PROJECT TREE
Teaching Resources for Environmental Education
Your Guide to Environmental Programs for the Classroom
Dear Spokane County Educators,

Thank you for the vital work you do in educating the students in Spokane County. To complement the lessons you provide, environmental agencies offer a range of educational resources. These resources are compiled annually in the Project T.R.E.E. Environmental Program Resource Guide.

Project TREE is a concept borne from years of work between agencies in Spokane County that work in areas of environmental science and natural resources. We have consistently provided education, information and resources for a variety of audiences in and around the county.

This guide lists classroom presentations, field trips, and other programs available at no cost to your school from various area agencies. Many of these offerings enhance your curriculum and support Next Generation Science Standards. They also encourage students to explore issues that directly relate to their everyday lives.

We hope this guide will be a valuable resource.

Sincerely,
The Project TREE Team

Environmental Program Directory
2017 School Year Edition

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Air Quality

Agency: Spokane Regional Clean Air  
Contact: Stephanie May  
Email: smay@spokanecleanair.org  
Website: spokanecleanair.org

With every breath we take, our lungs are exposed to the world around us, filtering over 2,100 gallons of air each day. Breathing dirty air hurts our bodies; it can damage lungs, harm the heart and damage the brain. Invite an environmental educator to your school or organization to learn more about the air we all share and things everyone can do to help protect this precious resource.

Interactive Air Quality Presentation  
Grades: K-12

We are available to engage your students in hands-on learning activities based on your needs. Presentations can range from air quality and weather, air pollution and human health, AP Environmental Science and scouting badge coursework.

Air Quality Toolbox and Materials  
Grades: K-12

We have copies of our coloring and activity books available for teachers and scout leaders to distribute to students. We also have an Air Quality Toolbox available for checkout. The toolbox is filled with a variety of hands on activities (with lesson plans) including a portable particulate monitor, exposed particle filters and build your own particle catchers, particle jars game, and inversion experiment.

No Idle Zone  
Grades: K-8

Stop unnecessary vehicle idling to improve air quality and respiratory health around your school! Become a No Idle Zone School! With this free, turn key program can help reduce vehicle emissions around your school.

Science Nights  
Grades: K-12

Invite Spokane Clean Air to exhibit at your school’s science night. We provide fun, hands-on activities for students and air quality literature for parents.

Natural Resources

Agency: Spokane Conservation District  
Presenter: Stacey Selcho  
Email: stacey-selcho@sccd.org  
Website: sccd.org

The Spokane Conservation District is your comprehensive go-to place for all of your natural resource issues and concerns. The mission of the SCD is simple: to promote the sustainable use of natural resources within Spokane County. We offer numerous educational programs and events to educate students, adults, landowners, producers, or the general public.

Classroom Presentations  
Grades: K-12

A variety of natural resource themed lessons can be provided to K-8 students for free. All lessons support the NGSS for your grade level and provide hands-on opportunities. Lessons are also designed to support the current science instruction being provided in the classroom.

Teacher Workshops

Environmental education workshops utilizing Project Learning Tree, Project WET, and Project WILD are offered every summer. We also provide a Vermiculture in the Classroom and School Garden Teacher workshop annually. Keep an eye open for new themes for teacher workshops!

Outdoor Presentations  
Grades: K-12

If you would like a lesson that is better suited to the outdoors, these can be provided. Whether you are on a field trip or in your school yard, we have a couple of lessons that have already been developed, or we can also work to provide whatever instruction is needed.

FIELD TRIP

SCD provides field trips in the area around our building and inside the WSU Extension called The Green Zone. Students in The Green Zone will participate in a scavenger hunt, nature journaling, look at the world of bees and worm composting. We also help to organize an annual field trip for 4th and 5th grade students in June to the Dishman Hills Natural Area called Kids in the Hills where students participate in four natural resource-based hikes and activities.
How does garbage impact our planet and how can we make less? The City of Spokane and the Spokane County Regional Solid Waste System make environmental education easy by providing lessons and resources that answer those questions. I invite an educator to your school or organization and learn more about reducing waste through recycling and composting.

**Hungry For a Waste-Free Lunch?**
**Grades:** K-6
Can using a lunch box save the planet? Students will discuss how the choices they make at lunchtime can save valuable resources and reduce the amount of garbage they generate at meals.

**Nature’s Recycling**
**Grades:** K-12
What does the Fall have to do with improving soil? Fungi, bacteria, and invertebrates are all decomposers that help break down food and yard waste into something beneficial. In this lesson, students will learn composting science and examine the worms that eat our garbage.

**Waste to Energy Facility**
**Grades:** 3-12
Find out where our garbage goes and how trash becomes electricity on a tour of Washington’s only waste to energy facility. Tours last 90 minutes. Group sizes are limited to staff availability and must be arranged two weeks in advance. Lessons can also be brought to the classroom if a field trip is not an option.

**Make it Recycled - Paper!**
**Grades:** K-6
Do you recycle paper in your classroom? Students will make their own “new” piece of paper from scraps out of your recycle bin. Discussion during this activity will include practicing the three R’s and the importance of recycling to save valuable resources - trees!

**Aquifer-In-A-Cup**
**Grades:** 3-6
Take an inside view of Spokane’s water source and Water Works as we follow our water “from the ground up to back down the drain.” Student’s will build an aquifer-in-a-cup and discuss possible pollution sources.

**Your Water Footprint**
**Grades:** 3-12
By playing a customized game, students become aware of their daily visible and virtual water use. The game is followed by construction of a water meter to measure their personal water use while brainstorming ways to be water wise at home.

**Storm Drain to Stream**
**Grades:** 3-6
Rain, rain, goes away, but where to? Students guide a drop of water through a maze of “drainage pipes” to learn about pollutants and how actions in the home, yard, and street affect water quality.

