts at $267 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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Stream and Wetland Connections

These are 2-part programs. Stream Connections: a Nature Vision educator will lead an in-class discussion and field trip at your local stream while facilitating a variety of activities related to salmon and the effects of stormwater. Wetland Connections: a Nature Vision educator will lead an in-class discussion and field trip 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 the watershed in which the stream or wetland 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: 1-2 hours

Cost: $220 per 2 part program. May also register for one part for $110.

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: 5.5 hours

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: Fall season runs from Labor Day to mid-November. Spring season takes place from mid-March to mid-June.

*Program fieldtrips currently on hold. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Salish Sea Expeditions: SOUND Program

Salish Sea Expeditions invites students to become scientists and mariners, facilitating student-led research and applied Science Technology Engineering and Math (STEM) skill development that focuses on the health of Puget Sound and its connected waterways aboard the 61' research sailing vessel, Carlyn. 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/

Time: 1-2 days

Cost: $440/hour for 5+ hour sail; $4800 for two-day overnight, including food and equipment (scholarships may be available)

Transportation: Please contact.

Note: 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, but willing to explore alternative arrangements for larger
groups. Salish Sea Expeditions also offers customized classroom-based watershed lessons.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Sea Otter Conservation Research*

Did you know that the Seattle Aquarium conducts research on wild sea otter populations on the outer coast of Washington state? Join an Aquarium instructor in the classroom to find out how Dr. Shawn Larson, our curator of conservation research, plans and conducts fieldwork investigating the foraging success of sea otter populations. The story of Shawn’s research is embedded in discussions, video clips of Shawn, and data collected by the students who will act as Shawn’s research assistants. Students will participate in hands-on activities, touch live invertebrates from Puget Sound, and have rich discussion about what story their data tells and how it can be used in sea otter conservation efforts (Max class size 32)

Link: [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

Time: 60 minutes

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

Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Oysters and Ocean Chemistry Research*

Ocean chemistry is rapidly changing as excess carbon dioxide from burning fossil fuels is absorbed into the water. Students will discover how this affects larval oysters and oyster farmers in Puget Sound, and how Dr. Simone Alin, oceanographer at NOAA, helps the farmers monitor ocean chemistry to maintain healthy hatchery conditions. Video clips integrated throughout the class allow students to hear Simone’s story directly from the source. Students will conduct two different pH tests to understand the relationship between CO2 and pH in the ocean; analyze graphs of real data from local ocean moorings to identify patterns in ocean chemistry; discuss solutions to the oyster farmers’ challenges; and get hands-on with live oysters (Max class size 32)

Link: [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

Time: 60 minutes

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

Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.
*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](https://www.seattle.gov/parks/find/centers/camp-long/camps)
Transportation: Please contact.

*Not offering Nature Camps for the 2021 season, planning to reopen in 2022. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*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. They 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. 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 ext. 2
Link: [https://www.soundexp.org/sail-with-us/schoolsyouth-groups/](https://www.soundexp.org/sail-with-us/schoolsyouth-groups/)
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; inquire about scholarship opportunities that may be available
Transportation: Please contact.
Note: The Adventuress sails out of many ports, including: Everett, Olympia, Seattle, and Tacoma.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Sound Experience: Sound Experience Program*

The goal of a Sound Experience 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 lives. 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 and 360-379-0439

Link: https://www.soundexp.org/sail-with-us/schools/youth-groups/

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.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.
Sound Salmon Solutions: Macroinvertebrates

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

Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

Time: 45-120 minutes

Cost: Varies depending on funding, contact for more information

Note: Can be done as an in-class lab

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.

Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

Time: 45-60 minutes

Cost: Varies, possibly free depending on funding, contact for more information

Sound Salmon Solutions: The 5 C’s of Salmon Habitat (Field Trip Add-On)

Students learn about the critical habitat components necessary for salmon survival! This lesson can be added on to any field trip.

Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

Time: 30 minutes

Cost: Varies, possibly free depending on funding, contact for more information

Projects

City of Burien: StormFest Toolkit

Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the StormFest Toolkit and curricula is to develop and promote an understanding of the serious issues facing our community from stormwater runoff through a hands-on experience. The curricula meets Next Generation Science Standards (NGSS) and Common Core science standards and was developed to serve a highly diverse school district, intentionally designed as an equitable education opportunity for all students regardless of race, ethnicity, or English language learning status. The toolkit details how districts or teachers can adapt and host StormFest to serve your own community. Curriculum can be modified for grades 4th through 8th, and education materials are provided in both English and Spanish.
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.

Nature Vision: Community Science
Community science is a process by which members of the public can participate in important scientific research. Under the guidance of a Nature Vision educator, students will work as scientists and help record data on the health of their local waterways. Students start their programs with a brief introduction to community science and the scientific method, before learning and practicing how to collect valuable data on water quality. Using these new skills, they can then investigate a local body of water and analyze real-world data in order to help local scientists monitor the health of their watershed.
These programs can be arranged either as a stand-alone series of classes, or as a part of a longer Blue Team module. We encourage teachers to schedule the programs at regular intervals each year in order to collect a body of data that can be referenced by each new class. Every year students may add their findings to the classes that came before them, providing an even better sense of the health of their local waterways over time.

Link: [https://naturevision.org/community-science](https://naturevision.org/community-science)
Contact: info@naturevision.org
Time: Variable
Cost: Free for most schools. Inquire about free programs with info@naturevision.org
Transportation: Must provide own transportation.
Note: Community Science now has a virtual option.

Sound Salmon Solutions: Tree Planting

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

Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)
Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)
Time: 60-90 minutes
Cost: Varies, possibly free depending on funding, contact for more information
8th Grade

Remote Learning

These are remote learning options for classrooms or home learning.

King County DNRP: Water Education – Wastewater and Stormwater Connected (grades 6-8)
Students will learn all about wastewater and stormwater and how these two water systems are connected. They will explore how humans are an integral part of the water cycle - where our water comes from, how we use it, and where it ends up after we are finished. Guided by an educator, students will work together to brainstorm and share creative engineering solutions to combined sewer system problems while also conducting simple, hands-on experiments at home.
Lesson 1 - Introduction to Water and Watersheds (Live synchronous)
Lesson 2 - What is Wastewater and How are You Connected to It? (Live synchronous)
Lesson 3 - What is Stormwater and How Does it Affect Humans and Ecosystems? (Live synchronous)
Lesson 4 - Engineering Solutions and How You Can Protect our Water Systems! (Live synchronous)
Contact: Katelyn.Leeuw@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Cost: No cost

King County: Virtual EcoConnections Workshops
The FREE virtual EcoConnections workshops described below can be adapted for different grade levels and class period lengths. Delivered through a variety of online platforms and featuring a live presenter, the EcoConnections workshops are designed to be interactive, engaging and offer a unique way to support remote learning. Supporting materials include integrated worksheets and an interactive follow up quiz. Topics include: Biodiversity in our World, Biospheres, Earth Impacts, and Four Rs for Our Climate.
Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: Presented “live” via Zoom and Microsoft Teams.
Burke Museum Virtual Education Programs: Virtual Field Trips
Web-based, virtual tours of the museum. Designed to support classroom curriculum, our Virtual Field Trips are interactive, self-paced experiences. All you need is an internet connection and web browser to get started.
Link: https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs
Time: 30 minutes
Cost: $40; cost assistance is available for qualifying schools, organizations, and groups.

Burke Museum Virtual Education Programs: Burke LIVE
Have a Burke educator join your class live from our learning studio.
Each program includes an interactive discussion or activity related to the topic, a closer look at real Burke collections and a chance for Q&A! You’ll also receive pre- and post-program materials to help prepare your students for the live experience and extend their learning afterwards.
Link: https://www.burkemuseum.org/education/educators-and-schools/virtual-education-programs
Time: 45 minutes
Cost: $90, Cost assistance is available for qualifying schools, organizations, and groups.

Friends of the Issaquah Salmon Hatchery (FISH): Forest & Fins Online Learning
This online video series covers a variety of topics from elements of healthy salmon streams to the relationship between salmon and the forest ecosystem. Videos are broken into 8 lessons, some with downloadable worksheets as well.
Contact: education@issaquahfish.org or 425-393-1118
Link: https://www.issaquahfish.org/educational-video-series/
Time: Varies
Cost: No cost
Note: FISH also offers field trips. https://www.issaquahfish.org/teachers-school-programs/#presentation-form

Nature Vision: Student Packets
Nature Vision has developed seven science packets for K-12 students: Ecological Impacts, Water Quality, Human Systems, Invasive Plants, Ecosystems, Watersheds, and Humans and Water. Each free downloadable packet includes the following:
Contact: info@naturevision.org
Link: https://naturevision.org/student-packets
Cost: No cost
Nature Vision: Remote Learning and Video Call Programs

Nature Vision has adapted many of our most popular in-class programs into two virtual formats for increased accessibility! We now offer synchronous full-length video call programs and asynchronous remote curriculum program options for teachers, parents, and caregivers to use during the upcoming school year. These programs are designed to accommodate both fully remote and hybrid teaching options for each school district Nature Vision serves. The programs are flexible to best fit teachers’ schedules, student needs, and current WA State K-12 Learning Standards with Science Technology Engineering and Math (STEM) education as a central focus. Each full-length video call program is 45-60 minutes live with one of our educators. Each remote learning program includes videos of our engaging Nature Vision Educators, detailed instructions for teachers/parents/caregivers to lead interactive activities, and a live Q&A session with an educator.

Link: https://naturevision.org/remote-learning-programs

Time: Roughly 1 hour between videos, activities, and Q&A sessions
Cost: Free for most schools. Otherwise $85-$90

Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers classroom programs, field trips, and projects.

Pacific Marine Research: Marine Science Remote

Book our series of 3 one hour live sessions and join our naturalists as they guide you through Plankton Lab, our Live Dive and an Invertebrate Food Chains Lesson or a more advanced Invertebrate Taxonomy with live critters. Meet our divers and ask them questions in real time as they take you underwater during the Live Dive. We will also include Water Quality Data collected on the day of this live portion. The live stream will allow for students to ask questions and interact with naturalists and scuba divers in real-time.

Contact: fieldtrips@marinescienceafloat.org or 206-361-1919
Link: https://www.pacificmarineresearch.org/pages/marine-science-remote

Time: Three 1 hour sessions
Cost: $250, scholarships available

Seattle Aquarium: Digital Learning Opportunities

All of our programs focus on the marine ecosystems of the Pacific Northwest. Our educators will guide you and up to 32 of your students over video conferencing software through lessons that support Next Generation Science Standards while giving your students agency to influence the class based on their prior knowledge and interests. Each of our classes has a grade level range, and within that range our skilled educators
will tailor the class for your specific grade level. Many classes also include special live animal interactions with the tide pool creatures in our care.

**Link:** [https://www.seattleaquarium.org/distance-learning](https://www.seattleaquarium.org/distance-learning)

**Time:** 45 minutes  
**Cost:** $150, Scholarships available for those eligible.

### Classroom Visitors

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

*King County DNRP: Water Education (grades 6-8)*

These programs are 60-90-minute long programs led by educators at your school. The lessons are Next Generation Science Standards (NGSS) aligned and focus on our local wastewater system.

- **Stormwater Solutions Program:** What happens to all that water when it rains? Can this water cause problems for our environment? How can we solve these problems? Students will investigate how stormwater moves, identify stormwater problems, and collaborate with their peers to think about solutions.

- **Wastewater Engineers Program:** How do we impact the water in our communities? What are we doing to clean it up? What actions can we take to keep our water clean? Students will explore the impacts that humans have on our water system and will learn how the choices they make on a daily basis impact our water system.

**Contact:** Katelyn.Leeuw@kingcounty.gov  
**Link:** [https://kingcounty.gov/services/environment/wastewater/education/school.aspx](https://kingcounty.gov/services/environment/wastewater/education/school.aspx)

**Cost:** No cost  

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

**King County: EcoConnections Classroom Workshops**

The FREE in-person EcoConnections workshops described below can be adapted for different grade levels and class period lengths. They include engaging instruction and hands-on activities, as well as discussion of both environmental issues and human considerations such as equity and social justice. EcoConnections workshops are designed to be interactive, dynamic and engaging and offer a unique way to support in-class learning. Topics include: life science and ecosystems, earth systems and human activity, and environmental action.
Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: New virtual workshop offerings, presented “live” via Zoom and Microsoft Teams. All in person workshop activities are modified to reduce contact with materials, and new cleaning protocols have been instituted, to sanitize between school visits.

