



## ENVIRONMENTAL SCIENCE CENTER 2011-12 PROGRAM GUIDE

**Programs are aligned with Washington State Essential Academic Learning Requirements, Science Standards, and Environmental Education Standards. ESC staff will work with teachers to modify programs to fit their curriculum needs.**

**ESC strives for a ratio of one instructor for every 12 students in the field in order to provide high quality instruction and personal attention for every student as well as to meet teachers' requests for specific curriculum emphasis.**

**\*For schools with more than 50% of the student population on a free or reduced lunch program, please inquire about a program cost fee waiver.**

**To register e-mail [education@envsciencecenter.org](mailto:education@envsciencecenter.org)  
or visit [www.envsciencecenter.org](http://www.envsciencecenter.org) to download a registration form.**

### **Grades: 4-8 – Salmon and You: Classroom Presentation & Field Study Investigation (offered in the fall)**

This program explores the lifecycle of salmon, provides hands-on experience with internal/external fish anatomy, identifies salmon habitat needs and limiting factors, and analyzes water quality. The 1 hour classroom presentation and 3 hour field study help students determine their local stream or river suitability for salmon as they investigate the health of the Walker/Miller Creek Watershed or Duwamish/Green River Watershed. Students also discover their impact on salmon habitat. The field study includes a large motor skills game. This program can be offered as a classroom only session.

\*Cost: \$50 for the 1 hour classroom presentation and \$200 for the 3 hour field study.

### **Grades: K-12 – Water Heroes: Classroom Presentation & Field Study Investigation**

The 1.5 hour classroom presentation uses an interactive power point presentation and group game to discover components of a healthy watershed and water cycle. The 1.5 hour field study investigation takes students to a local water feature such as Walker Creek or Angle Lake to test the quality of the water and identify living and non-living elements present. All three focus areas can be offered as a classroom only session.

Teachers can choose from two grade specific focus areas:

1: **Follow the Flow** – Explore the water cycle and properties of water and the importance of watershed health and water quality. Identify your local watershed and examine indicators of watershed health. (Grades K-2)



2: ***Where Does it Go?*** – Examine human made modifications to the watershed system and review the difference between a sewer and storm drain. Identify street run-off and help students identify actions they can take to reduce the amount of pollutants entering storm drains. This program includes a scientific exploration with water quality testing. (Grades 3-12)

\*Cost: \$50 for the 1 hour classroom presentation and \$150 for the 1.5 hour field study.

### **Grades: K-12 – Your Neighborhood Wilderness: Classroom Presentation & Field Study Investigation**

This program introduces students to their local backyard ecosystems. The 1 hour classroom presentation incorporates a power point presentation and scavenger hunt. The 1.5 hour field study will be performed at your school, Camp Schoenwald or at Seahurst Park's 169 acres of woodland trails.

Teachers will choose from three possible focus areas:

- 1: ***Who's Bugging You?*** - Terrestrial Invertebrate Identification (Grades K-2)
- 2: ***What's Under Your Feet?*** - Soil and Plants (Grades 2-5)
- 3: ***What's Above Your Head?*** - Birds and Biodiversity (Grades 6-12)

\*Cost: \$50 for the 1 hour classroom presentation and \$150 for the 1.5 hour field study.

### **Grades: 4-8 – Digging up Dirt – A Field Investigation Using the Scientific Method in Three Classroom Sessions**

This lesson includes three 1 hour classroom/field investigation sessions. Students will use the scientific method to collect, measure, and analyze soil samples from two different school ground locations.

- *Session One:* An overview of the steps involved in planning a field investigation: Forming a Hypothesis, Materials, Procedures, Data Collection, and Conclusion.
- *Session Two:* The data collection phase in which transect lines are used to collect soil from two different locations on the school grounds and tools are used to measure the results.
- *Session Three:* Students graph and analyze their data to accept or reject the hypothesis. Students draw conclusions and recognize variables. Students connect this information to environmental issues and stewardship practices.

\*Cost: \$200 for three 1 hour classroom/field study sessions.

### **Grades: K-12 – Exploring Intertidal Puget Sound: Classroom Presentation & Field Study (offered in the spring)**

This program introduces students to the local Puget Sound beach habitat and the organisms that live there. Beach etiquette and stewardship are stressed. The classroom presentation includes a PowerPoint presentation and a field guide activity tailored to the focus area. The field study will be performed at Seahurst Beach.



Teachers can choose from four possible focus areas:

- 1: ***Who Am I?*** - Identification of Marine Invertebrates (Grades K-2)
- 2: ***Who's My Neighbor?*** - Intertidal Zones (Grades 3-4)
- 3: ***Who's My Dinner?*** - Predators and Prey of Marine Invertebrates (Grades 4-6)
- 4: ***Who's My Relative?*** - Organization of Marine Invertebrates by Phylum (Grades 7-12)

*All four focus areas can be delivered as a classroom only session.*

\*Cost: \$50 for the 1 hour classroom presentation and \$150 for the 1.5 hour field study.

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