NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION INFORMATION EXCHANGE FOR MARINE EDUCATORS APRIL 2011

This update is funded by the National Marine Sanctuary Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from NOAA's Office of Education and the National Marine Protected Areas Center, to share information pertinent to the marine educator community. It is intended to encourage exchange of information and programs. We hope that it will also promote collaboration among the different educators addressing similar issues in their programs.

Please share this email with your colleagues and constituents. If you request materials or respond to a request for information, please mention that you learned about it from NOAA's Information Exchange.

The information included here has been compiled from many different sources, including EE-NEWS@NAAEE, EEinGEORGIA, the Scout Report, edinfo at FREE, scuttlebutt, NSTA Express, and others. We have verified web addresses, but make no guarantee that they will remain active. The Department of Commerce/NOAA does not necessarily endorse or promote the views or facts presented on these sites.

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Collected archives of the information presented in past newsletters are available at http://mpa.gov/resources/education/#exchange. Contact the editor directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074, to discuss further enhancements or to contribute information for future issues.

EARTHQUAKE AND TSUNAMI RESOURCES

Educators are quick to respond with timely resources; here are some of the materials gathered together in response to the disaster in Japan.

American Nuclear Society Blog

The ANS Nuclear Cafe blog site offers headlines, news and updates, links to resources, and more.

http://ansnuclearcafe.org/fukushima/

Bridge's Tsunami Blog

The Bridge has created a special blog through which you may share information as well as learn of ways you may help. Check back often, as new resources will be posted.

http://bridge.blogs.wm.edu/tsunami-in-japan/

Investigating Earthquakes through Regional Seismicity

The Southern California Earthquake Center is funded by the National Science Foundation and the U.S. Geological Survey to develop a comprehensive understanding of earthquakes in Southern California and elsewhere, and to communicate useful knowledge for reducing earthquake risk. This educational module is divided into three major sections, What is an Earthquake?, The Distribution of Earthquakes, and Measuring Earthquakes. Each section presents background material and interactive learning activities allowing students to understand such characteristics of earthquakes as their associated faults, rates of occurrence, magnitudes, and geographic distribution. http://www.data.scec.org/Module/

JASON Project Tsunami Resources

The JASON Project offers resources from their energy curriculum *Operation: Infinite Potential*, to educate students on the effects and causes of tsunamis, videos, modeling, and more.

http://www.jason.org/public/feature/FeatureDetail.aspx?fid=255

NOVA Tsunami and Earthquake Resources

NOVA has aired programs about tsunamis and earthquakes and provides websites for off-TV explorations. Japan's Killer Quake offers an eyewitness account of the recent disaster, while the Wave that Shook the World reconstructs the 2004 Indian Ocean tsunami. The websites link to expert questions and answers, videos, teacher resources, and more.

http://www.pbs.org/wgbh/nova/earth/japan-killer-quake.html http://www.pbs.org/wgbh/nova/tsunami/

Recent Earthquake Teachable Moments

Incorporated Research Institutions for Seismology (IRIS) is a consortium of U.S. universities dedicated to the operation of science facilities for the acquisition, management, and distribution of seismological data. The website hosts links to earthquake resources, animations and visualizations, and more. http://www.iris.edu/hq/retm

Teaching Resources on Edutopia

Edutopia hosts links to teaching resources for the Japanese earthquake and tsunami, compiled by blogger and STEM educator, Eric Brunsell. Materials include infographics, resources about earthquakes, tsunamis, and nuclear reactors, and more. http://www.edutopia.org/blog/teaching-resources-japanese-earthquake-tsunami

Tsunami Resources from NOAA

The NOAA Office of Education has put together a resource list of existing NOAA and NOAA Partner materials on tsunamis and tsunami safety. Resources include background information, multimedia, lessons and activities, data, and more. http://www.education.noaa.gov/Ocean and Coasts/Tsunami.html