City of Duvall: Surface Water Management Classroom Visitor
Larissa Polanco, Assistant City Engineer. Discussion adapted to what you are teaching in the classroom.
Contact: Larissa Polanco at larissa.polanco@duvallwa.gov and 425-788-3434 ext. 8040
Link: http://www.duvallwa.gov/305/sewer-water-stormwater
Time: Variable
Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor
The Surface Water Program Manager can speak to your class about surface water management, with an emphasis on what you are currently talking about in the classroom.
Contact: Audrie Starsy at audries@newcastlewa.gov or 425-649-4444 ext. 111
Link: http://newcastlewa.gov/departments/public_works/surface_water_management/
Time: Variable
Cost: No Cost

EarthGen: Stormwater Stewards
EarthGen provides tailored classroom resource support for schools around watersheds, stormwater problems and stormwater solutions. Students engage in a co-design process with a landscape designer to develop and install green stormwater infrastructure on their campus. Additionally, students learn from various professionals in their region who engage with stormwater management. Stormwater Stewards is a program for middle and high school students to learn about watersheds and how to reduce the impact of stormwater. Students investigate their local watersheds, and then design and implement green stormwater infrastructure projects to improve water quality in their community. EarthGen facilitates connections to stormwater professionals who introduce students to pathways into environmental careers.
Link: https://earthgenwa.org/
Contact: Becky Bronstein at becky@earthgenwa.org
Cost: No cost
Transportation: EarthGen visits the school and corresponds via email/phone
Note: Contact Becky for more information on how to get involved with this program

Eastside Audubon: Classroom Workshops
These workshops teach K-12 students what makes a bird a bird and how to identify common birds seen in our area. Each workshop is on a different topic and has specific activities included. Workshop topics include: Introduction to Birds, Bird Identification, Using Binoculars, Bird Beaks and Food, and more!
Contact: youthprograms@eastsideaudubon.org
Link: https://www.eastsideaudubon.org/youth-education
Time: Depends on workshop topic
Cost: No cost
Note: Can be adapted by the volunteer to address stormwater runoff effects specifically.
Programs are offered in communities from Bellevue to Woodinville/Bothell and from East Lake Washington to North Bend.

*Environmental Science Center: Salmon Heroes
The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@environmentalsciencecenter.org or 206-248-4266
Link: https://envsciencecenter.org/salmon-heroes/
Time: 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)
Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per
class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

**Transportation:** Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

**Note:** Offered September-December. In-person and virtual program offerings available in 2021.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

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.

**Contact:** education@issaquahfish.org or 425-393-1118

**Link:** [https://www.issaquahfish.org/](https://www.issaquahfish.org/)

**Time:** 60 minutes

**Cost:** $50 per class requested

**Note:** Offered November-June. FISH also offers field trips.

*The Jellyfish Project: School Presentations*

The Jellyfish Project provides students with a unique experience to learn about ocean health and the climate crisis, motivating them to become active environmental stewards. What makes our presentation unique is that the presenters are musicians and their vibrant, live music performance is used as a means to engage the attention of the students and set the stage for the captivating slideshow that follows.

Our intention is to deliver a message of hope to help mitigate the fear and helplessness students may be feeling by empowering them with the knowledge that they, as youth, can become instruments of change and that every individual action, no matter how big or small, is impactful.

The Jellyfish Project presentation is geared towards middle and high school students grades 6-12. The performance time depends on the amount of block time we are allotted by each school as well as the age range of the audience. Generally, the presentations are 45-60 minutes which includes the musical performance, slide presentation by the musicians, and a 5-10 minute Q&A.

**Link:** [https://www.thejellyfishproject.org/](https://www.thejellyfishproject.org/)

**Contact:** info@thejellyfishproject.org

**Cost:** No cost

**Note:** As of April 2021, the Jellyfish Project will be offering a live-streamed presentation to students; and as of September 2021, hopes to resume live, in-school presentations to
reduced-size audiences where COVID safety and physical distancing guidelines can be effectively met.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Watershed Programs

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/](https://naturevision.org/school-programs/)

**Time:** 45-60 minutes

**Cost:** Free for most schools. Otherwise $110 per in-person lesson, $85-90 for remote

**Note:** Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects. Nature Vision can also provide classroom programs virtually over video call at 45-60 minutes.

*Salish Sea Expeditions: SOURCE Program

Salish Sea Expeditions invites students to become scientists, facilitating student-led research and applied Science Technology Engineering and Math (STEM) 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 or 206-780-7848

**Link:** [https://www.salish.org/programs/source/](https://www.salish.org/programs/source/)

**Time:** 10 hours total (multiple classes)

**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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*
Sound Salmon Solutions: Macroinvertebrates (Lab option)
Students identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.
Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)
Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)
Time: 45-120 minutes
Cost: Varies depending on funding, contact for more information
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.
Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)
Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)
Time: 120 minutes
Cost: Varies, possibly free depending on funding, contact for more information
Note: Can be done as a field trip

Vashon Nature Center: Nature Presentations
Trained scientists and naturalists offer in-class and outdoor programs designed to foster student awareness and understanding of environmental science topics relevant to their community and tied to global issues. Programs are tailored to suit teachers' classroom teaching goals and align with Next Generation Science Standards.
Contact: info@vashonnaturecenter.org or 206-755-5798
Time: 30-90 minutes
Cost: $50-$150
Note: Areas of focus address the natural history of the Salish Sea and Pacific Northwest. Examples include: watershed education, stormwater management, phenology, freshwater macroinvertebrates, salmon, amphibians, intertidal studies, forage fish, shoreline restoration, biodiversity studies, and methods in field research.

Field Trips

*King County DNRP: Water Education: Field Trips and Treatment Plant tours*
King County provides water educational field trips for students in grades 6-8 located at both Brightwater and South Treatment Plant. Field trips last 2-4 hours, and are free of charge. Teachers can choose from programs that focus on stormwater or wastewater.
Contact: Katelyn.Leeuw@kingcounty.gov
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: Laura West at lwest@kingcounty.gov or 206-477-7574


Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can 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 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 their mission, core values, and programs. We believe in the power of nature to awaken a child’s senses, curiosity, and desire to learn. With a 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. Camp Sealth serves grades K-12 for our Outdoor Education, Retreats, and Day Programs and can create customizable schedules that meet current educational standards by grade level.

Contact: Josh Cunningham at joshc@campfireseattle.org

Link: [https://campfireseattle.org/outdoor-education/](https://campfireseattle.org/outdoor-education/)
Time: Program offered September-June. Typical program is 3 days, 2 nights. Can do both 1 night and week-long programs as well.

Cost: $56 per student per night, $48 per adult per night

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

Note: In addition to the Outdoor Education program, Camp Sealth and Camp Fire Central Puget Sound offers rentals of our site for other non-profit groups, over ten community based day camps in various locations in King County during the summer months, summer resident camp at our Camp Sealth site, and community based group programing at various locations in King County. For more information about these programs please contact Michael McGrath at the Seattle office at michaelm@campfireseattle.org.

*Environmental Science Center: Salmon Heroes

The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@envirosciencecenter.org or 206-248-4266

Link: https://envsciencecenter.org/salmon-heroes/

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

Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

Transportation: Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

Note: Offered September-December. In-person and virtual program offerings available in 2021.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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: education@issaquahfish.org or 425-392-1118
Link: [https://www.issaquahfish.org/](https://www.issaquahfish.org/)
Time: Tours last 45 minutes to one hour and are available primarily mid-September though early November
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.

*Hatchery grounds are currently closed to the public. Guided tours are permitted with a reservation. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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 and undisturbed nature. 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 the 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: 253-856-5000 or Covington Parks and Recreation: 253-480-2480
Link: [https://www.facebook.com/FriendsOfSoosCreekPark/](https://www.facebook.com/FriendsOfSoosCreekPark/)
Time: Variable
Transportation: Please contact for details
Note: All of the walks take place outdoors, so be sure to dress for the weather

*Mercer Slough Environmental Education Center: Wetland Ecologists
Lab: Groups spend the day answering the questions: is the wetland healthy, and how can we tell? Students collect water and samples from the pond to bring back to the lab for testing. We perform pH and DO water quality tests to start shaping our view of wetland health. The lab session wraps up with Benthic Macroinvertebrate collecting and reporting to see what the smallest pond creatures can tell us about the health of the wetland. If there is enough time, students can use the video microscope to learn more about each Aquatic Macro up close.

Hike: Depending on the group’s interest, students can enjoy a mile walk through the wetland doing a range of different activities to learn how real Wetland Ecologists conduct wetland delineations in the field. Students practice using a dichotomous key to learn how to identify plants, and which plants are indicative of wetland ecosystems. They use soil corers to understand more about the soils in wetlands and what makes the soils unique. Students also learn to read the landscape and gather clues about the hydrology of the place in order to understand the full picture of the ecosystem. At the end, students play a migrating bird game and can discuss the effects of human-caused climate change on their migrating patterns.

Contact: Elley Vanderline at evanderline@pacsci.org or 425-450-0207
Link: https://www.pacificsciencecenter.org/mercer-slough/teachers-school-groups/
Time: 4-5 hour option, including a 30 min lunch
Cost: $235-$248 for up to 16 students, $408-$429 for 17-32 students. See website for other pricing.
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!

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Mount Rainier Institute: FieldSCOPES Day Programs

After months of on-line distance education, the need for hands-on, experiential learning is greater than ever. Mount Rainier Institute (MRI) is now offering FieldSCOPES, a series of day-long field experiences and outreach programs. Our goal is to continue to partner with schools to provide experiences that enhance curriculum, enrich science, and build community. We will work directly with schools to accommodate needs and provide safe and innovative solutions to school re-opening plans. FieldSCOPES programs are designed to provide students with a hands-on education experience in a safe outdoor classroom. FieldSCOPES has options for every grade level. FieldSCOPES also includes Outreach programs where Mount Rainier Institute instructors come to your school.

Contact: John Hayes, Mount Rainier Institute Director, at jhayes90@uw.edu or 253-692-4161.
Cost: Costs range from $20 per person. Mount Rainier Institute, the National Park Service and our partners are committed to providing scholarships to ensure students from all backgrounds have the opportunity to participate.
Link: http://www.rainierinstitute.org/day-programs.html

*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.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Mountains to Sound Greenway Trust: Forests 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.
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.  
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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: olympicreservations@naturebridge.org or 206-382-6212

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

Time: 3-5 days

Cost: Price range for programs can be found here:
https://naturebridge.org/programs/olympic-school-environmental-science#rates-and-availability

Rates vary based on time of year. For the standard season (March-August) 3 days/2 nights starts at $298 per student. For off-peak season (February-March) 3 days/2 nights starts at $267 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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Stream and Wetland Connections

These are 2-part programs. Stream Connections: a Nature Vision educator will lead an in-class discussion and field trip at your local stream while facilitating a variety of activities related to salmon and the effects of stormwater. Wetland Connections: a Nature Vision educator will lead an in-class discussion and field trip 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 the watershed in which the stream or wetland 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/](https://naturevision.org/school-programs/)

**Time:** 1-2 hours  
**Cost:** $220 per 2 part program. May also register for one part for $110.  
**Transportation:** Must provide own transportation.  
**Note:** Free programs may be available, please email [info@naturevision.org](mailto: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/](https://marine-science-afloat.myshopify.com/)  
**Time:** 5.5 hours  
**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:** Fall season runs from Labor Day to mid-November. Spring season takes place from mid-March to mid-June.  

*Program fieldtrips currently on hold. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*Salish Sea Expeditions: SOUND Program*

Salish Sea Expeditions invites students to become scientists and mariners, facilitating student-led research and applied Science Technology Engineering and Math (STEM) skill development that focuses on the health of Puget Sound and its connected waterways aboard the 61' research sailing vessel, Carlyn. 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/

Time: 1-2 days

Cost: $440/hour for 5+ hour sail; $4800 for two-day overnight, including food and equipment (scholarships may be available)

Transportation: Please contact.

Note: 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, but willing to explore alternative arrangements for larger groups. Salish Sea Expeditions also offers customized classroom-based watershed lessons.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Sea Otter Conservation Research

Did you know that the Seattle Aquarium conducts research on wild sea otter populations on the outer coast of Washington state? Join an Aquarium instructor in the classroom to find out how Dr. Shawn Larson, our curator of conservation research, plans and conducts fieldwork investigating the foraging success of sea otter populations. The story of Shawn’s research is embedded in discussions, video clips of Shawn, and data collected by the students who will act as Shawn’s research assistants. Students will participate in hands-on activities, touch live invertebrates from Puget Sound, and have rich discussion about what story their data tells and how it can be used in sea otter conservation efforts (Max class size 32)

Link: https://www.seattleaquarium.org/site-classroom-programs

Time: 60 minutes

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

Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.
*Seattle Aquarium: Oysters and Ocean Chemistry Research*

Ocean chemistry is rapidly changing as excess carbon dioxide from burning fossil fuels is absorbed into the water. Students will discover how this affects larval oysters and oyster farmers in Puget Sound, and how Dr. Simone Alin, oceanographer at NOAA, helps the farmers monitor ocean chemistry to maintain healthy hatchery conditions. Video clips integrated throughout the class allow students to hear Simone’s story directly from the source. Students will conduct two different pH tests to understand the relationship between CO2 and pH in the ocean; analyze graphs of real data from local ocean moorings to identify patterns in ocean chemistry; discuss solutions to the oyster farmers’ challenges; and get hands-on with live oysters (Max class size 32)

**Link:** [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

**Time:** 60 minutes

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

**Transportation:** Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*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](https://www.seattle.gov/parks/find/centers/camp-long/camps)

**Transportation:** Please contact.

*Not offering Nature Camps for the 2021 season, planning to reopen in 2022. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*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. They 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. 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 ext. 2
Link: https://www.soundexp.org/sail-with-us/schools-youth-groups/

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; inquire about scholarship opportunities that may be available
Transportation: Please contact.

