

It's All WITHIN YOUR REACH

A publication for teachers and educators from the Johnson Creek Watershed Council

A Publication Dedicated to Johnson Creek Watershed Education

By Bowen Patterson, Education Intern

Providing exciting, hands-on environmental education for your students isn't always easy. With the multitude of pressures facing public school teachers today, environmental education may even get pushed aside. If you even have the time to include it in your curriculum, how do you do it? Who can you contact for help and experience? Where can you get the resources you need?

This newsletter is here to help you, the teacher, provide environmental education experiences for your students by suggesting resources and tools you may need along the way. Our focus is the Johnson Creek Watershed, within which your students live and/or your school is located. We believe education is key to healthy watersheds.



Students at Lent Elementary School learn about native plants.

Each issue includes a "Resources" section, pointing you to valuable online and print materials to fortify or complete your watershed curriculum. A "Fun Watershed

The Johnson Creek Watershed Council

Johnson Creek flows 26 miles from its headwaters near the Sandy River to its confluence with the Willamette River, passing through four cities (Gresham, Portland, Milwaukie, and Happy Valley) and two counties (Clackamas and Multnomah) along the way.

A watershed is defined as the area of land where all precipitation drains to a common water body, such as a river or lake. Watersheds are not made of water, but of land. This means that the boundaries of a watershed are determined by the shape of the land that surrounds them. Water runs downstream, so buttes and ranges often form the boundaries of a watershed.

Johnson Creek flows into the Willamette River and therefore is a part of the Willamette River Watershed, which in turn is part of the Columbia River Watershed. The Johnson Creek Watershed is

comprised of several smaller watersheds, called subwatersheds, or subbasins. These include Kelley Creek, Crystal Springs, Sunshine Creek, Butler Creek, Veterans Creek, and Badger Creek.

The Johnson Creek Watershed Council (JCWC) was formed in 1994 to fill the need for a single organization which could have the entire watershed as its focus. The JCWC provides an important opportunity for community members to participate in enhancing the resource that flows through their neighborhoods and communities. In 2001, the Council became a 501(c)3 non-profit.

Our mission is to inspire and facilitate community investment in the Johnson Creek Watershed for the protection and enhancement of its natural resources.



Welcome

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Activity" in each issue, generally suitable for younger students, provides hands-on experience on a particular topic. The "Education Spotlight" highlights an organization, individual, or school that is currently working with watershed and environmental education.

Most importantly, this newsletter provides information about partnering with the Johnson Creek Watershed Council (JCWC) to offer your students viable, real-life experiences with the watershed around them and opportunities to become stewards of its natural areas.

Over the 2003-04 school year JCWC staff engaged over 1000 students from elementary, middle and high schools, and universities in watershed education programs at no charge.

Sellwood Middle School worked with JCWC to "adopt" a creek-side demonstration site at 21st and Tacoma, and will continue working with the council to facilitate site planning, invasive plant removal,

planting, wildlife identification, and water quality monitoring.

Centennial High School 10th grade science classes learned about watersheds and participated in fieldwork associated with their career day to restore and maintain areas of Gresham Woods. The school has made a 10-year stewardship commitment to this 10-acre site in the watershed, and JCWC will continue to support education and fieldwork.

Raleigh Hills Elementary School students helped JCWC release salmon in Johnson Creek Park and JCWC staff then provided presentations about watershed health.

Along with providing hands-on support for watershed education, JCWC is dedicated to serving as a watershed library and technical support resource. We can provide support, materials, and our experience with the watershed to help you provide beneficial watershed and environmental education for your students.

Call us with any questions, or visit our new Water Resource Center at 1900 SE Milport Rd. in Milwaukie!



JCWC staff help students plant trees in a natural restoration area.

Education Spotlight: Zenger Farm

Friends of Zenger Farm Provide Education in Outer SE Portland

Our mission is to promote sustainable food systems, environmental stewardship and local economic development through a working urban farm. Current programs include: Grow Wise Youth Education, Immigrant Market Garden, Community Supported Agriculture (CSA) Farm Operation, Scholarship Shares Program (providing CSA scholarships to low-income families).

