



Organization Title: Watsonville Wetlands Watch (WWW)

Project Title: Project SEE (Slough-Based Environmental Education) Formative Phase: Curriculum Development

Priority Area: Meaningful Watershed Educational Experiences

Partners: Pajaro Valley Unified School District (PVUSD), Pajaro Valley High School (PVHS), Monterey Bay Aquarium

Target Audience: PVUSD student demographics tell us that 76% of the students in the district are Latino, between 75 and 80% of these students qualify for free or reduced cost lunches and are therefore considered low income, and about 60-65% are English Language Learners. We worked with 8 teachers and will reach 566 students on the PVHS campus.

Curriculum designed for grades 9-12, Pajaro Valley High School is a “performance school” and has the following demographics: WWW is dedicated to preserving and restoring all the wetlands of the Pajaro Valley. The Wetland Steward grant is designed for all middle school students within this area. PVUSD figures tell us that 76% of the students in the district are Latino, between 75 and 80% of these students qualify for free or reduced cost lunches and are therefore considered low income, and about 60-65% are English Language Learners.

Goals and Objectives:

- All teachers piloting the Project SEE curriculum will find the lesson plans practical to implement and be likely to implement them, as measured by teacher questionnaires.
- All teachers participating in teacher workshops will increase their understanding of the subject matter in each workshop as measured by teacher questionnaires.
- At least 90% of participating students will be engaged in the wetlands lesson activities as they occur, as measured by evaluator observation.
- Participating students will increase their knowledge of the subject matter in each lesson by an average of 25% as measured by pre-and post-tests.
- At least 90% of participating students will enjoy the activities in each lesson, scoring above average on a Learning Enjoyment Scale.

Project Overview: Project SEE is an extensive high school curricular program designed to assist teachers of the newly formed Pajaro Valley High School (PVHS) to write, pilot

and publish curriculum which integrates wetland ecosystem concepts and science into state standards based core subject matter. This part of the project is the Formative Phase. Once the curriculum is written and published, we will enter the Implementation Phase. This phase of the project will allow all teachers on the Pajaro Valley High School campus and the school district to engage their students in meaningful environmental education experiences that will inspire in students the judicious stewardship of their local wetlands.

Actual Accomplishments to Date: Staying on target with the proposed objectives has been the most impressive accomplishment given the restructuring challenges we faced in 2006-07. In 2006 the Pajaro Valley High School restructured to smaller learning communities. The scheduling and organizational changes that ensued made our job of working with the teachers challenging. We re-invigorated our efforts in December of 2007 and we are on target mid-semester. In spite of all of these challenges, we have reached over one third of the PVHS student population. They are receiving integrated, cross discipline wetland ecosystem instruction based on hands-on curriculum which meets state standards.

We are excited about the planning and energy around the Implementation Phase of this project. The Implementation Phase of Project SEE is written into the Strategic Plan for Watsonville Wetlands Watch.

Approach/Products: We have worked diligently over the past year recruiting and training, high school teachers from the new Pajaro Valley High School. Our curriculum consultant, Geoff Smith, has been invaluable to this project as he is a former teacher at the Pajaro Valley High School and was faculty for the New Teacher Project through University of California at Santa Cruz. Teachers know him, trust him and love working with him. He has produced advanced organizers for each teacher, meets one to one with teachers as necessary, and will help us successfully complete the formative phase of this project.

Results/Lessons Learned:

Teacher questionnaires are still in raw data form. With some changes in teacher participation, we do not yet have completed teacher questionnaires.

566 students have participated in Project SEE. The evaluator observations are still in raw data form and will not be finalized until August, 2008. Anecdotally, we know that students show all behavioral indicators that they are engaged, interested, and involved.

118 students participated in pre and post surveys for Project SEE. Raw data (not yet analyzed statistically due to the ongoing nature of the program) indicates students increased their knowledge of wetlands, birds, flora, fauna, and ecosystems in general. Formal statistical analysis of the Learning Enjoyment Scale is on-going and will be completed by August, 2008.

8 teachers across 8 different disciplines (which includes the four core content areas: Math, Science, Social Studies, Language Arts as well as electives which include Art and Foreign Language) are currently participating in Project SEE and related hands-on activities. This is an astounding number given the high school restructuring challenges we faced. Each teacher is working on an average of 3 lesson plans. We are actively working with 8 high school teachers, across disciplines, and all are in various stages of completion of integrated wetland environmental curriculum. To date, 5 teachers have piloted or taught 23 lessons directly to students. All curriculum will be written, piloted, and published by August, 2008. Teacher questionnaires are still in development and will be completed by August, 2008. These results complement the curricular focus of PVHS as stated in the Expected School-Wide Learning Results:

CARETAKERS OF THE ENVIRONMENT

PVHS students will learn about the environment surrounding PVHS and beyond, the impact of the wetland environment on their lives and vice versa, and how to

preserve the environment. Whether by pursuing an “environmental” career or simply by using their communities recycling program, PVHS students will become stewards of the environment.

Teachers are participating in teacher training workshops which are planned through August, 2008.

As lesson plans are completed and piloted, they are posted on the WERC’s website for other teachers to utilize.

The lesson plans are equally distributed throughout grade levels: 9-12. PVHS is a heterogeneously based school thus Project SEE curriculum serves a broad spectrum of students as it focuses on differentiated instruction to meet the instructional needs of all levels of students.

Our success to date paves the path for the implementation phase of our curricular project: spreading the word, providing outreach, and making sure that the published curriculum is utilized throughout the high schools of the school district.