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

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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The goal of a Sound Experience 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 lives. 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 and 360-379-0439

Link: https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Sound Salmon Solutions: Macroinvertebrates

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

Contact: http://www.soundsalmonsolutions.org/contact-us

Link: http://www.soundsalmonsolutions.org/education-lessons

Time: 45-120 minutes

Cost: Varies depending on funding, contact for more information

Note: Can be done as an in-class lab

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

Contact: http://www.soundsalmonsolutions.org/contact-us

Link: http://www.soundsalmonsolutions.org/education-lessons

Time: 45-60 minutes

Cost: Varies, possibly free depending on funding, contact for more information

Sound Salmon Solutions: The 5 C’s of Salmon Habitat (Field Trip Add-On)

Students learn about the critical habitat components necessary for salmon survival! This lesson can be added on to any field trip.

Contact: http://www.soundsalmonsolutions.org/contact-us

Link: http://www.soundsalmonsolutions.org/education-lessons
Time: 30 minutes
Cost: Varies, possibly free depending on funding, contact for more information

Projects

City of Burien: StormFest Toolkit
Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the StormFest Toolkit and curricula is to develop and promote an understanding of the serious issues facing our community from stormwater runoff through a hands-on experience. The curricula meets Next Generation Science Standards (NGSS) and Common Core science standards and was developed to serve a highly diverse school district, intentionally designed as an equitable education opportunity for all students regardless of race, ethnicity, or English language learning status. The toolkit details how districts or teachers can adapt and host StormFest to serve your own community. Curriculum can be modified for grades 4th through 8th, and education materials are provided in both English and Spanish.
Link: [https://www.pugetsoundstartshere.org/Resources.aspx](https://www.pugetsoundstartshere.org/Resources.aspx)
Contact: Paige Morris at Paigem@burienwa.gov or 206-248-5511
Time: Variable
Cost: No Cost

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](https://naturevision.org/blue-teams)
Nature Vision: Community Science

Community science is a process by which members of the public can participate in important scientific research. Under the guidance of a Nature Vision educator, students will work as scientists and help record data on the health of their local waterways. Students start their programs with a brief introduction to community science and the scientific method, before learning and practicing how to collect valuable data on water quality. Using these new skills, they can then investigate a local body of water and analyze real-world data in order to help local scientists monitor the health of their watershed.

These programs can be arranged either as a stand-alone series of classes, or as a part of a longer Blue Team module. We encourage teachers to schedule the programs at regular intervals each year in order to collect a body of data that can be referenced by each new class. Every year students may add their findings to the classes that came before them, providing an even better sense of the health of their local waterways over time.

Link: https://naturevision.org/community-science
Contact: info@naturevision.org
Time: Variable
Cost: Free for most schools. Inquire about free programs with info@naturevision.org
Transportation: Must provide own transportation.
Note: Community Science now has a virtual option.

Sound Salmon Solutions: Tree Planting

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

Contact: http://www.soundsalmonsolutions.org/contact-us

Link: http://www.soundsalmonsolutions.org/education-lessons

Time: 60-90 minutes
Cost: Varies, possibly free depending on funding, contact for more information
9th Grade

Remote Learning

These are remote learning options for classrooms or home learning.

*King County DNRP: Water Education (grades 9-12)
King County offers the following programs as live virtual programs or in-classroom programs with guest educators:
Introduction to Wastewater: Have you ever wondered what happens to the water we use each day? Spoiler: It’s more complex than you would imagine, involving a lot of engineering and science. In this lesson, we will reveal the hidden world of wastewater treatment through a mix of visuals and conversations. Classes this supports: Environmental Science, Chemistry, Biology, Public Health, Engineering.

Introduction to Stormwater: We will explore the biggest source of pollution to the Puget Sound: stormwater. Students will gain a deeper understanding of how the stormwater system works, the chemistry and ecological impact of stormwater runoff, and what we can do to limit its impacts in our local water bodies. Classes this supports: Environmental Science, Chemistry, Biology.

Careers in Clean Water: Keeping waterways healthy within an urban environment is critical work, yet extremely challenging. From engineers to educators to electricians, it takes many types of jobs and skills to make it happen. This lesson will highlight the wide variety of careers available within wastewater treatment, including ones that are less obvious. The goal is to open more career possibilities and help participants realize there’s a place for them in government and environmental work.

Contact: Kristin.Covey@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Time: 50-60 minutes
Cost: No Cost

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

King County: Virtual EcoConnections Workshops
The FREE virtual EcoConnections workshops described below can be adapted for different grade levels and class period lengths. Delivered through a variety of online platforms and featuring a live presenter, the EcoConnections workshops are designed to be interactive, engaging and offer a unique way to support remote learning. Supporting materials include integrated worksheets and an interactive follow up quiz. Topics
include: Biodiversity in our World, Biospheres, Earth Impacts, and Four Rs for Our Climate.

Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110


Time: 50 mins, can be adapted for different grade levels and class period lengths

Cost: No Cost

Note: Presented “live” via Zoom and Microsoft Teams.

Nature Vision: Student Packets

Nature Vision has developed seven science packets for K-12 students: Ecological Impacts, Water Quality, Human Systems, Invasive Plants, Ecosystems, Watersheds, and Humans and Water. Each free downloadable packet includes the following:

1. Teacher Overview
2. Parent/Caregiver Overview
3. Daily Student Science Lessons

Contact: info@naturevision.org

Link: https://naturevision.org/student-packets

Cost: No cost

Nature Vision: Remote Learning and Video Call Programs

Nature Vision has adapted many of our most popular in-class programs into two virtual formats for increased accessibility! We now offer synchronous full-length video call programs and asynchronous remote curriculum program options for teachers, parents, and caregivers to use during the upcoming school year. These programs are designed to accommodate both fully remote and hybrid teaching options for each school district Nature Vision serves. The programs are flexible to best fit teachers’ schedules, student needs, and current WA State K-12 Learning Standards with Science Technology Engineering and Math (STEM) education as a central focus. Each full-length video call program is 45-60 minutes live with one of our educators. Each remote learning program includes videos of our engaging Nature Vision Educators, detailed instructions for teachers/parents/caregivers to lead interactive activities, and a live Q&A session with an educator.

Link: https://naturevision.org/remote-learning-programs

Time: Roughly 1 hour between videos, activities, and Q&A sessions

Cost: Free for most schools. Otherwise $85-$90

Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers classroom programs, field trips, and projects.
Pacific Marine Research: Marine Science Remote
Book our series of 3 one hour live sessions and join our naturalists as they guide you through Plankton Lab, our Live Dive and an Invertebrate Food Chains Lesson or a more advanced Invertebrate Taxonomy with live critters. Meet our divers and ask them questions in real time as they take you underwater during the Live Dive. We will also include Water Quality Data collected on the day of this live portion. The live stream will allow for students to ask questions and interact with naturalists and scuba divers in real-time.
Contact: fieldtrips@marinescienceafloat.org or 206-361-1919
Link: https://www.pacificmarineresearch.org/pagesmarine-science-remote
Time: Three 1 hour sessions
Cost: $250, scholarships available

Seattle Aquarium: Digital Learning Opportunities
All of our programs focus on the marine ecosystems of the Pacific Northwest. Our educators will guide you and up to 32 of your students over video conferencing software through lessons that support Next Generation Science Standards while giving your students agency to influence the class based on their prior knowledge and interests. Each of our classes has a grade level range, and within that range our skilled educators will tailor the class for your specific grade level. Many classes also include special live animal interactions with the tide pool creatures in our care.
Link: https://www.seattleaquarium.org/distance-learning
Time: 45 minutes
Cost: $150, Scholarships available for those eligible.

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

*King County DNRP: Water Education (grades 9-12)
King County offers the following programs as live virtual programs or in-classroom programs with guest educators.
Introduction to Wastewater: Have you ever wondered what happens to the water we use each day? Spoiler: It’s more complex than you would imagine, involving a lot of engineering and science. In this lesson, we will reveal the hidden world of wastewater treatment through a mix of visuals and conversations. Classes this supports: Environmental Science, Chemistry, Biology, Public Health, Engineering.
Introduction to Stormwater: We will explore the biggest source of pollution to the Puget Sound: stormwater. Students will gain a deeper understanding of how the stormwater system works, the chemistry and ecological impact of stormwater runoff, and what we can do to limit its impacts in our local water bodies. Classes this supports: Environmental Science, Chemistry, Biology.

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Contact: Kristin.Covey@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Time: 50-60 minutes
Cost: No Cost
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

King County: EcoConnections Classroom Workshops
The FREE in-person EcoConnections workshops described below can be adapted for different grade levels and class period lengths. They include engaging instruction and hands-on activities, as well as discussion of both environmental issues and human considerations such as equity and social justice. EcoConnections workshops are designed to be interactive, dynamic and engaging and offer a unique way to support in-class learning. Topics include: life science and ecosystems, earth systems and human activity, and environmental action.

Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost
Note: New virtual workshop offerings, presented “live” via Zoom and Microsoft Teams. All in person workshop activities are modified to reduce contact with materials, and new cleaning protocols have been instituted, to sanitize between school visits.
City of Duvall: Surface Water Management Classroom Visitor
Larissa Polanco, Assistant City Engineer. Discussion adapted to what you are teaching in the classroom.
Contact: Larissa Polanco at larissa.polanco@duvallwa.gov and 425-788-3434 ext. 8040
Link: http://www.duvallwa.gov/305/sewer-water-stormwater
Time: Variable
Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor
The Surface Water Program Manager can speak to your class about surface water management, with an emphasis on what you are currently talking about in the classroom.
Contact: Audrie Starsy at audries@newcastlewa.gov or 425-649-4444 ext. 111
Link: http://newcastlewa.gov/departments/public_works/surface_water_management/
Time: Variable
Cost: No Cost

EarthGen: Stormwater Stewards
EarthGen provides tailored classroom resource support for schools around watersheds, stormwater problems and stormwater solutions. Students engage in a co-design process with a landscape designer to develop and install green stormwater infrastructure on their campus. Additionally, students learn from various professionals in their region who engage with stormwater management. Stormwater Stewards is a program for middle and high school students to learn about watersheds and how to reduce the impact of stormwater. Students investigate their local watersheds, and then design and implement green stormwater infrastructure projects to improve water quality in their community. EarthGen facilitates connections to stormwater professionals who introduce students to pathways into environmental careers.
Link: https://earthgenwa.org/
Contact: Becky Bronstein at becky@earthgenwa.org
Cost: No cost
Transportation: EarthGen visits the school and corresponds via email/phone
Note: Contact Becky for more information on how to get involved with this program

*Environmental Science Center: Salmon Heroes
The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@environmentalsciencecenter.org or 206-248-4266
Link: https://envsciencecenter.org/salmon-heroes/

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

Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

Transportation: Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

Note: Offered September-December. In-person and virtual program offerings available in 2021.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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.

Contact: education@issaquahfish.org or 425-393-1118
Link: https://www.issaquahfish.org

Time: 60 minutes

Cost: $50 per class requested

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

*The Jellyfish Project: School Presentations
The Jellyfish Project provides students with a unique experience to learn about ocean health and the climate crisis, motivating them to become active environmental stewards. What makes our presentation unique is that the presenters are musicians and
their vibrant, live music performance is used as a means to engage the attention of the students and set the stage for the captivating slideshow that follows.

Our intention is to deliver a message of hope to help mitigate the fear and helplessness students may be feeling by empowering them with the knowledge that they, as youth, can become instruments of change and that every individual action, no matter how big or small, is impactful.

The Jellyfish Project presentation is geared towards middle and high school students grades 6-12. The performance time depends on the amount of block time we are allotted by each school as well as the age range of the audience. Generally, the presentations are 45-60 minutes which includes the musical performance, slide presentation by the musicians, and a 5-10 minute Q&A.

Link: https://www.thejellyfishproject.org/
Contact: info@thejellyfishproject.org
Cost: No cost

Note: As of April 2021, the Jellyfish Project will be offering a live-streamed presentation to students; and as of September 2021, hopes to resume live, in-school presentations to reduced-size audiences where COVID safety and physical distancing guidelines can be effectively met.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Watershed Programs
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: 45-60 minutes
Cost: Free for most schools. Otherwise $110 per in-person lesson, $85-90 for remote

Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects. Nature Vision can also provide classroom programs virtually over video call at 45-60 minutes.

*Salish Sea Expeditions: SOURCE Program
Salish Sea Expeditions invites students to become scientists, facilitating student-led research and applied Science Technology Engineering and Math (STEM) 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 or 206-780-7848
Link: https://www.salish.org/programs/source/

Time: 10 hours total (multiple classes)
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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Sound Salmon Solutions: Macroinvertebrates (Lab option)
Students identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.

Contact: http://www.soundsalmonsolutions.org/contact-us
Link: http://www.soundsalmonsolutions.org/education-lessons

Time: 45-120 minutes
Cost: Varies depending on funding, contact for more information

Note: Can be done as a field trip.