Our Grow Wise Youth Education program focuses on service learning and experiential education. On your first visit to Zenger Farm we recommend a Farm Tour. Farm Tour takes approximately 1.5 hours

and the topics include pollination, organic methods, land use, food systems and tasting, touching and smelling what is growing on the Farm. We also use our urban farm to host multiple-visit experiences, which allow a more in depth experience in service learning, farm monitoring projects, insects, seeds, soil, pollination, stormwater management, wetland ecology, land use, plant biology, composting, cooking, and local food systems. The Friends of Zenger Farm serves K-12 students year round, free of charge. Our programs are seasonally oriented and focused to meet benchmark requirements. To schedule, please call our Education Coordinator, Nieka Rahe at 503-282-4245.

Partnership Opportunity

Environmental Services City of Portland and Portland Parks & Recreation have teamed up to provide free restoration/education opportunities within the city's watersheds.

If you are considering having your students do community service and conduct hands-on field-based environmental education, call Lynn Vanderkamp at (503) 823-5281 or Louise Shorr at (503) 823-6131. There are approximately 20 slots reserved for work in targeted restoration sites.

Each class is required to make two visits to the adopted plot so they can participate in invasive plant removal, maintenance or native plant planting. Students can also participate educationally in plant identification, water quality testing or wetland simplified delineation activities. This program is available for 5th graders on up and a minimum time of 2.5 hours per field trip is required. Call for more information.

Resources

Each issue, we'll provide you with a list of resources that can help you find the materials you need to create a lively, fun, educational curriculum about the water cycle and watersheds. See www.jcwc.org for more!

The Environmental Protection Agency's page of resources for students and youth in their "Adopt a Watershed" program (<http://www.epa.gov/adopt/resources/>) provides lengthy lists of links to other educational websites, as well as links to sites with educational and interactive materials to purchase and the sites for top-rated watershed curriculums.

<http://www.epa.gov/OWOW/NPS/kids/splash/webpage2/> this site allows you to download a free demo of a CD-ROM game called **Splash!**, designed to teach kids about water quality and the environment.

<http://www.nalms.org/education/educres.htm> This site from the North American Lake Management Society hosts the "Plant Life Game" and the "Pond Life game," both which ask players to place various flora and fauna in different parts of the aquatic ecosystem.

<http://www.envirosapes.com/> is the

site for Envirosapes, an interactive watershed/non-point source model designed to teach children about how



JCWC staff teach students at Seth Lewelling Elementary using the Envirosapes teaching model.

different land uses affect water quality. This site also has posters, puzzles, publications and other educational

watershed-themed products.

<http://cgee.hamline.edu/waters2thesea/> This CD-ROM from the Center for Global Environmental Education teaches students in grades 4-9 about diverse science and social studies concepts. Virtual journeys down three Upper Mississippi watersheds take users from prehistoric times up to the present through prairie, deciduous forest, and coniferous forest ecoregions. Each journey investigates the impacts of human land-use activities within each watershed. Users also conduct water-quality tests on simulated water samples. Twenty-four short videos, landscape panoramas, hundreds of historic photos, and numerous engaging multimedia activities provide for a rich learning experience. Contact the Center for Global Environmental Education. Phone: 651-523-2480; Email: cgee@hamline.edu

Fun Watershed Activity

Objectives:

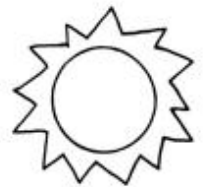
Students will: 1) explain how seeds are carried by animals 2) evaluate the importance of wildlife as contributors to ecological systems based on this example of seed dispersal

Materials:

One large fuzzy sock or masking tape Optional: 2 shoeboxes filled with planting medium, 2 cookie sheets or trays

Procedure: 1) each student wears a sock over their shoe 2) splits into 2 or more teams 3) each team picks 1 location area within the watershed area 4) students walk for 10 minutes in the area 5) contrast the seeds found in each of the locations 6) discuss the seeds found and identify other objects attached to the socks 7) create an environmental map that shows the ecosystem differences in the watershed 8) each group should tally the number and kind of seeds on their socks

Evaluation: Ask students how their socks could be similar to animals fur. Then discuss how the seeds are carried by animals the same way they are carried by socks. Seeds may stick to animals fur in one location and then fall off in another location. Discuss with students why this is important to environmental diversity. - from <http://www.jcwc.org/resources/edlessons.htm>



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Seed collecting nature walk



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