



Ocean Literacy Alliance Hawai'i
OLA-HI

Resource Guide for Hawai'i's Ocean Science Educators

Second Printing - May 2008

To add your organization to this Resource Guide,
please send your information to Tara Hicks Johnson
hickst@hawaii.edu

You can also submit information to the OLA-HI web site
<http://www.soest.hawaii.edu/OLAHawaii/>
(under development)

Western Pacific Regional Fishery Management Council

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Website: www.wpcouncil.org

The Western Pacific Regional Fishery Management Council is one of eight regional fishery management councils in the United States which aim to prevent overfishing, minimize bycatch, and protect fish stocks and habitat. The Council is comprised of 16 Council members, the Council staff and several Council advisory groups. The process is bottom-up, emphasizing public participation and involvement of fisheries management at the local and community levels.

Our education and outreach offerings include a teacher's workshop, a high school summer course, K–8 curriculum with three-part video series, lunar calendars, and an associated poster / photo essay contest.



School of Ocean and Earth Science and Technology (SOEST), University of Hawai'i at Mānoa

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SOEST brings together four academic departments, four research institutes, several federal cooperative programs, and support facilities of the highest quality in the nation to meet challenges in the ocean, earth, and planetary sciences and technologies.

SOEST outreach activities include organizing the Aloha Bowl (Hawai'i Regional Ocean Science Bowl) and holding a biennial Open House to which everyone is invited. Through our Speaker's Bureau, faculty, staff, and students speak to school groups and other organizations on a variety of topics, including ocean science. The online "Ask-an-Earth-Scientist" enables students to submit a question to one of our volunteer experts. The online weekly SOEST bulletin provides the latest news at the School, including events, grants, publications, and other announcements.

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Center for Microbial Oceanography: Research and Education (C-MORE)

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C-MORE is a Science and Technology Center, funded by the National Science Foundation to facilitate a more comprehensive understanding of the diverse assemblages of marine microbes. Headquartered at UH Mānoa, the Center brings together teams of ocean researchers, educators, and community members who otherwise may not have an opportunity to communicate, collaborate, or design creative solutions to long-term ecosystem-scale problems. Participants design and conduct novel research, implement education and outreach programs, and utilize comprehensive information about microbial life in the sea.

C-MORE's educational activities range from community outreach, online "Kids' Korner" activities, paid undergraduate research internships and traineeships, and graduate and post-doctoral education. For teachers, C-MORE offers professional development workshops in oceanography, participation on research cruises, and mini-grants to integrate microbial oceanography activities into their classrooms.



Partnership for Reform through Investigative Science and Math (PRISM), University of Hawai'i at Hilo

Contact: Donald Price

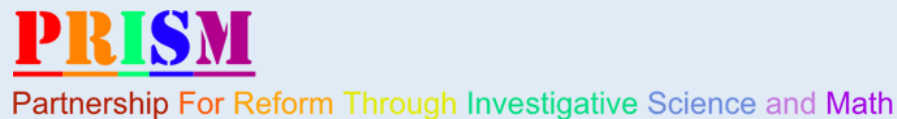
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Website: www.uhh.hawaii.edu/affiliates/prism

Funded by the National Science Foundation, PRISM is a partnership between UH Hilo and the Department of Education for reform in investigative science and math. The central goal of PRISM is to improve the interest and performance of Hawai'i's K-8 students through the creation of investigative, standards-based curricula in science, math, and technology that are both relevant and accessible to Hawai'i's rural student population.

PRISM couples graduate students from the Tropical Conservation Biology program at UH Hilo with educators around the Big Island to create and teach hands-on science curriculum focused on Hawai'i's unique habitats and organisms. Downloadable lessons, videos, presentations, examples of student work and lots of images are available in the "Curricula" section of our website. Also see "News and Events" to read what PRISM's teachers and fellows will be doing in the coming months.



Pacific Islands Integrated Ocean Observing System (PacIOOS), University of Hawai'i at Mānoa

Contact: Marcie Grabowski

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PacIOOS seeks to serve society by coordinating and integrating ocean observing and forecasting efforts to ensure that the coastal ocean in the Pacific remains safe, productive, and clean, and that coastal communities are resilient. An initial focus will be placed on the Hawaiian Islands through the Hawai'i Ocean Observing System (HiOOS).

PacIOOS is currently creating a web-based Hawai'i Ocean Atlas to serve user-driven and relevant data products to a variety of ocean users (such as resource managers, community members, educators, researchers, ocean industry, and others). General information on oceanography, technologies used, and information gathered will be provided on the website. In the future, lesson plans incorporating real-time data from HiOOS and activities are planned for development.