Vashon Nature Center: Nature Presentations
Trained scientists and naturalists offer in-class and outdoor programs designed to foster student awareness and understanding of environmental science topics relevant to their community and tied to global issues. Programs are tailored to suit teachers' classroom teaching goals and align with Next Generation Science Standards.

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: Areas of focus address the natural history of the Salish Sea and Pacific Northwest. Examples include: watershed education, stormwater management, phenology, freshwater macroinvertebrates, salmon, amphibians, intertidal studies, forage fish, shoreline restoration, biodiversity studies, and methods in field research.
Field Trips

*King County DNRP: Water Education: Field Trips and Treatment Plant tours

King County provides water educational field trips for students in grades 9-12 located at both Brightwater and South Treatment Plant. Field trips last 2-4 hours, and are free of charge. Teachers can choose from programs that focus on stormwater, wastewater, and sustainability.

Have you ever wondered what happens to the water we use each day? Spoiler: It’s more complex than you would imagine, involving a lot of engineering and science. Students will gain a deeper understanding of how the water system works, the chemistry and ecological impact of stormwater runoff, and what we can do to limit our impacts on our local water bodies. Classes this supports: Environmental Science, Chemistry, and Biology.

**Contact:** Kristin.Covey@kingcounty.gov (Brightwater Center) or Katelyn.Leeuw@kingcounty.gov (South Treatment Plant)

**Link:** https://kingcounty.gov/services/environment/wastewater/education/school.aspx

**Time:** 2-4 hours

**Cost:** No Cost

**Transportation:** Qualifying schools can access free bus transportation through the Wheels to Water transportation program

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

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:** Laura West at lwest@kingcounty.gov or 206-477-7574

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

**Time:** 15-60 minutes

**Cost:** No Cost

**Transportation:** Qualifying schools can 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 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 their mission, core values, and programs. We believe in the power of nature to awaken a child’s senses, curiosity, and desire to learn. With a 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. Camp Sealth serves grades K-12 for our Outdoor Education, Retreats, and Day Programs and can create customizable schedules that meet current educational standards by grade level.

Contact: Josh Cunningham at joshc@campfireseattle.org
Link: https://campfireseattle.org/outdoor-education/
Time: Program offered September-June. Typical program is 3 days, 2 nights. Can do both 1 night and week-long programs as well.
Cost: $56 per student per night, $48 per adult per night
Transportation: https://campfireseattle.org/camp-sealth-overnight-camp/all-about-camp-sealth/transportation/

Note: In addition to the Outdoor Education program, Camp Sealth and Camp Fire Central Puget Sound offers rentals of our site for other non-profit groups, over ten community based day camps in various locations in King County during the summer months, summer resident camp at our Camp Sealth site, and community based group programing at various locations in King County. For more information about these programs please contact Michael McGrath at the Seattle office at michaelm@campfireseattle.org.

*Environmental Science Center: Salmon Heroes

The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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:** programs@environmentalsciencecenter.org or 206-248-4266

**Link:** https://envsciencecenter.org/salmon-heroes/

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

**Cost:**
- Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge
- Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students
- Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students

**Transportation:** Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals

**Note:** Offered September-December. In-person and virtual program offerings available in 2021.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*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:** education@issaquahfish.org or 425-392-1118

**Link:** https://www.issaquahfish.org/

**Time:** Tours last 45 minutes to one hour and are available primarily mid-September though early November

**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.

*Hatchery grounds are currently closed to the public. Guided tours are permitted with a reservation. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

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 and undisturbed nature. 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 the 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: 253-856-5000 or Covington Parks and Recreation: 253-480-2480

Link: [https://www.facebook.com/FriendsOfSoosCreekPark/](https://www.facebook.com/FriendsOfSoosCreekPark/)

Time: Variable

Transportation: Please contact for details

Note: All of the walks take place outdoors, so be sure to dress for the weather

Mount Rainier Institute: FieldSCOPES Day Programs

After months of on-line distance education, the need for hands-on, experiential learning is greater than ever. Mount Rainier Institute (MRI) is now offering FieldSCOPES, a series of day-long field experiences and outreach programs. Our goal is to continue to partner with schools to provide experiences that enhance curriculum, enrich science, and build community. We will work directly with schools to accommodate needs and provide safe and innovative solutions to school re-opening plans. FieldSCOPES programs are designed to provide students with a hands-on education experience in a safe outdoor classroom. FieldSCOPES has options for every grade level. FieldSCOPES also includes Outreach programs where Mount Rainier Institute instructors come to your school.

Contact: John Hayes, Mount Rainier Institute Director, at jhayes90@uw.edu or 253-692-4161.

Cost: Costs range from $20 per person. Mount Rainier Institute, the National Park Service and our partners are committed to providing scholarships to ensure students from all backgrounds have the opportunity to participate.

Link: [http://www.rainierinstitute.org/day-programs.html](http://www.rainierinstitute.org/day-programs.html)

*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: olympicreservations@naturebridge.org or 206-382-6212

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

Time: 3-5 days

Cost: Price range for programs can be found here: https://naturebridge.org/programs/olympic-school-environmental-science#rates-and-availability

Rates vary based on time of year. For the standard season (March-August) 3 days/2 nights starts at $298 per student. For off-peak season (February-March) 3 days/2 nights starts at $267 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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

Nature Vision: Stream and Wetland Connections

These are 2-part programs. Stream Connections: a Nature Vision educator will lead an in-class discussion and field trip at your local stream while facilitating a variety of activities related to salmon and the effects of stormwater. Wetland Connections: a Nature Vision educator will lead an in-class discussion and field trip 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 the watershed in which the stream or wetland 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: 1-2 hours

Cost: $220 per 2 part program. May also register for one part for $110.

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:** 5.5 hours

**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:** Fall season runs from Labor Day to mid-November. Spring season takes place from mid-March to mid-June.

*Program fieldtrips currently on hold. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*Salish Sea Expeditions: SOUND Program*

Salish Sea Expeditions invites students to become scientists and mariners, facilitating student-led research and applied Science Technology Engineering and Math (STEM) skill development that focuses on the health of Puget Sound and its connected waterways aboard the 61' research sailing vessel, Carlyn. 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/

**Time:** 1-2 days

**Cost:** $440/hour for 5+ hour sail; $4800 for two-day overnight, including food and equipment (scholarships may be available)

**Transportation:** Please contact.

**Note:** 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, but willing to explore alternative arrangements for larger
groups. Salish Sea Expeditions also offers customized classroom-based watershed lessons.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Marine Invertebrate Lab
Discover the rich diversity of animals that call the Puget Sound nearshore habitat home. By interacting with live marine invertebrates, students will learn how to classify animals into phyla based on physical characteristics. They will also explore the biodiversity of the intertidal ecosystem, and the ways in which the organisms are interrelated. (Max class size 32)
Link: [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)
Time: 60 minutes
Cost: $10 each (This is the price of aquarium admission for adults and youth 4 and up)
Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Oysters and Ocean Chemistry Lab
Ocean chemistry is rapidly changing as excess carbon dioxide from burning fossil fuels is absorbed into the water. Students will discover how this affects larval oysters and oyster farmers in Puget Sound, and how Dr. Simone Alin, oceanographer at NOAA, helps the farmers monitor ocean chemistry to maintain healthy hatchery conditions. Video clips integrated throughout the class allow students to hear Simone’s story directly from the source. Students will conduct two different pH tests to understand the relationship between CO2 and pH in the ocean; analyze graphs of real data from local ocean moorings to identify patterns in ocean chemistry; discuss solutions to the oyster farmers' challenges; and get hands-on with live oysters (Max class size 32)
Link: [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)
Time: 60 minutes
Cost: $10 each (This is the price of aquarium admission for adults and youth 4 and up)
Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Puget Sound Plankton Lab
The surface of the ocean is home to diverse populations of plankton. In this hands-on program, students will use oceanographic equipment to collect plankton samples and identify different organisms using microscopes. Analysis and discussion of data will
reveal how this ever-changing ecosystem responds to both human and environmental factors.

**Link:** [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

**Time:** 60 minutes  
**Cost:** $10 each (This is the price of aquarium admission for adults and youth 4 and up)  
**Transportation:** Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

**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](https://www.seattle.gov/parks/find/centers/camp-long/camps)  
**Transportation:** Please contact.

*Not offering Nature Camps for the 2021 season, planning to reopen in 2022. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

**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. They 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. 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
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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 ext. 2
Link: https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

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; inquire about scholarship opportunities that may be available

Transportation: Please contact.

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

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Sound Experience: Sound Experience Program

The goal of a Sound Experience 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 lives. 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 and 360-379-0439
Link: https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

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.
*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Sound Salmon Solutions: Macroinvertebrates
Students identify and categorize aquatic benthic macroinvertebrates as a biological indicator of water quality.
Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)
Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)
Time: 45-120 minutes
Cost: Varies depending on funding, contact for more information
Note: Can be done as an in-class lab

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
Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)
Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)
Time: 45-60 minutes
Cost: Varies, possibly free depending on funding, contact for more information

Sound Salmon Solutions: The 5 C’s of Salmon Habitat (Field Trip Add-On)
Students learn about the critical habitat components necessary for salmon survival! This lesson can be added on to any field trip.
Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)
Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)
Time: 30 minutes
Cost: Varies, possibly free depending on funding, contact for more information
Projects

King Conservation District: Envirothon

Envirothon is an excellent opportunity for students to cultivate new skills and learn about resource conservation career opportunities. High school teams participating in Envirothon explore ecology, natural resource management, and current environmental issues through an overarching special topic/environmental theme.

Contact: Nikki Wolf at nikki.wolf@kingcd.org or 425-773-1868

Link: https://waenvirothon.org/

Time: Variable; trainings are 60-90 minutes

Cost: Free (Schools just need to provide their own transportation to events and cover costs of substitute teachers for the day of competition)

Transportation: Not provided.

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: Blue Teams now have a virtual option. Nature Vision also offers in-class and virtual lessons and field trips.
Nature Vision: Community Science

Community science is a process by which members of the public can participate in important scientific research. Under the guidance of a Nature Vision educator, students will work as scientists and help record data on the health of their local waterways. Students start their programs with a brief introduction to community science and the scientific method, before learning and practicing how to collect valuable data on water quality. Using these new skills, they can then investigate a local body of water and analyze real-world data in order to help local scientists monitor the health of their watershed.

These programs can be arranged either as a stand-alone series of classes, or as a part of a longer Blue Team module. We encourage teachers to schedule the programs at regular intervals each year in order to collect a body of data that can be referenced by each new class. Every year students may add their findings to the classes that came before them, providing an even better sense of the health of their local waterways over time.

**Link**: [https://naturevision.org/community-science](https://naturevision.org/community-science)

**Contact**: info@naturevision.org

**Time**: Variable

**Cost**: Free for most schools. Inquire about free programs with info@naturevision.org

**Transportation**: Must provide own transportation.

**Note**: Community Science now has a virtual option.

Sound Salmon Solutions: Tree Planting

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

**Contact**: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

**Link**: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

**Time**: 60-90 minutes

**Cost**: Varies, possibly free depending on funding, contact for more information

Vashon Nature Center: Hands-on Field Research

Trained scientists mentor high school students in the methods of field research and applied environmental resource management. Research addresses local land management tied to broader geographic movements. Projects conducted include amphibian monitoring; salmonid studies; monitoring sea star wasting syndrome; cataloguing notable trees; storm-water management; biodiversity studies; and shoreline monitoring. Students are led through the entire scientific process from making scientific observations, to data collection and analysis, and finally reporting and communicating results to local land managers and agencies.

**Contact**: info@vashonnaturecenter.org or 206-755-5798
Link: [https://vashonnaturecenter.org/project/scientists-in-schools/](https://vashonnaturecenter.org/project/scientists-in-schools/)

Time: Variable

Cost: Variable

Transportation: Please contact.

Note: Programs are tailored to suit individual classroom teaching goals and are aligned with Next Generation Science Standards. In-class presentations are also available.
Remote Learning

These are remote learning options for classrooms or home learning.

*King County DNRP: Water Education (grades 9-12)

King County offers the following programs as live virtual programs or in-classroom programs with guest educators.

Introduction to Wastewater: Have you ever wondered what happens to the water we use each day? Spoiler: It’s more complex than you would imagine, involving a lot of engineering and science. In this lesson, we will reveal the hidden world of wastewater treatment through a mix of visuals and conversations. Classes this supports: Environmental Science, Chemistry, Biology, Public Health, Engineering.

Introduction to Stormwater: We will explore the biggest source of pollution to the Puget Sound: stormwater. Students will gain a deeper understanding of how the stormwater system works, the chemistry and ecological impact of stormwater runoff, and what we can do to limit its impacts in our local water bodies. Classes this supports: Environmental Science, Chemistry, Biology.

Careers in Clean Water: Keeping waterways healthy within an urban environment is critical work, yet extremely challenging. From engineers to educators to electricians, it takes many types of jobs and skills to make it happen. This lesson will highlight the wide variety of careers available within wastewater treatment, including ones that are less obvious. The goal is to open more career possibilities and help participants realize there’s a place for them in government and environmental work.