Notable References

Census of Marine Life Reports

The Census of Marine Life offers a first baseline picture of ocean life and the website hosts reports and syntheses which can be used to forecast, measure, and understand changes in the global marine environment, as well as to inform the management and conservation of marine resources. Check out A Summary for Decision Makers: Scientific Results to Support the Sustainable Use and Conservation of Marine Life; First Census of Marine Life 2010: Highlights of a Decade of Discovery; and much more. http://www.coml.org/

Sound Health

The Long Island Sound Study 2010 Sound Health report is now available for downloading from the website, or in hard copy by request. The Sound Health provides information on water quality, the abundance of animal and plant life in the Sound, and trends in land use along the shore. The updated set of environmental indicators that is used to produce the Sound Health report includes more than 60 indicators that track environmental conditions in the sound and management's response to improve its health. Contact Larissa Graham if you'd like copies of the report for your classroom, at lig85@cornell.edu.

http://longislandsoundstudy.net/2010/12/sound-health-2010/

WEBSITE OF THE MONTH

EE Week Ocean Connections

National Environmental Education Week is April 10-16, 2011. Recognizing the importance of protecting the health of our ocean and understanding our dependence upon it regardless of its proximity, EE Week's 2011 theme is *Ocean Connections*. The website offers resources, lesson plans, and opportunities for educator professional development. Check out the quiz page for nature, ocean, and water quizzes. Share your story of success about how you engage your students in environmental education tied to the ocean.

Green Teacher magazine will provide registered EE Week participants a free digital copy of their spring marine education issue in late April.

http://www.eeweek.org/success

http://eeweek.org/ocean connections.htm

http://www.greenteacher.com/

MESSAGES FROM THE BRIDGE

Bridge e-Updates

The Bridge now offers monthly e-Updates, bringing you new marine education resources and happenings to encourage you to plunge into ocean science education. These brief, monthly updates, distributed through the Scuttlebutt e-mail list, will help to keep you current on ocean science education. Subscribe to Scuttlebutt, the email list for ocean educators to receive this useful resource.

http://www2.vims.edu/bridge/search/scuttle.cfm

Special Sea Grant Collection

The National Sea Grant College Program offers ocean education resources related to its mission. The Bridge's new Sea Grant Collection provides easy access to these resources. Visitors can search this collection by topic area, keyword, or Sea Grant program. Resources can also be found under the Sea Grant focus areas of Hazard Resilient Coastal Communities, Healthy Coastal Ecosystems, Safe Sustainable Seafood Supply, and Sustainable Coastal Development. http://www2.vims.edu/bridge/seagrant/

REQUESTS

Sustainability Standards Survey

The K-12 and Teacher Education Sector of the US Partnership for Education for Sustainable Development developed a set of National Education for Sustainability K-12 Learning Standards that define what K-12 students should know and be able to do to be sustainability literate. They are collecting data on the use of these standards and would appreciate if you would take a few moments to complete this short survey so they can understand the needs of, and better serve, educators. http://www.surveymonkey.com/s/QTR6ZP5

Volunteers Needed

The North American Association for Environmental Education (NAAEE) Annual Conference will be held in Oakland, California in 2012. The co-chairs are currently seeking volunteers for the various logistics committees, with work to begin in summer 2011.

Contact Celeste Royer at croyer@slocoe.org or Ryan Brennan at president@aeoe.org

GRANTS AND OPPORTUNITIES

Advanced Placement Incentive Program

The Advanced Placement Incentive program awards competitive grants designed to increase the successful participation of low-income students in advanced placement courses and tests. The program expands opportunities for low-income students to take college-level classes and earn college credit while still in high school. The program also supports efforts to raise the rigor of the academic curriculum for all students attending high-poverty schools. The deadline for the Notice of Intent to Apply is April 15, 2011. http://www2.ed.gov/legislation/FedRegister/announcements/2011-1/031611a.html