Curriculum Research & Development Group (CRDG), University of Hawai'i at Mānoa

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CRDG is a research unit of the University of Hawai'i's College of Education. Our mission is to design and develop new curricula and provide professional development for all students and teachers, from K–12 and beyond. Each year, over 700,000 students in Hawai'i, 42 other states, and six foreign countries use curricula developed by CRDG. Additionally, CRDG provides staff development to teachers across the nation each year. CRDG uses the diverse K–12 student body of the University Laboratory School during the initiation, development, testing, and evaluation phases of new curricula to ensure that they are suitable for a wide range of students.

CRDG produces quality educational programs with these features: effective instructional materials for diverse students; professional development workshops and institutes; long-term teacher support services; and alignment with state and national standards. Current CRDG programs targeting ocean literacy are the Fluid Earth and the Living Ocean (FE/LO) and Teaching Science as Inquiry: Aquatic Science.



Department of Business, Economic Development & Tourism (DBEDT), State of Hawai'i

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DBEDT's core mission is to strengthen and diversify Hawai'i's economy by leading business development efforts, attracting new business and investment, and encouraging the expansion of existing companies. DBEDT operates a variety of programs to address business issues, market the State's products and services, assist in the development of strategic industries, and identify new economic opportunities.

DBEDT's goals for ocean science and technology are: to develop new and larger markets for Hawai'i's ocean science, technology, and consulting businesses and organizations; to attract companies, investors, and technical personnel to Hawai'i; and to position Hawai'i as a recognized leader in the ocean science and technology industry.

Pacific American Foundation (PAF)

Contacts: Herb Lee and Maura O'Connor

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Website: www.thepaf.org

Formed in 1993, PAF is a non-profit organization that has successfully secured funding for programs that focus on five main pathways: education, mentorship/leadership, employment, research and development, and community partnerships. We rely on individuals and organizations alike to invest in the future of Pacific Americans everywhere.

One of PAF's most recent formal education efforts is Aloha 'Āina, a project-based curriculum for grades 3–12. This interdisciplinary, standards-based curriculum focuses on different environments for each grade level; marine units are available for grades 4, 7, and 10. The materials build on Native Hawaiian values and practices to help students get to know the place where they live and give back to their communities in a meaningful way. PAF also produced Kāheha Loko: The Call of the Pond, a hands-on curriculum guide based on the native Hawaiian fishpond. The complete Kāheha Loko curriculum for grades 4–12 is available online at Ulukau.org/kahealoko1. Aloha 'Āina will likewise be available online in the summer of 2008. A new PAF culture-based curriculum, Mālama Kaho'olawe, is now being produced for grades 7–12. The curriculum includes a marine unit for grade 7, voyaging for grade 8, and biology, social studies and earth science units for high school. Workshops to disseminate this new curriculum will begin in October 2008.

PAF
The Pacific American Foundation

Myron B. Thompson Academy (MBTA)

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The MBTA is an innovative competency-based K–12 charter school with a hybrid curriculum delivered both online and through face-to-face classes. MBTA's ultimate goal is to empower all of our students to become valuable members of society. Our approach is to improve student achievement by providing a curriculum that is based on state and national performance standards, and by integrating thematic content with real-world problem-solving strategies.

MBTA offers greater flexibility for students in a non-traditional educational environment, with a staff that is ready and able to provide students with engaging online classes, face-to-face elective classes, instructional strategies, technical advice, and moral support. MBTA students also attend 'science magnets' located on Kaua'i, O'ahu, Maui, and Hawai'i Island that give students the opportunity to engage in hands-on marine and environmental science activities, fieldtrips, and cultural and ecological restoration projects.



Department of Curriculum Studies, University of Hawai'i at Mānoa

Contact: E. Barbara Klemm



University of Hawai'i at Mānoa
College of Education

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The Department of Curriculum Studies (EDCS) and the Institute for Teacher Education (ITE) are part of the University of Hawai'i's College of Education. EDCS offers MEd Curriculum Studies, MEd in Early Childhood Education and Middle Level MEd degrees as well the PhD in Education–Curriculum Studies degree. Candidates for the MEd and PhD work with their advisors to tailor their program to their professional education interests, providing an opportunity to focus on ocean literacy or other educational areas. EDCS courses are scheduled at times to accommodate full-time classroom teachers. Check with the EDCS department for current coursework schedules, including summer or DOE inter-session courses, as well as the status of neighbor island online or hybrid online courses and degree programs.

ITE offers two BEd programs to prepare undergraduate teacher candidates for initial teacher certification: BEd in elementary education and early childhood education and the BEd in secondary science in which candidates focus on one of these areas: biology, chemistry, earth-space sciences, general science, physical science or physics. ITE also offers two programs for teacher candidates who have completed at least a Bachelor's degree but have not completed an initial teacher certification program: Post-Baccalaureate Certificate in Secondary Education or Master of Education in Teaching (MEdT). Coursework flexibility in ITE programs supports teacher candidates' interests in ocean literacy or other areas. Check with the ITE department for the current status of statewide online courses and degree programs.

