Project Information Sheet

Applicant: South Sound Estuary Association, P.O. Box 2182, Olympia, WA 98507

Strategic Initiative: D6.3: Incorporate Puget Sound place-based content into K-12 curricula throughout the Puget Sound region. Connect schools with technical assistance, inquiry-based learning opportunities, and community resources. Implement student service projects connected to ecosystem recovery. Link schools to organizations with structured volunteer programs.

Priority Near-Term Action: Implement field trip program to educate elementary school students on changes in local landforms over time

Ecosystem threat summary: Habitat modification via urbanization and dredging

Project Description:
To enhance Olympia and Thurston School Districts' Landform science curriculum, the South Sound Estuary Association (SSEA) will provide elementary students in Olympia School District and Thurston School District with hands on learning about the Budd Inlet and Capital Lake historic shoreline and dredging. Using the customized landform kit, the students will learn about the important factors sediment plays in an estuary and the changes that take place when dredging occurs. The students' experience includes facilitated estuary activities in the Estuarium, a marine activity center in downtown Olympia that teaches about the function and flow of estuaries. A guided walk along the historic shoreline will demonstrate the impact sediment has had on the City of Olympia waterways and give students a glimpse at real life engineering challenges that face their communities.

The Landform Kit, developed by the City of Olympia's Stream Team, is a hands-on learning tool demonstrating some of the challenges of living on the edge of an estuary. Using custom models of local shorelines, students will be able to alter the flow of water and sediment and see the impact of erosion and deposition. They will be introduced to the math needed to calculate sediment flow, and develop an understanding of the role engineering plays in real life. Specific educational standards for the fifth grade to be addressed in this program include Next Generation Science Standard (NGSS) ESS 2-1 and common core math standard 5.MD.

Major Tasks
Get feedback from Olympia and Tumwater School districts on curriculum development to date, and confirm program participation.
Finish development of curriculum to Next Generation Science Standards.
Train educational staff on landforms curriculum.
Schedule and run field trips for 80 school groups over two years.
Share lesson plans with other South Sound school districts.

Budget
South Sound Estuary Association (SSEA)

D 6.3 Exploring Landforms Science Unit Budget

Year 1 & 2 – Olympia School District Focus (20 sessions)

Staff: 4 educators $14/hour for 4 hours each session

2 Estuarium Science Educators	$ 2,240.00
2 Historic Shoreline Educators	2,240.00
Coordination $14 X 3 hrs. X 20 sessions	840.00
Bus Transportation: $100 per bus trip	2,000.00
11 schools (several with 4 classes)/20 trips	
Online survey software for program evaluation	300.00
Curriculum development $14/hour X 20 hours	280.00
Support materials, consumables	350.00
PHASE I BUDGET SUBTOTAL	$8,250.00

Year 2 & 3 – Four School District Focus (60 sessions for Olympia, Griffin, North Thurston, Tumwater SD)

Staff: 4 educators $14/hour/4 hours each session

2 Estuarium Science Educators	$ 6,720.00
2 Historic Shoreline Educators	6,720.00
Coordination $14 X 3 hrs. X 60 sessions	2,520.00
Bus Transportation: $100 per bus trip	6,000.00
31 schools (several with 4 classes)/60 trips	
Online survey software for program evaluation	300.00
Curriculum support materials, consumables	950.00
PHASE II BUDGET SUBTOTAL	$23,210.00

PROJECT BUDGET TOTAL	$31,460.00

Project Schedule

March-April year 1: Align programming with Next Generation Science Standards. Meet with Olympia SD representatives to get feedback on and schedule trips for the school year.
April-August year 1: Refine lesson plans according to district feedback. Write pre- and post-tests for online evaluation of student learning before and after field trip. Train educational staff on field trip curriculum. Obtain any remaining materials.
September year 1 – May year 2: Provide field trip programming to 20 **fourth and fifth grade classes**, complete with pre- and post-lesson testing.
May year 2: Write one year program report to present at evaluation with district officials. Obtain feedback on previous year and schedule next year of trips. Meet with officials from North Thurston, Tumwater and Griffin school districts to expand program. Discuss partial funding for future years.
June-August year 2: Update curriculum with staff and district official feedback. Acquire any additional consumable materials.
November year 2 – May year 3: Provide field trip programming with pre- and post-testing to 40 additional classes from North Thurston, Tumwater, and Griffin school districts.
May year 3: Approach schools for future partial funding. Share lesson plans with environmental education groups interested in expanding programming to additional surrounding school districts to increase number of students reached.

Project Partnerships and Roles:
The South Sound Estuary Association (SSEA) will work with Olympia School District administrative officials to coordinate with 5th grade teachers in Boston Harbor, Centennial, Garfield, Madison, McKenny, McLane, Pioneer, Roosevelt, LP Brown, Hansen, and Lincoln schools to conduct the City of Olympia's Dredge Landform curriculum at SSEA's Estuarium and lead a facilitated educational walking tour of the historic shoreline created by dredging materials. In year two, SSEA will work with North Thurston, Tumwater and Griffin school districts to provide field trips to their students. Surrounding school districts will be reached by other environmental education organizations we share the lesson plans with at the end of the two year pilot program.

Note: Another potential idea for a proposal is Ocean Acidification field trip curriculum planning and implementation. We are also eager and open to collaborating with other organizations within the AHSS region.