



2011 Summer Teacher Institute

Nisqually National Wildlife Refuge, June 27, 28, 29, 30

RESTORE (Restoration, Education, Science Training and Outreach for Regional Educators) is pleased to bring "Earth Partnerships for Schools" to SSG, NREP, and CBEC teachers!

Ecological Restoration of Schoolyards & Water Quality Monitoring!

In this special 4-day training, you will:

- Participate in sequential, dynamic restoration activities.
- Access a variety of tools as you learn how to guide your students, colleagues and members of the community through the schoolyard restoration.
- Take a field trip to local school to see their ecological restoration project in process!
- Receive a copy of the "Earth Partnership" K-12 curriculum guide with more than 100 activities cross-referenced with curriculum standards, objectives, and student assessment ideas.
- Learn how to test your community's water quality with your students and get involved with your local watershed education programs.
- Acquire environmental education tools in art, science, writing and history.
- Network with other teachers and local resource professionals who can assist you with your ecological restoration schoolyard project.
- \$250.00 per school restoration project will be available!

For more information and to register contact Anne at South Sound GREEN (360) 754-3588, ext. 108 ssgreen@thurstoncd.com

Kathy at Chehalis Basin Education Consortium (360)464-6722 kjacobson@esd113.k12.wa.us

**This program
is free!**

**8:30am-4pm
daily**

Hands-on!

**Up to 24 free
clock hours!!**

**Stipends for
qualified teachers!**

Monday - June 27

Introduction and Study the Model

8:30 Coffee/Tea and Socializing (Optional)

9:00 Welcome and Introductory Activities

- *Botany Bouquet (1-3)*
- *Observations from a Single Spot (1-1)*

10:15-11:00 Keynote Presentation

- What's Green and Grows All Over? Studying Ecosystem Biodiversity (1-4)

12:00 – 12:30 Lunch

Studying the Model Investigate Site History & Perform Site Analysis

12:30-1:00 Compass Basics (3-1)

1:00-2:00

- Ecosystem Observations (1-15) and Ecosystem Comparisons (1-5) **OR** Plant Families (1-10)

2:00-3:00

- Plant Families (1-10) **OR** Ecosystem Observations (1-15) and Ecosystem Comparisons (1-5)

3:00 Land History through Survey and Ownership Records (2-4)

3:45-4:00 Final Thoughts and Daily Wrap-Up

Tuesday – June 28

Perform Site Analysis, Plan the Restoration

8:30 Coffee/Tea and Socializing (Optional)

9:00-9:30 Getting the Big Picture with Michelle Salgado

9:30 Field Trip to Chloe Clark: Tour of Chloe Clark Elementary School

- *Conducting a Site Analysis (3-0)*
- *Soil Texture Feel Test (3-14)*
- *Infiltration Tests (3-15)*

10:45-11:45 Plan the Restoration

- *What's A Square Foot Anyway? Laying Out the Design Plan (5-5)*
- *Discussion – Species Selection: Herbaceous and Woody Plants (5-6) and (5-7)*

12:00 -12:30 Lunch

Make Community Connections, Plan, Prepare & Plant the Site

12:30-1:30 Make Community Connections, Plan the Restoration

- *Designing a Restoration (5-2)*
- *Up Close and Personal (5-8)*
- *Balancing the Budget (5-10)*

1:30-2:30 Prepare the Site

- *Site Preparation Techniques (6-0)*
- *How Much Mulch? (6-2)*

2:30-3:45 Plant the Site

- *Planting Native Plants (7-6)*
- *Planting Birthday Celebrations (7-7)*

3:45-4:00 Final Thoughts and Daily Wrap-Up

Wednesday – June 29

Manage the Site

8:30 Coffee/Tea and Socializing (Optional)

9:00-9:15 Recap of Tuesday

9:15-9:45 Manage the Site & Conduct Research

9:45-10:45 Invasion of the Non-Natives (8-2) (Worst Weed in WA activity)

10:45-11:00 Young Restoration Checkup (8-5)

11:00-12:00 Working Lunch - *It's Your Turn* – Engage your students in inquiry research (9)

Possible Activities:

- *Inquiry-Based Field Problems (9-1)*
- *Germination Determination (9-2)*
- *What Does a Seed Need? (9-3)*
- *Sweeping Discoveries (9-10)*
- *Inquiry Learning: Students as Ecological Researchers (9-11)*
- *Inquiry Learning: What's Your Favorite Color? (9-12)*

Use the Learning Grounds

12:00-12:30 Introduction to Phenology and Birthday Phenology - *Activity (1-1) Website*

12:30-1:20 Choose 2 of 3

- *Phenological Nature Walks 10-9 and Plant Power! (10-11)*
- *Phenology: Climate Change in Your Schoolyard (10-18)*
- *Wheelscapes: Enhancing Sense of Place with Phenology Wheels - Activity (1-2) Website*

2:20-2:30 Transition

2:30-3:00 Small group report out

3:00-3:30 Observations from a Single Spot (1-1) Reflect on training and how we will implement and involve students in a school restoration project.

3:30-4:00 Wrap up, sharing, and evaluations

Thursday – June 30

Water Quality Monitoring Training

8:30 Coffee/Tea and Socializing (Optional)

9:00 Optimal Water Quality Parameters and Introducing your Water Quality Unit

10:15 Stream Survey Factors Effecting Results

11:00 Collecting Water Samples

11:15 Dissolved Oxygen, Biochemical Oxygen Demand, Nitrates, pH and Turbidity

12:45 Lunch at Twin Barns picnic tables

1:15 Overview of the Estuary Restoration and hike back to Education Center

1:30 **New teachers** Water Quality Monitoring Day and Logistics discussion

Returning Teachers NREP/SSG/CBEC Program Assessment

2:30 Technology Integration—On-line WQ data

3:15 **Tying It Together-**

Weaving New Experiences into Your Watershed Year

Calendar overview and additional opportunities through SSG/CBEC/NREP