Coral Program and Coral Reef Outreach Network, Division of Aquatic Resources (DAR), State of Hawai'i

Contact: Emma Anders

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Email: ecanders@hawaii.edu



Website: hawaii.gov/dlnr/dar/programs.htm

DAR is part of the Department of Land and Natural Resources whose mission is to manage, conserve, and restore the state's unique aquatic resources and ecosystems for present and future generations. The DAR manages the state's aquatic resources and ecosystems through programs in commercial fisheries and resource enhancement, aquatic resources protection, habitat enhancement and education, and recreational fisheries. The Coral Reef Outreach Network (CRON) is coordinated through DAR and is made up of more than 35 organizations, government agencies, and businesses that provide education outreach about coral reefs. The CRON works to develop more effective and consistent outreach messages about corals and the threats they face as well as to share outreach products and curriculum developed by members.

Our Community Guidebook for Coastal Stewardship is designed to guide and assist community groups, both large and small, in developing programs to help foster coastal community stewardship. It details the process of initiating and leading community stewardship events already being utilized by Hawai'i's coastal communities. The guidebook is available on: www.conservationpractice.org/upload/EntireGuideBook.pdf

The Kohala Center

Contact: Samantha Birch

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The Kohala Center is an independent, not-for-profit academic institute for research and education in the environmental sciences. By working at the intersection of culture, community, and science, and by respectfully engaging Hawai'i Island's unique natural assets as scientific and intellectual assets, the Kohala Center builds teaching and research programs that enhance island environments and serve island communities.

Our offerings include public outreach on topics such as reef etiquette, the Puana Ka 'Ike (Imparting Knowledge) lecture series, symposiums for researchers and conservationists, professional development for K–12 teachers, environmental leadership program for high school students, and doctoral and post-doctoral fellowships for Native Hawaiian scholars.



Ka 'Imi 'Ike, University of Hawai'i at Mānoa

Contact: Noelani Puniwai and Barbara Gibson

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Funded by the National Science Foundation, Ka 'Imi 'Ike is administered by the University of Hawai'i's School of Ocean and Earth Science and Technology. The program aims to recruit and retain Native Hawaiian and Pacific Island students into the geosciences by creating pathways within the context of linking science with culture and community.

Our program provides scholarships for applicable students, initiates paid summer internships in a geoscience field of study, introduces new, incoming UH students to the earth-, water-, and weather-related sciences, and provides a resourceful website to link students with career opportunities in their discipline. The cornerstone of Ka 'Imi 'Ike is a three-week residential summer program that exposes undergraduates to different geoscience careers, and emphasizes hands-on field experiences.



Ka 'Imi 'Ike
Seeker of Knowledge

"Creating pathways for Native Hawaiian and Pacific Islander students pursuing and graduating with a degree in the geosciences."

GK–12 Program in Ecology, Evolution, & Conservation Biology (EECB), University of Hawai'i at Mānoa

Contact: Erin Baumgartner

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The GK–12 EECB is a National Science Foundation funded program administered by the Center for Conservation Research & Training (CCRT) at the University of Hawai'i. The GK–12 fellowship program sets up a learning partnership between graduate students and K–12 teachers. Fellows act as partners and mentors and incorporate their own research, emphasizing perspectives of evolutionary and conservation biology, into school curricula to assist in teaching standards-based biology.

The GK–12 program provides graduate research fellowships to students admitted into the EECB program. Fellows have the support of education and science mentors, and spend time training with the University of Hawai'i Curriculum Research & Development Group (CRDG) before they enter classrooms. A teacher or school wishing to host a GK–12 fellow can download an application from our website. The GK–12 program also supports Our Project in Hawai'i's Intertidal (OPIHI), a long-term monitoring program that involves students in the monitoring of Hawai'i's intertidal zones.



Hawai'i Coral Reef Initiative (HCRI), University of Hawai'i at Mānoa

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HCRI was established in 1998 with a goal to better understand our valuable, yet vulnerable, nearshore reef ecosystem. We fund scientific research and monitoring in order to advance effective resource management within our state. HCRI's education and outreach goals seek to expand knowledge of Hawai'i's reefs and associated habitats through broad-based awareness and education programs.

HCRI's educational activities range from community outreach events, online publications, keiki activity booklets, and games. For the upcoming fiscal year, HCRI's objectives include finalizing its K-2 coral reef ecosystem curriculum, expanding its website, finishing a three-dimensional video game, and reaching out to the community through the media and collaborative events.