**Upriver Dam and Well Station**
**Grades:** 3-12
Where does our water come from? How do you turn water into electricity? Find out by visiting the City of Spokane’s historic facility where you can see the aquifer, pump house, and the inner workings of hydroelectricity.

*Want to double down? Combine the Upriver Dam tour with the County’s Water Education and Reclamation Center and tour Spokane’s complete water cycle.*

**Agency:** Spokane Solid Waste
**Presenter:** Kris Major
**Email:** kmajor@spokanecity.org
**Website:** spokanecounty.org/utilities/solidwaste

**Agency:** City of Spokane Water Department
**Presenter:** Kristen Zimmer
**Email:** kzimmer@spokanecity.org
**Website:** waterstewardship.org

Discover where Spokane’s water comes from, where storm drains lead to, and how to sustain and conserve our most precious resource by building system models and creating tools to use less water. The City of Spokane Water and Stormwater Department, KSPS, and the Spokane Aquifer Joint Board have joined forces to offer a series of classroom workshops to involve and educate the community in water stewardship.

*Workshops are also available individually.*
The Spokane County Water Resource Education Center located at 1004 N Freya Street is a destination venue where lessons about water revolve around the Spokane Valley-Rathdrum Prairie (SVRP) Aquifer and Spokane River watershed. Activities allow students to visualize concepts that complement teachers’ lessons. Classroom and Science Night visits also available.

**The Water Cycle & the SVRP Aquifer**
**Grades:** K-8

Did you know that the water cycle does not always move in a perfect circular manner? One activity demonstrates this while an aquifer model brings to life the concept of groundwater and how it moves under our feet. The Spokane River and SVRP Aquifer are highlighted in an activity that represents their interchange.

**People & Water**
**Grades:** K-12

- **Stormwater:** Where does it go? How does it get polluted? How does civil engineering play a role? An Enviroscape model, stormwater maze and site evaluation are all interesting activities.
- **Wastewater:** Where does your wastewater go and how is it cleaned? How do chemistry and biology play a role? What should we flush/not flush?

**FIELD TRIP**
**Education Center & Reclamation Center**
**All grades**

Along with water lessons and visual aids at the center, students can learn a lot from the adjacent County Water Reclamation Facility. A virtual wastewater tour created with a GoPro camera, allows a peek inside the processes that turn wastewater into reclaimed water! An actual walking tour of the operating facility is available too (group size and age dependent). Physical, chemical and biological processes play an important role in water treatment and are explained age appropriately.

**Investigate Water**
**Grades:** 5-12

What are the differences between aquifer, river, storm drain, pond, and reclaimed water? In this activity students will try to identify water samples based on their analyses of the minerals and organisms in the water. As a conclusion, we will identify the sources of the water samples and discuss the reasons for the differences in minerals and organisms.

**Clouds, Clouds, Beautiful Clouds**
**Grades:** K-3

Learn about all the different kinds of clouds in the sky, and make your own personal cloud chart to take home.

**Three Little Pigs**
**Grades:** K-4

The big bad wolf is trying to blow our houses down, but which houses are the sturdiest from the wind? Learn about the wind and weather safety as students build houses out of different materials and see which will be the last one standing.

**Wild Weather**
**Grades:** 4-8

Tornadoes, Thunderstorms, Hail, and Lightning! Learn of the wild weather of the Inland Northwest and ways to stay safe. Through a series of demonstrations, students will understand air flow, instability and how thunderstorms form.

Weather affects many facets of our lives - from what we wear to how we plan our day. Weather can be exciting - stormy one day to calm the next. The National Weather Service provides the weather/water forecasts and warnings for the people of eastern Washington and north Idaho with the only weather radar in the Inland Northwest. Educational outreach includes office tours, school presentations, and participation in local science events.
Western Washington Regional Science & Engineering Fair (EWRSEF) is a one-day event at WSU Spokane that provides 6-12th students throughout the region the opportunity to present their STEM projects in a conference setting.

To compete, students submit an abstract about their projects in advance of the event for review from industry experts and acceptance into the conference. Event day entries include three-dimensional posters and project notebook presentations. High school seniors may be eligible to compete for college scholarships.

The EWRSEF is designed to:

- Encourage students to do real scientific investigations and explore engineering concepts and inventions.
- Provide students a forum to share their projects with their peers and learn about STEM-related issues.
- Send participants to compete at the Washington State Science and Engineering Fair and select winners will be eligible to attend the International Science and Engineering Fair.

To find out more information and view funding resources, visit: www.ewrsef.org.

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West Valley Outdoor Learning Center
http://oic.wvsd.org

The West Valley Outdoor Learning Center gives teachers and students an opportunity to have experiences in an outdoor setting while instilling an appreciation for fish, wildlife, and our natural resources. All activities support Next Generation Science Standards. For more information, contact Jami Ostby at Jami.Ostby@wvsd.org.

Project WET Teacher Workshops
www.projectwet.org

Project WET provides teachers and resource professionals with accredited workshops designed to provide non-advocacy, hands-on, interdisciplinary water education materials and instruction. This program trains teachers in use and application of the “Project WET Curriculum and Activity Guide”. For more information, contact Stacey Selcho at stacey-selcho@sccd.org.

Washington Green Schools
www.wagreenschools.org

Students and communities across Washington State are working to create greener, healthier school environments. Washington Green Schools provides a system of support for school communities to set and achieve sustainability goals through: classroom resources, hands-on support, trainings and workshops, and statewide recognition. Visit wagreenschools.org to learn more.
Thank you!

For additional copies of this directory, please call 509-742-8144 or email kzimmer@spokanecity.org

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