The Arctic: An Ecosystem Expedition Earth Day Contest

Reaping Nature Educational Outreach Foundation invites children 12 and under to enter The Arctic: An Ecosystem Expedition Earth Day Contest. Entries should take us on an expedition to the coldest continent on Earth and include Petunia Garner, Echo the Squirrel, or both characters, in a written, drawn, or photographed format. The deadline for entry is April 25, 2011.

http://www.reapingnature.org/Contests.html

Be Big In Your Community Contest

Scholastic's Be Big Fund will help bring to life the winning Big Idea that helps make your community a better place. The deadline for submission is June 17, 2011. http://www.scholastic.com/cliffordbebig/contest/

Best Communities for Young People Competition

America's Promise Alliance and the ING Foundation offer the 100 Best Communities for Young People Competition. The program recognizes communities that work to help reduce high school dropout rates and provide their youth with an outstanding place to live, learn, and grow. Community representatives are encouraged to download the application now to gather the information needed, which includes essays by local students. The deadline for application is May 27, 2011 but submit early for additional opportunities.

http://americaspromise.org/100best

Biodiversity and Local Knowledge Call for Proposals

The Fondation d'entreprise Hermès supports action research that promotes local practices and expertise for the sustainable management of biodiversity. The objectives of this call for proposals are to promote the emergence of and strengthen local and global initiatives that facilitate access to global networks for local production, through means that are responsible, humanitarian, and respectful of the environment and the needs of present and future generations, based on the recognition of local expertise and know-how. Preference will be given to projects that cannot be funded by traditional research channels and that encourage support for local communities, while allowing an evaluation of the impact of these approaches in term of biodiversity. The deadline for submission is April 15, 2011.

http://www.fondationdentreprisehermes.org/eng-GB/projet/1199/Biodiversity-and-local-skills.htm

Dare to Dream Micro Grants for Girls

The Ann Bancroft Foundation's Dare to Dream grant program funds small experiences for girls designed to help them gain a new perspective on their own abilities and goals. Grants may be used for classes, camps, or lessons to improve a skill; outdoor adventures or camps; honors programs; travel with approved schools or groups; choir trips or school activities; and more. The deadline for application is April 15, 2011. http://www.annbancroftfoundation.org/microgrants/about.php

Earth Day Photo Contest

The Institute for Global Environmental Strategies is holding an Earth Day Photo Contest for students in grades 5-8. During the week of Earth Day, April 18-29, 2011, take a photograph of something that is changing in your local environment. Submit the photo and explanation. The deadline for entry is May 13, 2011.

http://www.strategies.org/education/index.aspx?sub=education&sub2=earthday&sub3=contest2011

Environmental Education Grants

The Grants Program sponsored by EPA's Office of Environmental Education, Office of External Affairs and Environmental Education, supports environmental education projects that enhance the public's awareness, knowledge, and skills to help people make informed decisions that affect environmental quality. A conference call on April 6, 2011 will answer questions about the solicitation and the application process. The deadline for application is May 2, 2011.

http://www.epa.gov/enviroed/grants.html

Funky Nests in Funky Places

The Cornell Lab of Ornithology encourages people of all ages to submit photos, artwork, or stories about Funky Nests in Funky Places. The deadline for submission is June 1, 2011.

http://www.birds.cornell.edu/celebration/challenge/funky-nests-2011/FunkyNests

Goldfish Training Contest

Immersion Learning's Marine Mammals of the Arctic program offers techniques used by marine mammal trainers, including bridging, shaping, and positive reinforcement. Students ages 10-14 can try these out for the second annual goldfish training contest. One winner will be selected to join a beluga trainer at Mystic Aquarium for a day in the summer of 2011. The deadline for entry is May 1, 2011.

http://www.immersionlearning.org/index.php?option=com_content&task=view&id=472<emid=251

Harry Passow Classroom Teacher Scholarship

The National Association for Gifted Children awards the A. Harry Passow Classroom Teacher Scholarship to teachers of grades K-12 who have shown excellence in teaching gifted students. The scholarship is designed to reimburse or defray the costs of continuing education. The deadline for application is April 18, 2011. http://www.nagc.org/index.aspx?id=1255

