

Name of Main Contact: Jessica Dennen

Main Contact Email: jdennen@petk12.org

Main Contact Phone: (707) 778-4652

Address where stipends can be mailed: 181 Orchard Ave, Sonoma, CA 95476 USA

Additional Participants: Shiloh Winders

School Name: Carpe Diem and Sonoma Mountain

Grade Level(s): 10-12

Course: Integrated Science

Name of Watershed Classroom Unit/Project: Steamer Landing Restoration Project

Integrated Academic Disciplines: Physical Science and Biology

Implementation Timeline: October 2016 - May 2017

Key Learning Objectives: Overall goals for the collaboration include fostering greater connection to the watershed, generating a deeper understanding of and relationship to the local ecosystems, and teaching the students hands-on skills for habitat assessment and restoration.

Provide a brief (50 word max.) description of this curriculum proposal, including the essential question.: Over the course of the year, students will work through a variety of steps that contribute to the successful establishment of native plants. These will include observation and research, site identification, soil preparation and amendment, planting, mulching, and a variety of other tending tasks necessary in the habitat restoration process. Each student pair will be responsible for one plant including soil preparation, installation, and tending of that plant. Essential question: How can we get plants to grow and thrive at Steamer Landing Park?

Provide a brief description (100 words max.) of how this coursework will integrate the core concepts of Geoliteracy: Interactions, Interconnections and Implications: Carpe Diem and Sonoma Mountain students will engage in a long-term planting project at Steamer Landing Park in partnership with Friends of the Petaluma River. The aim of the project will be to plant an array of native trees and shrubs in contribution to an effort to help rewild Steamer Landing, a public park in the heart of Petaluma. In this process, students will take up an active role in native habitat restoration and contribute to ongoing community efforts to celebrate and conserve the Petaluma River. Students will see the interconnectedness of the biotic and abiotic factors and the park and the implications of their plants as time progresses. It is my hope that someday they will bring their children here and say "look, I planted that tree."

Describe the fieldwork activities involving the Petaluma River/Wetlands.

Curriculum must include a minimum of three outdoor watershed educational experiences.: -

September 27/October 18: School groups make initial site visits, site assessment. Activities will include sit spot, introductions, and basic introduction to FOPR, Steamer Landing, native plants, and project. (1.5 hrs)

- November 14/15: Site location, preparation. Students will choose and prepare sites for each plant. Students will at this point have been assigned plants and pairs, and will have done basic research regarding plants. FOPR will supply compost, straw bales, and flagging material. Activities will include harvest of plant information, introduction to planting site, flagging, possibly earthworks, and basic soil amendments. (2-3 hrs)

- December 12/13: Install day. FOPR will supply tools, mulching material, and will coordinate selection and delivery of plants supplied by Carpe Diem and Sonoma Mountain High Schools. Activities will include introduction to planting, installation, and sheet mulching. (3 hrs)

- Late January/February: Tending visit. Students will add mulch, water, prune as needed, and maintain any earthworks projects. Students could additionally make signs for each plant during this visit. (1.5 hrs)

- April/May visit: Tending visit. Students will add mulch, water, and work on plant visibility. (1.5 hrs)

Describe any other hands-on learning activities: NA

Content Standards addressed: ESS3.C Human Impacts on Earth systems. The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources. HS-ESS3.C

Reading Tasks: What primary documents and informational texts will be read/analyzed?: Our primary source of information will be text, images and maps found on the California Native Plant Societies website. Each student will be researching their own species.

Writing Tasks: What kinds of writing tasks (Arguments and Drawing Evidence) will be required?: Students will create a native plant fact sheet for their plant. This will include expository writing.

Collaboration: How will students collaborate, communicate and organize together (Speaking and Listening/Discussion): Students are paired up with on plant. A variety of tasks require them to collaborate and communicate.

Integration of Media Sources and Skills: How will students use technology for research, communication, documentation and or presentation purposes?: They are documenting the process with ipads and will created a presentation at the end.

CA Core Standards-based Assessments: How will students demonstrate their acquisition of new knowledge and skills?:They will create a digital presentation of their work.

Presentation of Knowledge/Student Public Forum: These will be shared with parents and community at portfolio night.

Evaluation of Knowledge Mastery & Attitude Changes: : I will work on this part and get to you.

Other Comments: Thanks for the opportunity!
(Sent via [Watershed Classroom](#))