

# OLYWATER Schools Program

## 4TH GRADE OPTIONS & GOALS

2007/2008



### Presentation and Field Trip

*Presentation: "Water on the Run" 1.5 hours*

In "Water on the Run" students build models representing three different Olympia watersheds in order to make observations and inferences about how the water cycle differs in urban versus forested areas. This hands-on activity serves as context for students to learn how the City of Olympia manages stormwater runoff.

Students then head outside to visit the **Drain Dare**, an interactive stormwater demonstration trailer, to experience firsthand what types of pollution are carried by runoff and how they can take action to protect local streams and inlets.

*Field Trip Options: Watershed Park or Black Lake Meadows (pick one) 2 hours*

The field trip follows within a few days of the presentation.

- *Watershed Park:* On a loop trail hike, students explore how water and forest habitat are connected. They also consider how humans have impacted Moxlie Creek historically and during the present day. Highlights include encountering native plants, forest animals, spring-fed creeks, and wetlands.
- *Black Lake Meadows:* Students engage in a quest to unravel the mystery of what happens to polluted stormwater runoff from Capitol Mall. Their journey will lead them from Yauger Park to Black Lake Meadows, a 42-acre stormwater facility. Students will learn how this wetland provides habitat for migratory birds, prevents flooding, and cleans water before it reaches Capitol Lake and Budd Inlet.

Salmon Field Trip to Tumwater Salmon Hatchery 1.5 hours

On this field trip students have an opportunity to experience how hatchery Chinook salmon are managed and spawned by Fish and Wildlife hatchery workers. On a loop walk around Tumwater Falls Park, students witness firsthand the determination of the upstream swimming salmon, learn history about the Deschutes River, visit the Falls, and view fish ladders. A 75-minute interactive presentation following the field trip introduces students to the differences between the wild and hatchery salmon lifecycles, as well as salmon habitat needs, and the impacts of human activities on salmon.

Tree Planting/Maintenance Action Project 1-1.5 hours

Students take action by planting, weeding, and mulching native trees and plants that play important roles in preventing flooding and erosion, providing habitat for wildlife, and improving water quality. Tree planting sites include Black Lake Meadows, Mission Creek, and Indian Creek (and more may be added). Depending on the site we can accommodate 2-3 classes at one time. Includes a 30-minute presentation prior to field trip.



Storm Drain Stenciling Action Project 1 hour

With supplies and support from OLYWATER Program staff, students take action by marking and/or stenciling storm drains at the school or in a nearby neighborhood.



Ivy Pull Action Project 1 hour

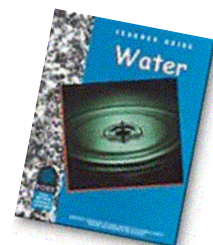
For this action project, students pull ivy at a local park or site to improve forest and riparian habitat.

## OLYWATER Presentation Overview - 4<sup>th</sup> Grade

<b>Program Goals</b>	<ul style="list-style-type: none"> <li>To increase <i>knowledge</i> about the City of Olympia's storm and surface water.</li> <li>To provide education and training opportunities that improve students' <i>skills</i> necessary for the protection and enhancement of local water resources and associated habitats.</li> <li>To <i>motivate</i> students, teachers, and families to change behaviors that adversely affect water and habitat quality within local watersheds.</li> </ul>
<b>Key Concepts</b>	<ul style="list-style-type: none"> <li>Water cycles on the earth in three different physical states (solid, liquid, and gas).</li> <li>Water that hits the ground will do one of the following: infiltrate into the soil, run off, or evaporate into the air.</li> <li>Water runs off impervious surfaces and infiltrates into pervious surfaces.</li> <li>The City of Olympia builds and manages a stormwater system to deal with water that runs off impervious surfaces.</li> <li>Stormwater runoff carries pollution to the nearest body of water, affecting the health of our water resources and local ecosystems.</li> <li>People can take several actions to keep pollutants out of our stormwater.</li> </ul>
<b>Science GLEs</b>	<p>1.1.1 Understand physical properties of Earth materials including rocks, soil, water, and air.</p> <p>1.2.1 Analyze how the parts of a system go together and how these parts depend on each other.</p> <p>1.3.3 Understand that a substance remains the same substance when changing state.</p> <p>2.1.2 Understand how to plan and conduct simple investigations following all safety rules.</p> <p>2.1.3 Understand how to construct a reasonable explanation using evidence.</p> <p>2.1.4 Understand how to use simple models to represent objects, events, systems, and processes.</p> <p>3.1.1 Understand problems found in ordinary situations in which scientific design can be, or has been used, to design solutions.</p> <p>3.2.4 Understand how humans depend on the natural environment and can cause changes in the environment that affect humans' ability to survive.</p>
<b>FOSS Kit Alignment</b>  (Please teach the following investigations prior to the classroom presentation.)	<p><u>Investigation 1:</u> Water Observations; Part 1 (<i>Looking at Water</i>)</p> <p><u>Investigation 2:</u> Hot Water, Cold Water; Parts 1-3 (<i>Build a Thermometer, Sinking and Floating Water, Water as Ice</i>)</p> <p><u>Investigation 3:</u> Water Vapor; Parts 1 and 4 (<i>Evaporation and Condensation</i>)</p> <p><u>Investigation 4:</u> Waterworks; Part 1 (<i>Water in Earth Materials</i>)</p>

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*The City of Olympia is committed to the non-discriminatory treatment of all persons in the employment and the delivery of services and resources.*

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