

TOMORROW'S OCEAN STEWARDS

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Thesis: we can protect only what we understand, therefore greater resources are needed for ocean education. To sustain the policy goals of the California Ocean Protection Council's Strategic Plan and to implement the California Ocean Strategy, California must commit adequate resources for basic ocean education, particularly for low-income and minority youth. State and federal education standards make almost no use of ocean concepts. Unrestricted funding available to low to moderate income schools to integrate ocean concepts into their curricula and use informal ocean education to enhance their classroom curricula is non-existent or limited.



Ocean protection can be linked to academic achievement. There is a national initiative to integrate the Ocean Literacy Essential Principles and Fundamental Concepts¹ in academic standards and formal and informal education curricula. To successfully argue that ocean concepts should be integrated into the standards, it must be shown that ocean concepts can enhance academic achievement. Measuring program objectives is expected by educators that use and donors that support informal education programs. Formal educators must “teach to the standards” and be successful in required student testing. Because environmental education has been shown to have a positive impact on critical thinking², using ocean-based education to promote academic achievement is a credible proposition to educators and decision-makers.

¹ www.coexploration.org/oceanliteracy

² Ernst & Monroe, 2004, study of high school environment-based program in Florida

Informal education is one tool to demonstrate the linkage. O'Neill Sea Odyssey (OSO) engages 4th - 6th grade youth with informal education programming in navigation, sailing, conservation, and marine science on a 65-foot catamaran sailing Monterey Bay, and in a shore-side education center. The program is free, and each group completes a community service project to participate. Under a grant from the Toyota USA Foundation, OSO and the Monterey Bay National Marine Sanctuary translated OSO's curriculum into Spanish, aligned it with State and Federal academic standards, and developed the "O'Neill Sea Odyssey: Investigations in a National Marine Sanctuary" handbook³ and distributed it nationally to assist with the alignment of informal education programs with the standards. OSO also worked with the Sierra Club's Youth In Wilderness Project on the approval of California Assembly Bill 1330, to study the impact of outdoor education. The study found that those who attended outdoor education had science scores that were 27% higher than those who did not⁴.



Conclusion: Greater resources can promote ocean literacy statewide. The OSO experience shows it can be done. During the 2004/2005 school year 71.5% of students served were ethnic minorities, and 63% were English learners.⁵ In 2002-2003, 97% of low-income youth whose participation was funded by the City of San Jose stated that they had a greater understanding of, and intended to improve behaviors towards, the marine environment and watersheds.⁶ Like similar programs, OSO is limited to serving 3,000 to 5,000 youth per year. Greater resources must be devoted to bringing ocean concepts to the next generation among California's changing population, and to demonstrate that they can enhance academic achievement.

³ <http://montereybay.noaa.gov/educate/curric.html>

⁴ http://www.yni.org/yi/standards_project/pdf/AB1330summary.pdf

⁵ OSO 04-05 Evaluation, <http://www.oneillseaodyssey.org/PDF/Eval05.pdf>

⁶ Report to the City of San Jose, FY 2002-2003.