Honolulu Theatre for Youth (HTY)

Contact: Daniel Kelin

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Website: www.htyweb.org

HTY has an international reputation for providing quality drama education to young people of all ages, experience, and ability. Each year, thousands of young people participate in our programs which encourage creativity, imagination, and an appreciation for theatre arts. Students that have participated in our after school and weekend workshops get excited about exploring ideas, debating key questions, and learning.

HTY drama education classes are aligned with HCPS III science standards on topics such as Animals, Cycles, Rainforests, Coral Reefs, Ocean Environments, and the Solar System. Our drama specialists also work with teachers to help extend student achievement in a range of subjects, including language arts, social studies, science and math, in ways that significantly involve and engage every student. We are looking for collaborations to create educational programs and performance-based work that connects to science-focused themes and concepts, promotes ocean literacy, and develop work that is integrated across disciplines.



Hawai'i Source Education Outreach (HSEO)

Contact: Ellen Federoff

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HSEO's mission is to encourage interest in science and technology among under-represented students in grades K–12. Currently, our main focus is the Digital Bus Project, a mobile, science-education platform. This project is designed towards giving Maui Nui's youth a chance to participate in hi-tech and hands-on science projects, incorporating cutting edge technology and field-based learning experiences for students.

Digital Bus technologies include laptop computers, digital microscopes, GPS, electronic data loggers, pda's, digital video and still cameras, and wireless networks. The Digital Bus offers six grade-based, field study units aligned with the Hawai'i Content and Performance Standards. HSEO offers professional development workshops to train educators on the program's technology, as well as to familiarize them with the science curriculum available. To date, over 7,100 students have been served, over 160 professional educators have participated, and over 33 schools have visited by our program. HSEO staff provides custom demonstrations for educators and schools upon request. Other HSEO projects include educator resources for Maui (Waihe'e Watershed B-WET Hawai'i Project) and Moloka'i (Ho'okuleana B-WET Hawai'i Project).



Hawai'i Institute of Marine Biology (HIMB), University of Hawai'i at Mānoa

Contact: Malia Rivera and Jennifer Barrett

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Founded in 1947, the Hawai'i Institute of Marine Biology is situated on Moku o Lo'e, more widely known as Coconut Island, in Kāne'ōhe Bay. As a research unit within the University of Hawai'i's School of Ocean and Earth Science and Technology, HIMB provides world-class facilities for researchers and students in wide-ranging disciplines related to tropical marine science. The island itself provides a unique living laboratory as it is surrounded by 64 acres of coral reef designated by the State of Hawai'i as the Hawai'i Marine Laboratory Refuge, one of only a few 'no-take' marine protected areas in the main Hawaiian Islands.

HIMB's K–12 educational and public outreach efforts focus on fostering ocean stewardship and awareness, and provide marine science training opportunities for Hawai'i's students in an effort to help recruit the next generation of ocean scientists and managers. Our offerings include: educational tours for classes and community groups; classroom visits, community outreach, and continuing education courses for our research program in the Northwestern Hawaiian Islands; a six-week summer environmental and marine science paid internship program with Windward Community College for high school students; and developing formal K–12 marine science curriculum for the Hawai'i Department of Education and NOAA.

Hawai'i Networked Learning Communities (HNLC), University of Hawai'i at Mānoa

Contact: Dan Suthers

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suthers@hawaii.edu

Website: www.hnlc.org



HNLC is a place for Hawaii's education professionals to communicate, collaborate, and create new resources to improve student outcomes. Members of HNLC can create unit plans together, provide continuous feedback, discuss options and alternative methods, share resources, and ultimately enrich education for Hawaii's K-12 students. More importantly, though, HNLC gives individual teachers and special purpose groups both a dedicated space in which to work, and the advantages of participating in a statewide community of teachers. HNLC began as an NSF-funded Rural Systemic Initiative undertaken as a collaboration between the University of Hawai'i and the Hawai'i Department of Education. Our centerpiece is a virtual community center, www.hnlc.org, which supports our Teacher-Librarian Inquiry Partnership, teachers involved in the Navigating Change curriculum, and a NOAA-sponsored education voyage to the Northwestern Hawaiian Islands.

There are now over 800 members of hnlc.org in Hawai'i. You are welcome to (1) become a member in order to access our resources and social network, (2) post news and events on our home page, and/or (3) request a 'workspace' to support the online collaboration of your group.

Hawai'i Science Teachers Association (HaSTA)

Contact: Carmela Minaya (outgoing president)

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Website: www.hasta.us

HaSTA's mission is to stimulate and maintain interest in science and to improve and coordinate science teaching at all levels of instruction in Hawai'i's schools. We promote the improvement of educational systems and processes, and support activities and programs which may increase the public knowledge of science.