Hispanic-Serving Institutions STEM and Articulation Programs

The Hispanic-Serving Institutions STEM and Articulation programs provide grants to assist Hispanic-Serving institutions to develop and carry out activities to improve and expand their capacity to serve Hispanic and other low-income students. The deadline for application is April 29, 2011.

http://www2.ed.gov/legislation/FedRegister/announcements/2011-1/032511c.html

i6 Green Challenge

The i6 Green Challenge focuses on the nexus between economic development and environmental quality and rewards innovative, ground-breaking ideas that enable technology commercialization, new venture formation, job creation, and economic growth. The deadline for submission of the mandatory letter of intent is May 2, 2011. http://www.eda.gov/PDF/i6GreenFFO.pdf

Marine Technology Society Scholarships

The Marine Technology Society is committed to helping students achieve success, and offers different scholarship opportunities. In addition, there is a Full Admission Ticket for one Teacher or College Instructor along with 2 students. The deadline for application is April 15, 2011.

https://www.mtsociety.org/education/scholarships.aspx

Marisla Environmental Program

The Marisla Foundation offers Environmental Program grants for activities that promote the conservation of biological diversity and advance sustainable ecosystem management. Primary emphasis is on marine resources conservation with a geographic focus on the western North America, Chile, and the western Pacific. The program also supports the search for solutions to health threats caused by toxic chemicals. The next deadline for application is April 15, 2011.

https://online.foundationsource.com/public/home/marisla

MASNA Scholarship

The Marine Aquarium Societies of North America offers the MASNA Scholarship to a full-time undergraduate seeking a degree in the marine science field. The deadline for application is July 1, 2011.

http://www.masna.org/AboutMASNA/MASNAScholarship.aspx

NAAEE Conference Scholarships

NAAEE offers a variety of scholarships to help different audience segments attend the annual conference, October 12-15, 2011 in Raleigh, North Carolina. The deadline for application for the Affordability, Columbia Sportswear Teacher, North Carolina Academic, and William B. Stapp College Student scholarships is May 11, 2011. Check the website for further information about additional opportunities. http://www.naaee.org/conference/scholarships

NSTA New Science Teacher Academy Fellowships

NSTA fellowships offer grade 6-12 teachers in their second or third years of teaching a year-long immersion in a host of science-related activities and professional development opportunities. The deadline for application is June 13, 2011. http://www.nsta.org/academy/

Ocean Guardian School Grants - California

Ocean Guardian School grant funds are now available for area California schools to create a project that focuses on current issues affecting local watersheds and the ocean while promoting best environmental practices. Check the website for eligible counties. The deadline for application is May 1, 2011.

http://sanctuaries.noaa.gov/education/ocean_guardian/og_application2010.pdf

Patagonia Environmental Grants

Patagonia offers grants to organizations that identify and work on the root causes of problems and that approach issues with a commitment to long-term change, with a focus on organizations that build a strong base of citizen support. Applications are accepted year round at retail stores and twice yearly at the headquarters, with the next deadline for application at headquarters of April 30, 2011.

http://www.patagonia.com/us/patagonia.go?assetid=2942

Predominantly Black Institutions Competitive Grant Program

The purpose of the Predominantly Black Institutions Program is to strengthen these institutions to carry out programs in the following areas: science, technology, engineering, or mathematics (STEM); health education; internationalization or globalization; teacher preparation; or improving educational outcomes of African-American males. The deadline for application is April 25, 2011. http://www2.ed.gov/legislation/FedRegister/announcements/2011-1/022311a.html