Contact: Kristin.Covey@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Time: 50-60 minutes
Cost: No Cost

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

King County: Virtual EcoConnections Workshops

The FREE virtual EcoConnections workshops described below can be adapted for different grade levels and class period lengths. Delivered through a variety of online platforms and featuring a live presenter, the EcoConnections workshops are designed to be interactive, engaging and offer a unique way to support remote learning. Supporting
Nature Vision: Student Packets
Nature Vision has developed seven science packets for K-12 students: Ecological Impacts, Water Quality, Human Systems, Invasive Plants, Ecosystems, Watersheds, and Humans and Water. Each free downloadable packet includes the following:
Contact: info@naturevision.org
Link: https://naturevision.org/student-packets
Cost: No cost

Nature Vision: Remote Learning and Video Call Programs
Nature Vision has adapted many of our most popular in-class programs into two virtual formats for increased accessibility! We now offer synchronous full-length video call programs and asynchronous remote curriculum program options for teachers, parents, and caregivers to use during the upcoming school year. These programs are designed to accommodate both fully remote and hybrid teaching options for each school district Nature Vision serves. The programs are flexible to best fit teachers’ schedules, student needs, and current WA State K-12 Learning Standards with Science Technology Engineering and Math (STEM) education as a central focus. Each full-length video call program is 45-60 minutes live with one of our educators. Each remote learning program includes videos of our engaging Nature Vision Educators, detailed instructions for teachers/parents/caregivers to lead interactive activities, and a live Q&A session with an educator.
Link: https://naturevision.org/remote-learning-programs
Time: Roughly 1 hour between videos, activities, and Q&A sessions
Cost: Free for most schools. Otherwise $85-$90
Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers classroom programs, field trips, and projects.
Pacific Marine Research: Marine Science Remote
Book our series of 3 one hour live sessions and join our naturalists as they guide you through Plankton Lab, our Live Dive and an Invertebrate Food Chains Lesson or a more advanced Invertebrate Taxonomy with live critters. Meet our divers and ask them questions in real time as they take you underwater during the Live Dive. We will also include Water Quality Data collected on the day of this live portion. The live stream will allow for students to ask questions and interact with naturalists and scuba divers in real-time.
Contact: fieldtrips@marinescienceafloat.org or 206-361-1919
Link: https://www.pacificmarineresearch.org/pagesmarine-science-remote
Time: Three 1 hour sessions
Cost: $250, scholarships available

Seattle Aquarium: Digital Learning Opportunities
All of our programs focus on the marine ecosystems of the Pacific Northwest. Our educators will guide you and up to 32 of your students over video conferencing software through lessons that support Next Generation Science Standards while giving your students agency to influence the class based on their prior knowledge and interests. Each of our classes has a grade level range, and within that range our skilled educators will tailorm the class for your specific grade level. Many classes also include special live animal interactions with the tide pool creatures in our care.
Link: https://www.seattleaquarium.org/distance-learning
Time: 45 minutes
Cost: $150, Scholarships available for those eligible.

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

*King County DNRP: Water Education (grades 9-12)
King County offers the following programs as live virtual programs or in-classroom programs with guest educators.
Introduction to Wastewater: Have you ever wondered what happens to the water we use each day? Spoiler: It’s more complex than you would imagine, involving a lot of engineering and science. In this lesson, we will reveal the hidden world of wastewater treatment through a mix of visuals and conversations. Classes this supports: Environmental Science, Chemistry, Biology, Public Health, Engineering.
Introduction to Stormwater: We will explore the biggest source of pollution to the Puget Sound: stormwater. Students will gain a deeper understanding of how the stormwater system works, the chemistry and ecological impact of stormwater runoff, and what we can do to limit its impacts in our local water bodies. Classes this supports: Environmental Science, Chemistry, Biology.

Careers in Clean Water: Keeping waterways healthy within an urban environment is critical work, yet extremely challenging. From engineers to educators to electricians, it takes many types of jobs and skills to make it happen. This lesson will highlight the wide variety of careers available within wastewater treatment, including ones that are less obvious. The goal is to open more career possibilities and help participants realize there’s a place for them in government and environmental work.

Contact: Kristin.Covey@kingcounty.gov
Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx
Time: 50-60 minutes
Cost: No Cost

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

King County: EcoConnections Classroom Workshops

The FREE in-person EcoConnections workshops described below can be adapted for different grade levels and class period lengths. They include engaging instruction and hands-on activities, as well as discussion of both environmental issues and human considerations such as equity and social justice. EcoConnections workshops are designed to be interactive, dynamic and engaging and offer a unique way to support in-class learning. Topics include: life science and ecosystems, earth systems and human activity, and environmental action.

Contact: Triangle Associates at workshops@triangleassociates.com or 206-583-0655 ext. 110
Time: 50 mins, can be adapted for different grade levels and class period lengths
Cost: No Cost

Note: New virtual workshop offerings, presented “live” via Zoom and Microsoft Teams. All in person workshop activities are modified to reduce contact with materials, and new cleaning protocols have been instituted, to sanitize between school visits.
City of Duvall: Surface Water Management Classroom Visitor
Larissa Polanco, Assistant City Engineer. Discussion adapted to what you are teaching in the classroom.

Contact: Larissa Polanco at larissa.polanco@duvallwa.gov and 425-788-3434 ext. 8040
Link: http://www.duvallwa.gov/305/sewer-water-stormwater
Time: Variable
Cost: No Cost

City of Newcastle: Surface Water Management Classroom Visitor
The Surface Water Program Manager can speak to your class about surface water management, with an emphasis on what you are currently talking about in the classroom.

Contact: Audrie Starsy at audries@newcastlewa.gov or 425-649-4444 ext. 111
Link: http://newcastlewa.gov/departments/public_works/surface_water_management/
Time: Variable
Cost: No Cost

EarthGen: Stormwater Stewards
EarthGen provides tailored classroom resource support for schools around watersheds, stormwater problems and stormwater solutions. Students engage in a co-design process with a landscape designer to develop and install green stormwater infrastructure on their campus. Additionally, students learn from various professionals in their region who engage with stormwater management. Stormwater Stewards is a program for middle and high school students to learn about watersheds and how to reduce the impact of stormwater. Students investigate their local watersheds, and then design and implement green stormwater infrastructure projects to improve water quality in their community. EarthGen facilitates connections to stormwater professionals who introduce students to pathways into environmental careers.

Link: https://earthgenwa.org/
Contact: Becky Bronstein at becky@earthgenwa.org
Cost: No cost
Transportation: EarthGen visits the school and corresponds via email/phone
Note: Contact Becky for more information on how to get involved with this program

*Environmental Science Center: Salmon Heroes
The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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: programs@environmentalsciencecenter.org or 206-248-4266
Link: https://envsciencecenter.org/salmon-heroes/

Time: 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)
Cost: Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students
Transportation: Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals
Note: Offered September-December. In-person and virtual program offerings available in 2021.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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.

Contact: education@issaquahfish.org or 425-393-1118
Link: www.issaquahfish.org
Time: 60 minutes
Cost: $50 per class requested
Note: Offered November-June. FISH also offers field trips.

*The Jellyfish Project: School Presentations
The Jellyfish Project provides students with a unique experience to learn about ocean health and the climate crisis, motivating them to become active environmental stewards. What makes our presentation unique is that the presenters are musicians and
their vibrant, live music performance is used as a means to engage the attention of the students and set the stage for the captivating slideshow that follows. Our intention is to deliver a message of hope to help mitigate the fear and helplessness students may be feeling by empowering them with the knowledge that they, as youth, can become instruments of change and that every individual action, no matter how big or small, is impactful.

The Jellyfish Project presentation is geared towards middle and high school students grades 6-12. The performance time depends on the amount of block time we are allotted by each school as well as the age range of the audience. Generally, the presentations are 45-60 minutes which includes the musical performance, slide presentation by the musicians, and a 5-10 minute Q&A.

Link: https://www.thejellyfishproject.org/
Contact: info@thejellyfishproject.org
Cost: No cost

Note: As of April 2021, the Jellyfish Project will be offering a live-streamed presentation to students; and as of September 2021, hopes to resume live, in-school presentations to reduced-size audiences where COVID safety and physical distancing guidelines can be effectively met.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Watershed Programs
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: 45-60 minutes
Cost: Free for most schools. Otherwise $110 per in-person lesson, $85-90 for remote
Note: Free programs are available to most schools, please email info@naturevision.org for more information. Nature Vision also offers field trips and projects. Nature Vision can also provide classroom programs virtually over video call at 45-60 minutes.

*Salish Sea Expeditions: SOURCE Program
Salish Sea Expeditions invites students to become scientists, facilitating student-led research and applied Science Technology Engineering and Math (STEM) 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 or 206-780-7848

Link: [https://www.salish.org/programs/source/](https://www.salish.org/programs/source/)

Time: 10 hours total (multiple classes)

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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

### Sound Salmon Solutions: Macroinvertebrates (Lab option)

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

Contact: [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

Link: [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

Time: 45-120 minutes

Cost: Varies depending on funding, contact for more information

Note: Can be done as a field trip.

### Vashon Nature Center: Nature Presentations

Trained scientists and naturalists offer in-class and outdoor programs designed to foster student awareness and understanding of environmental science topics relevant to their community and tied to global issues. Programs are tailored to suit teachers' classroom teaching goals and align with Next Generation Science Standards.

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


Time: 30-90 minutes

Cost: $50-$150

Note: Areas of focus address the natural history of the Salish Sea and Pacific Northwest. Examples include: watershed education, stormwater management, phenology, freshwater macroinvertebrates, salmon, amphibians, intertidal studies, forage fish, shoreline restoration, biodiversity studies, and methods in field research.
Field Trips

*King County DNRP: Water Education: Field Trips and Treatment Plant tours

King County provides water educational field trips for students in grades 9-12 located at both Brightwater and South Treatment Plant. Field trips last 2-4 hours, and are free of charge. Teachers can choose from programs that focus on stormwater, wastewater, and sustainability.

Have you ever wondered what happens to the water we use each day? Spoiler: It’s more complex than you would imagine, involving a lot of engineering and science. Students will gain a deeper understanding of how the water system works, the chemistry and ecological impact of stormwater runoff, and what we can do to limit our impacts on our local water bodies. Classes this supports: Environmental Science, Chemistry, and Biology.

Contact: Kristin.Covey@kingcounty.gov (Brightwater Center) or Katelyn.Leeuw@kingcounty.gov (South Treatment Plant)

Link: https://kingcounty.gov/services/environment/wastewater/education/school.aspx

Time: 2-4 hours

Cost: No Cost

Transportation: Qualifying schools can access free bus transportation through the Wheels to Water transportation program

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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: Laura West at lwest@kingcounty.gov or 206-477-7574

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

Time: 15-60 minutes

Cost: No Cost

Transportation: Qualifying schools can 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 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 their mission, core values, and programs. We believe in the power of nature to awaken a child’s senses, curiosity, and desire to learn. With a 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. Camp Sealth serves grades K-12 for our Outdoor Education, Retreats, and Day Programs and can create customizable schedules that meet current educational standards by grade level.

Contact: Josh Cunningham at joshc@campfireseattle.org
Link: https://campfireseattle.org/outdoor-education/
Time: Program offered September-June. Typical program is 3 days, 2 nights. Can do both 1 night and week-long programs as well.
Cost: $56 per student per night, $48 per adult per night
Transportation: https://campfireseattle.org/camp-sealth-overnight-camp/all-about-camp-sealth/transportation/

Note: In addition to the Outdoor Education program, Camp Sealth and Camp Fire Central Puget Sound offers rentals of our site for other non-profit groups, over ten community based day camps in various locations in King County during the summer months, summer resident camp at our Camp Sealth site, and community based group programing at various locations in King County. For more information about these programs please contact Michael McGrath at the Seattle office at michaelm@campfireseattle.org.

