

SECTION A. COURSE DESCRIPTION COVER PAGE

Date Received:

(Educational Services Office use only)

1. Course Title: Environmental Science 7/8	6. Prerequisite(s): N/A
2. Action: ___ New Course ___x___ Course Revision ___ Title Change Only	7. Grade Level: 7/8
3. Transcript Title/Abbreviation: (For Educational Services)	8. Elective/Required: Elective: Part of a Science/Engineering trimester wheel
4. Transcript Course Code/Course Number: (For Educational Services)	9. Subject Area: Science
5. CBEDS Code: (For Educational Services)	10. Department: Science
11. Length /Credits: Trimester ___ 0.5 (half year or semester equivalent) ___ 1.0 (one year equivalent) ___ 2.0 (two year equivalent) ___x___ Component of wheel	
12. Was this course previously approved by UC? ___ Yes ___x___ No If so, year removed from list: _____	
13. Meets the "_____" requirements in the a-g university/college entrance requirement. Approval date: _____	
14. School Contact Information Name: ___ Michael Hans ___ Title/Position: ___ Principal ___ Phone: ___ 510-748-4018 ___ Fax: _____ E-Mail: ___ mhans@alameda.k12.ca.us ___	
16. Signatures: Department Chair: _____ Principal: <u>Michael Hans</u> Acknowledged by Other Principals: <u>Carmine Herrera</u> <u>[Signature]</u> Educational Services: <u>[Signature]</u> <u>[Signature]</u>	
16. Superintendent Signature: _____ Date Approved by Board of Education: _____	

SECTION B. COURSE CONTENT

17. **Course Description:** In this trimester course students engage in caring for the health of our local San Leandro Bay Ecosystem. We learn about watersheds, our local San Leandro Bay Watershed, the Marine Sanctuary System, our local Gulf of the Farallones National Marine Sanctuary, and how the National Oceanic and Atmospheric Administration (NOAA) acts as a guardian of the ocean. Not only does the ocean provide habitat for plants and animals, but it also provides resources upon which humans depend.
18. **Course Goals and/or Major Student Outcomes:** The goal is to make a revision to the current Explor Environmental Science 6 course. This would allow 7th and 8th graders to take a trimester long Environmental Science class. This class would go into more depth than the 6 week exploration class. This class would serve as one of three classes on the Science/Engineering trimester wheel. Through hands-on instruction and service learning, this project teaches students to take action to actively care for the local coastal environment. Students will expand their study of wetlands ecosystems by restoring native plants along the San Leandro Bay at the edge of Lincoln Middle School.
19. **Course Objectives (standards):** Same as the Explor Environmental Science 6 class. Students examine the human impact on the ocean and participate in a project to improve the health of our local San Leandro Bay Ecosystem. They communicate the project to the wider community with presentations, posters, and press articles. We present to the entire student body, and to groups such as the School Site Council, the PTA and the School Board. Projects have included the CA Coastal Cleanup, litter analysis, and wetland restoration with native plants. Public speaking, project planning and advocacy are developed in this class as students work to become an "Ocean Guardians".
20. **Course Outline:** Modified from the exploratory 6th grade class since it will be 6 weeks longer. Students will restore native plant populations in the San Leandro Bay Watershed to improve the health of the wetlands ecosystem. Students will remove non-native invasive plant species, and install native species. Students will make presentations to the larger student body, educating them on our watershed, our ocean and our progress. This effort will complement the work we are doing with our Nature Area, Outdoor Development classes, curriculum, reusable bottles, hydration station, rain barrels, campus-wide recycling and lunch waste recycling. Our goal is to educate our students and community about human impact on the watershed, and to improve the health of the local watershed, the Gulf of the Farallones National Marine Sanctuary and the ocean.
21. **Instructional Materials:** Any materials are generously funded by a grant from NOAA. Curriculum includes "Populations and Ecosystems" developed by the Lawrence Hall of Science and an annual Shark Program by the Gulf of the Farallones. This project extends the curriculum with a service-learning component with the goal of improving the local environment and participating in the larger goal that Save the Bay's has for increasing wetlands to 100,000 acres.
Board approved required text: N/A
Supplementary materials: N/A
21. **Instructional Methods and/or Strategies:** To measure the success of the class, plant audits will be made at the beginning and end of the year. Pre- and post-assessments will be taken by students. Numbers of students, teachers, and community members reached will be tabulated. At least one newspaper article will be published.

22. Assessment and Evaluation: Assessment of student knowledge of the effects of non-native plants on ecosystems. The goal is that 70% of Environmental Science students will be able to identify at least three ways in which non-native plants can affect the health of the ocean ecosystem.

- # of native perennials planted, with a goal of a plant audit documenting a 50% reduction in non-native plants in the transition zone between the Lincoln Middle School Nature Area and the San Leandro Bay. At least three species of native plants will be installed in the transition zone.
- Amount of square feet of non-native invasive removed
- Students will have made educational presentations to all science classes reaching all of our student body, and one presentation each to Parent Night, the School Board, and PTA.
- # of students reached inside our school (based on presentations to science classes)
- # of students reached outside our school (based on Student/Parent Information Night)
- # of parents reached outside our school (based on Student/Parent Information Night and PTA)
- # of community members reached outside our school (based on School Board Meeting)
- # of media hit

23. Grading Policy: Student grades will consist of the following three categories: in-class assignments, projects, and tests and quizzes.

93% or higher A	90.0 % to 92.9% A-	87.0 % to 89.9% B+	83.0% to 86.9% B	80.0% to 82.9% B-
77.0 % to 79.9% C+	73.0% to 76.9% C	70.0% to 72.9% C-	67.0% to 69.9% D+	63.0% to 66.9% D
60.0% to 62.9% D-	59.9% or below F			

SECTION C. OPTIONAL INFORMATION

24. Context for offering the course: For the 2014-2015 school year Lincoln offered "Explor Environmental Science 6" class. This was a 6th grade wheel course that lasted only six weeks long. For the 2015-2016 school year we would like to move this class to a 7/8 grade trimester elective. We are planning to add a 7/8 STEM wheel and the Environmental Science class would be the appropriate course for this elective wheel. Our teacher has already taught the 6th grade class and would be looking to deepen the work that could be done by having older students for a longer period of time.

25. History of Course Description: This course is an expansion of the current 6th grade wheel course that has already been offered this past year.