*Environmental Science Center: Salmon Heroes

The Salmon Heroes program introduces 4th-12th grade students to salmon habitat needs and stormwater pollution solutions in the Puget Sound watershed. Classroom Lessons & Field Study Investigation: During the 1-hour pre-field study classroom lesson, students will engage in hands-on, Next Generation Science Standards-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 can make to their behaviors in order to make the watershed a 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 1-hour post-visit classroom lesson, 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:** programs@environmentalsciencecenter.org or 206-248-4266  
**Link:** https://envsciencecenter.org/salmon-heroes/  
**Time:** 2 hours (in classroom) + 3 hours (field trip to Normandy Park Cove)  
**Cost:** Schools with more than 75% of students qualifying for Free or Reduced Priced Meals (FRPM) - No Charge; Schools with 45-75% students qualifying for FRPM - $50 per class of 30 students; Schools with less than 45% of students qualifying for FRPM - $350 per class of 30 students  
**Transportation:** Partial transportation reimbursements are available for schools where more than 45% of students qualify for Free or Reduced Priced Meals  
**Note:** Offered September-December. In-person and virtual program offerings available in 2021.  
**Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.**

*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:** education@issaquahfish.org or 425-392-1118  
**Link:** https://www.issaquahfish.org/  
**Time:** Tours last 45 minutes to one hour and are available primarily mid-September though early November  
**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.  
**Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.**

*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 and undisturbed nature. 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 the 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: 253-856-5000 or Covington Parks and Recreation: 253-480-2480  
**Link:** [https://www.facebook.com/FriendsOfSoosCreekPark/](https://www.facebook.com/FriendsOfSoosCreekPark/)  
**Time:** Variable  
**Transportation:** Please contact for details  
**Note:** All of the walks take place outdoors, so be sure to dress for the weather

**Mount Rainier Institute: FieldSCOPES Day Programs**  
After months of on-line distance education, the need for hands-on, experiential learning is greater than ever. Mount Rainier Institute (MRI) is now offering FieldSCOPES, a series of day-long field experiences and outreach programs. Our goal is to continue to partner with schools to provide experiences that enhance curriculum, enrich science, and build community. We will work directly with schools to accommodate needs and provide safe and innovative solutions to school re-opening plans. FieldSCOPES programs are designed to provide students with a hands-on education experience in a safe outdoor classroom. FieldSCOPES has options for every grade level. FieldSCOPES also includes Outreach programs where Mount Rainier Institute instructors come to your school.  
**Contact:** John Hayes, Mount Rainier Institute Director, at [jhayes90@uw.edu](mailto:jhayes90@uw.edu) or 253-692-4161.  
**Cost:** Costs range from $20 per person. Mount Rainier Institute, the National Park Service and our partners are committed to providing scholarships to ensure students from all backgrounds have the opportunity to participate.  
**Link:** [http://www.rainierinstitute.org/day-programs.html](http://www.rainierinstitute.org/day-programs.html)

*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: olympicreservations@naturebridge.org or 206-382-6212

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

Time: 3-5 days

Cost: Price range for programs can be found here: https://naturebridge.org/programs/olympic-school-environmental-science#rates-and-availability

Rates vary based on time of year. For the standard season (March-August) 3 days/2 nights starts at $298 per student. For off-peak season (February-March) 3 days/2 nights starts at $267 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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

Nature Vision: Stream and Wetland Connections

These are 2-part programs. Stream Connections: a Nature Vision educator will lead an in-class discussion and field trip at your local stream while facilitating a variety of activities related to salmon and the effects of stormwater. Wetland Connections: a Nature Vision educator will lead an in-class discussion and field trip 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 the watershed in which the stream or wetland 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: 1-2 hours

Cost: $220 per 2 part program. May also register for one part for $110.

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: 5.5 hours
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: Fall season runs from Labor Day to mid-November. Spring season takes place from mid-March to mid-June.

*Program fieldtrips currently on hold. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Salish Sea Expeditions: SOUND Program

Salish Sea Expeditions invites students to become scientists and mariners, facilitating student-led research and applied Science Technology Engineering and Math (STEM) skill development that focuses on the health of Puget Sound and its connected waterways aboard the 61' research sailing vessel, Carlyn. 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/

Time: 1-2 days
Cost: $440/hour for 5+ hour sail; $4800 for two-day overnight, including food and equipment (scholarships may be available)

Transportation: Please contact.

Note: 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, but willing to explore alternative arrangements for larger
groups. Salish Sea Expeditions also offers customized classroom-based watershed lessons.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Marine Invertebrate Lab*
Discover the rich diversity of animals that call the Puget Sound nearshore habitat home. By interacting with live marine invertebrates, students will learn how to classify animals into phyla based on physical characteristics. They will also explore the biodiversity of the intertidal ecosystem, and the ways in which the organisms are interrelated. (Max class size 32)

Link: [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

Time: 60 minutes

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

Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Oysters and Ocean Chemistry Lab*
Ocean chemistry is rapidly changing as excess carbon dioxide from burning fossil fuels is absorbed into the water. Students will discover how this affects larval oysters and oyster farmers in Puget Sound, and how Dr. Simone Alin, oceanographer at NOAA, helps the farmers monitor ocean chemistry to maintain healthy hatchery conditions. Video clips integrated throughout the class allow students to hear Simone’s story directly from the source. Students will conduct two different pH tests to understand the relationship between CO2 and pH in the ocean; analyze graphs of real data from local ocean moorings to identify patterns in ocean chemistry; discuss solutions to the oyster farmers’ challenges; and get hands-on with live oysters (Max class size 32)

Link: [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

Time: 60 minutes

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

Transportation: Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*Seattle Aquarium: Puget Sound Plankton Lab*
The surface of the ocean is home to diverse populations of plankton. In this hands-on program, students will use oceanographic equipment to collect plankton samples and identify different organisms using microscopes. Analysis and discussion of data will
reveal how this ever-changing ecosystem responds to both human and environmental factors.

**Link:** [https://www.seattleaquarium.org/site-classroom-programs](https://www.seattleaquarium.org/site-classroom-programs)

**Time:** 60 minutes

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

**Transportation:** Please contact.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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](https://www.seattle.gov/parks/find/centers/camp-long/camps)

**Transportation:** Please contact.

*Not offering Nature Camps for the 2021 season, planning to reopen in 2022. Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

*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. They 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. 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 ext. 2

**Link:** https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

**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; inquire about scholarship opportunities that may be available

**Transportation:** Please contact.

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

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

*Sound Experience: Sound Experience Program*

The goal of a Sound Experience 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 lives. 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 and 360-379-0439

**Link:** https://www.soundexp.org/sail-with-us/schoolsyouth-groups/

**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.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.*

**Sound Salmon Solutions: Macroinvertebrates**

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

**Contact:** [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

**Link:** [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

**Time:** 45-120 minutes

**Cost:** Varies depending on funding, contact for more information

**Note:** Can be done as an in-class lab

**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

**Contact:** [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

**Link:** [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

**Time:** 45-60 minutes

**Cost:** Varies, possibly free depending on funding, contact for more information

**Sound Salmon Solutions: The 5 C’s of Salmon Habitat (Field Trip Add-On)**

Students learn about the critical habitat components necessary for salmon survival! This lesson can be added on to any field trip.

**Contact:** [http://www.soundsalmonsolutions.org/contact-us](http://www.soundsalmonsolutions.org/contact-us)

**Link:** [http://www.soundsalmonsolutions.org/education-lessons](http://www.soundsalmonsolutions.org/education-lessons)

**Time:** 30 minutes

**Cost:** Varies, possibly free depending on funding, contact for more information
Projects

King Conservation District: Envirothon

Envirothon is an excellent opportunity for students to cultivate new skills and learn about resource conservation career opportunities. High school teams participating in Envirothon explore ecology, natural resource management, and current environmental issues through an overarching special topic/environmental theme.

Contact: Nikki Wolf at nikki.wolf@kingcd.org or 425-773-1868

Link: https://waenvirothon.org/

Time: Variable; trainings are 60-90 minutes

Cost: Free (Schools just need to provide their own transportation to events and cover costs of substitute teachers for the day of competition)

Transportation: Not provided.

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: Blue Teams now have a virtual option. Nature Vision also offers in-class and virtual lessons and field trips.

Nature Vision: Community Science
Community science is a process by which members of the public can participate in important scientific research. Under the guidance of a Nature Vision educator, students will work as scientists and help record data on the health of their local waterways. Students start their programs with a brief introduction to community science and the scientific method, before learning and practicing how to collect valuable data on water quality. Using these new skills, they can then investigate a local body of water and analyze real-world data in order to help local scientists monitor the health of their watershed.

These programs can be arranged either as a stand-alone series of classes, or as a part of a longer Blue Team module. We encourage teachers to schedule the programs at regular intervals each year in order to collect a body of data that can be referenced by each new class. Every year students may add their findings to the classes that came before them, providing an even better sense of the health of their local waterways over time.

**Link:** [https://naturevision.org/community-science](https://naturevision.org/community-science)
**Contact:** info@naturevision.org
**Time:** Variable
**Cost:** Free for most schools. Inquire about free programs with info@naturevision.org
**Transportation:** Must provide own transportation.
**Note:** Community Science now has a virtual option.

### Sound Salmon Solutions: Tree Planting

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

**Contact:** http://www.soundsalmonsolutions.org/contact-us
**Link:** http://www.soundsalmonsolutions.org/education-lessons
**Time:** 60-90 minutes
**Cost:** Varies, possibly free depending on funding, contact for more information

### Vashon Nature Center: Hands-on Field Research

Trained scientists mentor high school students in the methods of field research and applied environmental resource management. Research addresses local land management tied to broader geographic movements. Projects conducted include amphibian monitoring; salmonid studies; monitoring sea star wasting syndrome; cataloguing notable trees; storm-water management; biodiversity studies; and shoreline monitoring. Students are led through the entire scientific process from making scientific observations, to data collection and analysis, and finally reporting and communicating results to local land managers and agencies.

**Contact:** info@vashonnaturecenter.org or 206-755-5798
**Link:** [https://vashonnaturecenter.org/project/scientists-in-schools/](https://vashonnaturecenter.org/project/scientists-in-schools/)
Time: Variable
Cost: Variable
Transportation: Please contact.

Note: Programs are tailored to suit individual classroom teaching goals and are aligned with Next Generation Science Standards. In-class presentations are also available.
Teacher Resources

6th Grade Resources

King County DNRP: Water Education Curriculum, Videos, Maps, Video Lessons, and more
   Link: https://kingcounty.gov/services/environment/wastewater/education/resources.aspx
   Cost: No cost

King County Green Schools Program – Level Three: Water conservation and pollution prevention
   The King County Green Schools Program provides assistance, tools, and recognition to student teams, 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.
   Time: Variable
   Cost: No cost

King County: Protecting Our Liquid Assets
   This Vashon Island course 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.
   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
King County: Geographic Information System (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

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
Unit II: Amazing Wetlands: Functions and Values
Unit III: People and Wetlands
Unit IV: A Walk on the Wild Side
(https://fortress.wa.gov/ecy/publications/documents/8816d.pdf)

Time: Variable
Cost: No Cost

Earth Echo: Going Blue: A Teen Guide to Saving Our Oceans, Lakes, Rivers, and Wetlands
Provides a close look at our oceans and waterways and our role in protecting this water planet. This Leader's Guide provides a lesson sequence that expands on the critical information in Going Blue! so young people can actively reflect on the global water crisis via detailed discussion and writing assignments. Appropriate for both traditional classroom teachers and facilitators for out of school time, the Leader's Guide is an excellent resource to move teens toward action for positive change in their classroom, their community, and the wider world!

Link: http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue

Time: Variable
Cost: Variable (Leaders Guide Free- Student Guide online)

Facing the Future

Facing the Future creates tools for educators that equip and motivate students to develop critical thinking skills, build global awareness, and engage in positive solutions for a sustainable future.
Contact: facingthefuture@wwu.edu
Cost: No Cost

FOR SEA Institute Marine Sciences: A Salmon in the Sound – Puget Sound Project Curriculum

Salmon serves as a vehicle to focus on Puget Sound as an ecosystem that includes rivers and watersheds as well as saltwater environments. Diverse activities which integrate material from many disciplines are united through a student text tracing the return of a Chinook salmon from the open ocean to its spawning ground in the Skykomish River watershed. From food chains and fishing to genetics and wild salmon, the activities highlight the difficult and complex choices Puget Sound residents must make concerning the management of our natural resources.
Contact: http://www.forsea.org/pspguide.html
Order Form: http://www.forsea.org/ORDER.HTML
Time: Variable
Cost: No Cost

Got Green

Got Green is a South Seattle based grassroots organization that raises the voices of low-income communities and communities of color in the green movement.
Link: https://gotgreenseattle.org/
Cost: No Cost

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

Illahee 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

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 works to filter water and to release water over time, thereby reducing the amount of artificial treatment needed to filter water and helping to prevent flooding. In this lesson, students learn about the importance of water quality for human health and agriculture. They relate their own consumption activities to the water supply and also brainstorm various threats to the water supply. By contrasting natural filters with impervious (paved) areas, students compare the impact of development on the ability of nature to provide clean freshwater.
Link: https://www.natureworkseverywhere.org/resources/how-natural-areas-filter-water/
Time: 3-4 45-minute lessons
Cost: No Cost

Link: http://www.washingtonnature.org/cities/solvingstormwater

Nature Conservancy: Nature Works Everywhere: City Habitats
Link: http://www.cityhabitats.org/

PBS Frontline: Poisoned Waters
More than three decades after the Clean Water Act, iconic American waterways like the Chesapeake Bay and Puget Sound are in perilous condition and facing new sources of contamination. Watch the video chapter from Poisoned Waters and discuss.
Link: http://www.pbs.org/wgbh/pages/frontline/teach/poisonedwaters/
Time: Variable
Cost: No Cost

Puget Sound Starts Here: Engineering Solutions
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

Puget Sound Starts Here: StormFest Toolkit
Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the StormFest Toolkit and curricula is to develop and promote an understanding of the serious issues facing our community from stormwater runoff through a hands-on experience. The curricula meets Next Generation Science Standards and Common Core science standards and was developed to serve a highly diverse school district, intentionally designed as an equitable education opportunity for all students regardless of race, ethnicity, or English language learning status. The toolkit details how districts or teachers can adapt and host StormFest to serve your own community.
Curriculum can be modified for grades 4th through 8th, and education materials are provided in both English and Spanish.

**Link:** [https://www.pugetsoundstartshere.org/Resources.aspx](https://www.pugetsoundstartshere.org/Resources.aspx)

**Cost:** No Cost

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

WA Department of Fish and Wildlife: Wild Washington Lesson Plans

As the global COVID-19 pandemic continues, educators, students, and parents are adapting to the new normal of distance/remote learning. To provide support for learners in Washington, we are offering a wildlife-themed curriculum for elementary, middle school, and high school students.

Our Wild Washington lessons incorporate disciplines ranging from math and science to art and literature. Lessons align with the Office of Superintendent of Public Instruction’s state and national environmental and sustainability learning standards.

Wild Washington lessons have modifications embedded for distance learning, but are also developed for teachers to use when Washington students return back to their classrooms.

**Link:** [https://wdfw.wa.gov/get-involved/environmental-education-curriculum](https://wdfw.wa.gov/get-involved/environmental-education-curriculum)

**Cost:** No cost
7th Grade Resources

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Cost: No cost

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Time: Variable
Cost: No cost

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Time: Variable
Cost: No Cost
Note: King County also offers in-class lessons, field trips, and projects.

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Time: Variable
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**Link:** [http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue](http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue)

**Time:** Variable  
**Cost:** Variable (Leaders Guide Free- Student Guide online)

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**Cost:** No Cost

### FOR SEA Institute Marine Sciences: A Salmon in the Sound – Puget Sound Project Curriculum

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**Contact:** [http://www.forsea.org/pspguide.html](http://www.forsea.org/pspguide.html)  
**Order Form:** [http://www.forsea.org/ORDER.HTML](http://www.forsea.org/ORDER.HTML)  
**Time:** Variable  
**Cost:** No Cost

### FOSS Kits: Populations and Ecosystems

Look around...you’re in an ecosystem. How do you know? Because there are organisms everywhere. An ecosystem is an organizational unit of life on Earth, defined by a physical environment and the organisms that live there. Organisms depend on their ecosystem for survival. Energy and matter, in the form of food, flow through an ecosystem. The critical role of photosynthetic organisms in creating food is what allows the rest of the organisms in the ecosystem to exist. Disruption to one element of the ecosystem produces waves and ripples that touch every member of the system. Changes may produce pressures in the ecosystem. When change is precipitous, a population may be exterminated. One powerful change agent in just about every ecosystem on Earth is humans. Human mobility, technology, and institutions place
pressures on many ecosystems. The first step toward placing less disruptive pressure on natural systems is understanding how they work and what they need to remain healthy. Link: https://www.fossweb.com/foss-modules

Time: Variable
Cost: No Cost

Got Green
Got Green is a South Seattle based grassroots organization that raises the voices of low income communities and communities of color in the green movement. Link: https://gotgreenseattle.org/
Cost: No Cost

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

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/](https://www.natureworkseverywhere.org/resources/how-dirt-works/)

**Time:** Three 45-minute lessons

**Cost:** No Cost

**Nature Conservancy: Nature Works Everywhere: How Natural Areas Filter Water**

Nature works to filter water and to release water over time, thereby reducing the
amount of artificial treatment needed to filter water and helping to prevent flooding. In
this lesson, students learn about the importance of water quality for human health and
agriculture. They relate their own consumption activities to the water supply and also
brainstorm various threats to the water supply. By contrasting natural filters with
impervious (paved) areas, students compare the impact of development on the ability
of nature to provide clean freshwater.

Link: [https://www.natureworkseverywhere.org/resources/how-natural-areas-filter-water/](https://www.natureworkseverywhere.org/resources/how-natural-areas-filter-water/)

**Time:** Three to four 45-minute lessons

**Cost:** No Cost


Link: [http://www.washingtonnature.org/cities/solvingstormwater](http://www.washingtonnature.org/cities/solvingstormwater)

**Nature Conservancy: Nature Works Everywhere: City Habitats**

Link: [http://www.cityhabitats.org/](http://www.cityhabitats.org/)

**PBS Frontline: Poisoned Waters**

More than three decades after the Clean Water Act, iconic American waterways like the
Chesapeake Bay and Puget Sound are in perilous condition and facing new sources of
contamination. Watch the video chapter from *Poisoned Waters* and discuss.


**Time:** Variable

**Cost:** No Cost

**Puget Sound Starts Here: Engineering Solutions**

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](http://www.pugetsoundstartshere.org/drain-rangers)  
**Time:** Variable  
**Cost:** No Cost

**Puget Sound Starts Here: StormFest Toolkit**  
Polluted stormwater runoff is the number one threat to the water quality of the Puget Sound. The purpose of the StormFest Toolkit and curricula is to develop and promote an understanding of the serious issues facing our community from stormwater runoff through a hands-on experience. The curricula meets Next Generation Science Standards and Common Core science standards and was developed to serve a highly diverse school district, intentionally designed as an equitable education opportunity for all students regardless of race, ethnicity, or English language learning status. The toolkit details how districts or teachers can adapt and host StormFest to serve your own community. Curriculum can be modified for grades 4th through 8th, and education materials are provided in both English and Spanish.  
**Link:** [https://www.pugetsoundstartshere.org/Resources.aspx](https://www.pugetsoundstartshere.org/Resources.aspx)  
**Cost:** No Cost

**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](mailto: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](https://www.youtube.com/user/StormwaterChannel/playlists?view=1&sort=dd&shelf_id=0)

**WA Department of Fish and Wildlife: Wild Washington Lesson Plans**  
As the global COVID-19 pandemic continues, educators, students, and parents are adapting to the new normal of distance/remote learning. To provide support for learners in Washington, we are offering a wildlife-themed curriculum for elementary, middle school, and high school students. Our Wild Washington lessons incorporate disciplines ranging from math and science to art and literature. Lessons align with the Office of Superintendent of Public Instruction’s state and national environmental and sustainability learning standards.
Wild Washington lessons have modifications embedded for distance learning, but are also developed for teachers to use when Washington students return back to their classrooms.

Link: https://wdfw.wa.gov/get-involved/environmental-education-curriculum

Cost: No cost
8th Grade Teacher Resources

King County DNRP: Water Education Curriculum, Videos, Maps, Video Lessons, and more
   Link: https://kingcounty.gov/services/environment/wastewater/education/resources.aspx
   Cost: No cost

King County Green Schools Program – Level Three: Water conservation and pollution prevention
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   Time: Variable
   Cost: No cost

King County: Protecting Our Liquid Assets
   This Vashon Island course 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.
   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: Geographic Information System (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
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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
   Unit II: Amazing Wetlands: Functions and Values
   Unit III: People and Wetlands
   Unit IV: A Walk on the Wild Side
   (https://fortress.wa.gov/ecy/publications/documents/8816d.pdf)
Time: Variable
Cost: No Cost

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Provides a close look at our oceans and waterways and our role in protecting this water planet. This Leader’s Guide provides a lesson sequence that expands on the critical
information in Going Blue! so young people can actively reflect on the global water crisis via detailed discussion and writing assignments. Appropriate for both traditional classroom teachers and facilitators for out of school time, the Leader's Guide is an excellent resource to move teens toward action for positive change in their classroom, their community, and the wider world!

Link: http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue

**Time:** Variable  
**Cost:** Variable (Leaders Guide Free- Student Guide online)

**Facing the Future**

Facing the Future creates tools for educators that equip and motivate students to develop critical thinking skills, build global awareness, and engage in positive solutions for a sustainable future.

**Contact:** facingthefuture@wwu.edu  
**Cost:** No Cost

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Salmon serves as a vehicle to focus on Puget Sound as an ecosystem that includes rivers and watersheds as well as saltwater environments. Diverse activities which integrate material from many disciplines are united through a student text tracing the return of a Chinook salmon from the open ocean to its spawning ground in the Skykomish River watershed. From food chains and fishing to genetics and wild salmon, the activities highlight the difficult and complex choices Puget Sound residents must make concerning the management of our natural resources.

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**Time:** Variable  
**Cost:** No Cost  
**Order Form:** http://www.forsea.org/ORDER.HTML

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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.

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Time: Variable
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Time: Three 45-minute lessons
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Link: https://www.natureworkseverywhere.org/resources/how-natural-areas-filter-water/
Time: Three to four 45-minute lessons
Cost: No Cost

Link: http://www.washingtonnature.org/cities/solvingstormwater

Nature Conservancy: Nature Works Everywhere: City Habitats
Link: http://www.cityhabitats.org/

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Time: Variable
Cost: No Cost

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Cost: No cost
9th Grade Teacher Resources

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Link: [http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue](http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue)

Time: Variable
Cost: Variable (Leaders Guide Free- Student Guide online)

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Contact: [facingthefuture@wwu.edu](mailto:facingthefuture@wwu.edu)
Cost: No Cost

FOR SEA Institute Marine Sciences: The Changing Sound
An investigation of the decline of the once abundant native Olympia oyster engages students in a wide variety of hands-on/minds-on science activities from experimentally determining the size of Puget Sound to oyster anatomy and ecology to water quality testing. Integrating material from geography, history, writing, and problem solving as well, the activities focus on human interaction with oyster populations and lead students to a consideration of actions they might take for maintaining the health of Puget Sound.
Contact: [http://www.forsea.org/pspguide.html](http://www.forsea.org/pspguide.html)
Link: Order Form: [http://www.forsea.org/ORDER.HTML](http://www.forsea.org/ORDER.HTML)
Time: Variable
Cost: No Cost

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Time: 30 minutes or less
Cost: No Cost (other videos available on sliding scale)

Nature Conservancy: Nature Works Everywhere:
Urban Runoff: Design a School Stormwater Management Plan
Whether a city is rebuilding after a devastating storm or simply looking to revitalize and improve, working with nature rather than against it is a key part of the process of redesigning our cities to be more resilient and sustainable. This lesson introduces students to the problem of urban runoff and a variety of nature-based design ideas and solutions. Through a school mapping activity, students determine which solutions would be best suited to dealing with urban runoff on their school grounds.
Link: https://www.natureworkseverywhere.org/resources/urban-runoff/
Time: Three to four 45-minute lessons
Cost: No Cost

Nature Conservancy: Nature Works Everywhere:
Sustainable Cities: Nature-Based Solutions in Urban Design
In this set of activities, students are introduced to sustainability in the urban context. They will describe their vision of a sustainable city, identify the challenges facing cities, and discover the ecosystem services provided by nature. Sustainable cities are much more than places where humans and nature coexist productively: they are cities in which all people—regardless of race, color, income, and so on—have equal access to a healthy environment in which they can flourish. In designing sustainable cities, planners must incorporate environmental justice ideals, and more broadly, social justice. The lesson guides students into taking an active role in their cities by using technology to map their communities and plan, design, and propose an urban design project that incorporates nature-based solutions.
Link: https://www.natureworkseverywhere.org/resources/sustainable-cities/
Time: Two to five 45-minute lessons
Cost: No Cost

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hydrologists. Using the collected data, students determine how much water their
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Link: http://www.pugetsoundstartshere.org/drain-rangers
Time: Variable
Cost: No Cost

Sustainability Ambassadors: Reading Resources
Videos, Library Links, and Low Impact Design Manual for Schools
Links: Video Links: http://www.sustainabilityambassadors.org/stormwater-videos
Library Links: http://www.sustainabilityambassadors.org/stormwater-library-links
Cost: No Cost

Sustainability Ambassadors: Stormwater Pollution Solution Project Ideas
Link: http://www.sustainabilityambassadors.org/20-action-projects
Cost: No Cost

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Link: https://wdfw.wa.gov/get-involved/environmental-education-curriculum
Cost: No cost
10th-12th Grade Teacher Resources

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King County: Geographic Information System (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

Unit II: Amazing Wetlands: Functions and Values

Unit III: People and Wetlands

Unit IV: A Walk on the Wild Side
(https://fortress.wa.gov/ecy/publications/documents/8816d.pdf)

Time: Variable

Cost: No Cost

Earth Echo: Going Blue: A Teen Guide to Saving Our Oceans, Lakes, Rivers, and Wetlands

Provides a close look at our oceans and waterways and our role in protecting this water planet. This Leader’s Guide provides a lesson sequence that expands on the critical
information in Going Blue! so young people can actively reflect on the global water crisis via detailed discussion and writing assignments. Appropriate for both traditional classroom teachers and facilitators for out of school time, the Leader's Guide is an excellent resource to move teens toward action for positive change in their classroom, their community, and the wider world!

**Link:** [http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue](http://earthecho.org/educator-resources/a-leaders-guide-to-going-blue)

**Time:** Variable  
**Cost:** Variable (Leaders Guide Free- Student Guide online)

### Facing the Future

Facing the Future creates tools for educators that equip and motivate students to develop critical thinking skills, build global awareness, and engage in positive solutions for a sustainable future.

**Link:** facingthefuture@wwu.edu  
**Cost:** No Cost

### FOR SEA Institute Marine Sciences: The Changing Sound

An investigation of the decline of the once abundant native Olympia oyster engages students in a wide variety of hands-on/minds-on science activities from experimentally determining the size of Puget Sound to oyster anatomy and ecology to water quality testing. Integrating material from geography, history, writing, and problem solving as well, the activities focus on human interaction with oyster populations and lead students to a consideration of actions they might take for maintaining the health of Puget Sound.

**Contact:** [http://www.forsea.org/pspguide.html](http://www.forsea.org/pspguide.html)  
**Link:** Order Form: [http://www.forsea.org/ORDER.HTML](http://www.forsea.org/ORDER.HTML)  
**Time:** Variable  
**Cost:** No Cost

### Got Green

Got Green is a South Seattle based grassroots organization that raises the voices of low income communities and communities of color in the green movement.

**Contact:** [https://gotgreenseattle.org/](https://gotgreenseattle.org/)  
**Cost:** No Cost

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

[Illahee] 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:
Urban Runoff: Design a School Stormwater Management Plan
Whether a city is rebuilding after a devastating storm or simply looking to revitalize and improve, working with nature rather than against it is a key part of the process of redesigning our cities to be more resilient and sustainable. This lesson introduces students to the problem of urban runoff and a variety of nature-based design ideas and solutions. Through a school mapping activity, students determine which solutions would be best suited to dealing with urban runoff on their school grounds.
Link: https://www.natureworkseverywhere.org/resources/urban-runoff/
Time: Three to four 45-minute lessons
Cost: No Cost

Nature Conservancy: Nature Works Everywhere:
Sustainable Cities: Nature-Based Solutions in Urban Design
In this set of activities, students are introduced to sustainability in the urban context. They will describe their vision of a sustainable city, identify the challenges facing cities, and discover the ecosystem services provided by nature. Sustainable cities are much more than places where humans and nature coexist productively: they are cities in which all people—regardless of race, color, income, and so on—have equal access to a healthy environment in which they can flourish. In designing sustainable cities, planners must incorporate environmental justice ideals, and more broadly, social justice. The lesson guides students into taking an active role in their cities by using technology to map their communities and plan, design, and propose an urban design project that incorporates nature-based solutions.
Link: https://www.natureworkseverywhere.org/resources/sustainable-cities/
Time: Two to five 45-minute lessons
Cost: No Cost

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/](https://www.natureworkseverywhere.org/resources/activity-guide-water/)

**Time:** Variable  
**Cost:** No Cost

Link: [http://www.washingtonnature.org/cities/solvingstormwater](http://www.washingtonnature.org/cities/solvingstormwater)

**Nature Conservancy: Nature Works Everywhere: City Habitats**  
Link: [http://www.cityhabitats.org/](http://www.cityhabitats.org/)

**PBS Frontline: Poisoned Waters**  
More than three decades after the Clean Water Act, iconic American waterways like the Chesapeake Bay and Puget Sound are in perilous condition and facing new sources of contamination. Watch the video chapter from *Poisoned Waters* and discuss.


**Time:** Variable  
**Cost:** No Cost

**Puget Sound Starts Here: Engineering Solutions**  
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](http://www.pugetsoundstartshere.org/drain-rangers)

**Time:** Variable  
**Cost:** No Cost

**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](mailto:beth.miller@seattle.gov)

**Time:** 29 minute video plus lesson  
**Cost:** No Cost
Sustainability Ambassadors: Reading Resources
Videos, Library Links, and Low Impact Design Manual for Schools

**Links:**

**Cost:** No Cost

Sustainability Ambassadors: Stormwater Pollution Solution Project Ideas

**Link:** [http://www.sustainabilityambassadors.org/20-action-projects](http://www.sustainabilityambassadors.org/20-action-projects)

**Cost:** No Cost

Washington Stormwater Center: Supplemental Videos

**Link:** [https://www.youtube.com/user/StormwaterChannel/playlists?view=1&sort=dd&shelf_id=0](https://www.youtube.com/user/StormwaterChannel/playlists?view=1&sort=dd&shelf_id=0)

WA Department of Fish and Wildlife: Wild Washington Lesson Plans

As the global COVID-19 pandemic continues, educators, students, and parents are adapting to the new normal of distance/remote learning. To provide support for learners in Washington, we are offering a wildlife-themed curriculum for elementary, middle school, and high school students.

Our Wild Washington lessons incorporate disciplines ranging from math and science to art and literature. Lessons align with the Office of Superintendent of Public Instruction’s state and national environmental and sustainability learning standards.

Wild Washington lessons have modifications embedded for distance learning, but are also developed for teachers to use when Washington students return back to their classrooms.

**Link:** [https://wdfw.wa.gov/get-involved/environmental-education-curriculum](https://wdfw.wa.gov/get-involved/environmental-education-curriculum)

**Cost:** No cost
Diversity, Equity, Inclusion and Accessibility Resources

Accessibility
TeacherVision provides resources and tips for teaching children with disabilities and helping them thrive in an inclusive classroom.

University of Washington offers guidelines for educators, events and online access at https://www.washington.edu/compliance/ada/best-practices-for-access/


How to Teach Children About Disabilities and Inclusion https://onlinegrad.baylor.edu/resources/teaching-children-disabilities-inclusion/

Anti-Defamation League
ADL is a global leader in exposing extremism and delivering anti-bias education. They have a collection of K-12 classroom blended and online learning solutions for educators and students that promotes critical thinking and learning around historical and current events topics through the lens of diversity, bias and social justice.
Time: 15 minutes—1 hr, varies depending on lesson plan
Cost: No cost
Note: Lesson plans to go through with students from elementary to middle and high school on a variety of topics.

Liberated Village
Our collective efforts have a shared vision to seek liberation and healing from systemic racism and internalized oppression and to restore scholars, parents/guardians, and family’s belief in their abilities, natural talents, and brilliance. There are 30 organization that make up the Liberated Village that impact educational systems and environments through leading staff professional development related to anti-racist practices/pedagogy and build strong relationships with scholars and families. These best practices lead to a more positive school climate and culture.
Link: https://www.liberatedvillage.com/
Cost: Free for educators/administrators
Time: Variable based on projects and training
Note: To gain access to content and training, sign up for free:
https://www.liberatedvillage.com/offers/MqsWHMmo/checkout

National Education Association: Education Justice
Black Lives Matter at School Resources
Check out resources to help facilitate conversations about race, including classroom appropriate lesson plans, guides on how to have tough conversations with peers and students, and more.
Link: https://neaedjustice.org/black-lives-matter-school-resources/
Cost: No cost
Contact: neaedjustice@nea.org

National Education Association: Education Justice
Protecting Our Students’ Civil Rights
In the face of federal civil rights rollbacks and threats, educators, parents and students are organizing to adopt school board policies that strengthen student protections. Get inspired by educators and students making change in their communities and find model policies that will empower you to ensure all students’ right to a safe and affirming school.
Link: https://neaedjustice.org/protecting-our-students-civil-rights/
Contact: neaedjustice@nea.org
Cost: No cost
Note: Compilation of stories, policies, and tips for teachers and parents/caregivers.

Seattle Education Association Center for Racial Equity
The Mission of the Center for Racial Equity is to empower educators, both individually and collectively to dismantle racial injustice in the SEA, our schools, our community, and our profession. The Center for Racial Equity is dedicated to providing resources for educators, school staff, community members, and family members.
Link: https://searacialequity.com/resources/
Contact: Marquita Prinzing at mprinzing@washingtonnea.org
Cost: No cost

Seattle Public Schools Black Lives Matter Resources
Seattle Public Schools is committed to racial justice and recognition of the lived experiences of our Black youth every single day.
Link: https://www.seattleschools.org/district/calendars/news/what_s_new/black_lives_matter
Cost: No cost
Note: SPS compiled many different resources on antiracism, supporting black owned business, supporting black community led efforts, and prioritizing voices of black youth and other students of color.

School’s Out Washington

Our education and other youth-serving systems are not equitably providing the supports and resources needed to help all young people achieve. The truth is that some young people need more because of the historical and structural systems in place that have perpetuated racism. Data on a variety of youth outcomes show us that racial disparities continue to exist.

At SOWA, we are committed to addressing how these disparities impact young people in our communities. We believe that access to high-quality expanded learning opportunities is essential for closing the opportunity gap and challenging inequity. We know first-hand from three decades of work in diverse communities how expanded learning opportunities can level the playing field. That is why we strive to increase access to quality programs for youth of color so that they have the opportunity to reach their full potential.

Link: https://www.schoolsoutwashington.org/pages/racial-equity-resources

Cost: No cost

Note: Compilation of racial equity resources for teachers and educators working directly with students.

School’s Out Washington

Exploring Structural Racism and Cultural Responsiveness: An Inclusive Approach for Youth Programs

School's Out Washington developed these foundational trainings for all staff working directly with young people. Since these trainings build upon one another, we highly recommend starting with Exploring Structural Racism before moving on to Cultural Responsiveness.

Link: https://www.schoolsoutwashington.org/collections/structural-racism

Time: 2 hours

Cost: No cost

Contact: Nerrisah Townsend at ntownsend@schoolsoutwashington.org

Note: Due to the limitations of virtual training, some content may slightly differ from in person training.

Teaching Tolerance Classroom Resources

From film kits and lesson plans to the building blocks of a customized Learning Plan—texts, student tasks and teaching strategies—our resources will help you bring relevance, rigor and social emotional learning into your classroom.
Link: https://www.tolerance.org/classroom-resources

**Time:** Varies between lessons and learning plans  
**Cost:** No cost

Washington Education Association: Professional Development Network- Closing the Achievement and Opportunity Gap Workshops

Supporting members who advocate and strive to "close the achievement gap" for culturally, linguistically, and economically diverse students is a key priority of the WEA and NEA. In addition to working to shape policies and secure funds, we believe the learner belongs at the center of the change effort and that we should promote the strengths of students in struggling schools.

Link: https://www.washingtonea.org/pd/closing-gaps/

**Time:** Varies depending on training  
**Cost:** No cost  
**Contact:** Ben Ibale at bibale@washingtonea.org  
**Note:** Many trainings available to teachers, all on slightly different topics around closing opportunity gaps for students.
Grant Opportunities for Teachers

Private & Corporate Foundation Grants

3M Community Giving Program/3M Foundation
https://www.3m.com/3M/en_US/gives-us/
The foundation gives in areas of company operations. In WA: Seattle 6701 6th Ave. S. Seattle, WA 98108
Check the website above for current guidelines and application procedures.

Aerojet Rocketdyne Foundation
https://www.aerojetrocketdyne.com/foundation
The Aerojet Rocketdyne Foundation does not accept paper Letters of Inquiry (LOI) or Grant Proposals. Grant proposals will be accepted online by invitation only.

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.

Bank of America Charitable Foundation, Inc.
http://www.bankofamerica.com/foundation/

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
Focus on low to moderate income individuals. No unsolicited requests will be accepted. All nonprofit organizations wishing to apply for a grant through the Cathay Bank Foundation must be invited by a Cathay Bank or Foundation Officer. The Cathay Bank or Foundation Officer will then direct your nonprofit organization to the link to submit a Letter of Intent (LOI).

Dimmer Family Foundation
http://dimmerfoundation.org/
Grants provided to more than 100 charitable organizations annually. 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.

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
(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
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: mgrant@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.thenorclfifefoundation.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
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 and environmental stewardship investments.

Washington Science Technology Engineering and Math (STEM)
http://www.washingtonstem.org/
Funds innovative education programs across Washington State.

Community Foundations

King County
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 is 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.

*KidsGardening.org Grants
https://kidsgardening.org/garden-grants/
KidsGardening.org has a variety of grants to apply for. Check their website for the current grants available.

*Please check the website for the most up-to-date information regarding closures or modifications due to COVID-19.

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.

EarthGen: Professional Development
Each year, hundreds of K-12 teachers receive professional development and clock hours from EarthGen’s experienced staff. Through EarthGen’s seminars and workshops, teachers will learn new strategies to engage students in science learning in the context of environmental issues; receive ready-to-use classroom resources designed to be adaptable to the local and culturally-specific needs of diverse students; and share ideas with like-minded colleagues.
Link: https://earthgenwa.org/professional-development/
Note: Online events

IslandWood:
Next Generation Science Standards In Action: A Professional Development Series
Next Generation Science Standards 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.

School-Based Supports (Free)
OSPI Climetime is funding school-based supports for teachers with planning and assistance in incorporating local phenomena, field experiences, and community assets into their curriculum. Teacher teams are encouraged (but not required) to sign up. Support can include one or more of the below.
Two-Hour Teacher Planning Session at your School
Online Video Chat
Online or In-Person Collaboration
Assistance Delivering Field-Based Lesson
https://islandwood.org/brightwater-center/teacher-professional-development

Pacific Education Institute:
PEI welcomes participation in their expert-designed, Next Generation Science Standards 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://pacificeducationinstitute.org/work/#catalog

Project WET:
Workshops to understand the Project WET Curriculum.
http://www.projectwet.org/teach-and-learn

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 2020-2021 attendees, we are excited to unveil our 2021-2022 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.

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