Rachel Carson Sense of Wonder Contest

The EPA, Generations United, and the Rachel Carson Council, Inc., announce a poetry, essay, photo, and dance contest "that best expresses the Sense of Wonder that you feel for the sea, the night sky, forests, birds, wildlife, and all that is beautiful to your eyes." Participants work as a team with a person from a generation older or younger than themselves. Entries will be judged on creativity, originality, and the ability to capture a sense of wonder. The entries will also be judged on how the project brought the

intergenerational team in touch with the natural world. The deadline for entry is June 10, 2011.

http://www.epa.gov/aging/resources/thesenseofwonder/index.htm

Science Prize for Inquiry-Based Instruction

The Science Prize for Inquiry-Based Instruction encourages innovation and excellence in education by recognizing inquiry-based science education modules associated with an introductory-level college course in science. The deadline for application is April 15, 2011.

http://www.sciencemag.org/site/feature/data/prizes/inquiry/

Smart Gear Competition

World Wildlife Foundation's International Smart Gear Competition brings together the fishing industry, research institutes, universities, and government, to inspire and reward practical, innovative, and cost-effective fishing gear designs that reduce bycatch - the accidental catch and related deaths of sea turtles, birds, marine mammals, cetaceans and nontarget fish species in fishing gear such as longlines and nets. The deadline for entry is August 31, 2011.

http://www.smartgear.org

Teacher Development Grants

The McCarthey Dressman Education Foundation offers Teacher Development Grants, providing funding to individuals or small teams of teachers in the formation and implementation of groundbreaking K-12 classroom instruction. The grants provide opportunities for teachers to integrate fresh strategies that encourage critical inquiry and to observe their effects on students. The deadline for application is April 15, 2011. http://www.mccartheydressman.org/teacher.html

Thesis Award on Migratory Species Conservation

Lufthansa sponsors the UNEP/CMS Thesis Award on Migratory Species Conservation to promote scientific research and conservation of migratory species. The thesis should provide new data and insights into the biology and ecology of migratory species or external factors disrupting their migration patterns. Research results must be applicable to conservation measures to the benefit of migratory species. The deadline for entry is April 15, 2011.

http://www.cms.int/thesis award/

TogetherGreen Conservation Leadership Program

The TogetherGreen Conservation Leadership Program from the National Audubon Society invests in high-potential leaders, providing them with the tools, resources, visibility, and a peer network to help them lead the conservation actions needed to shape a greener, healthier future. The deadline for application is May 2, 2011. Check this out.

http://www.togethergreen.org/People/Fellows.aspx

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Marine Fisheries Management Fellowship

North Carolina Sea Grant is accepting applications for a fellowship opportunity for students nearing completion of an advanced degree program in natural resources or

marine sciences. The North Carolina Marine Fisheries Management Fellowship is open to graduate or post-graduate students at southeastern universities and colleges from Maryland to Texas. The deadline for application is April 201, 2011.

http://www.ncseagrant.org/home/about-ncsg/news-

events?task=showArticle&id=912&category=news&limitstart

Summer Marine Biology Program – Grand Cayman

Ocean Matters is a college-level marine biology program for high school students. They offer partial to full scholarships to their three-week summer marine biology program to accepted applicants who demonstrate both need and merit. The program will be held on Grand Cayman in the British West Indies, July 7-28, 2011. The deadline for application is April 8, 2011.

http://www.oceanmatters.org/

Undergraduate Coastal Community Fellowship

The Sustainable Coastal Communities Program at the University of Delaware offers this fellowship to undergraduate students interested in an opportunity to work on coastal land use issues in Sussex County, Delaware this summer. Students will work on various projects that will help address the impacts of growth and development, stimulate economic development, and promote quality of life in southern Delaware. The deadline for application is April 15, 2011. University of Delaware applicants will be given priority, but students from other institutions may apply.

http://www.udel.edu/udaily/2011/mar/sustainable-coastal-communities-fellowship-030411.html

Whale Camp - Maine

The Whale Camp, on Grand Manan Island off the coast of Northern Maine, offers summer programs for students and teachers to observe and study whales, dolphins, porpoises, seals, and puffins in their natural habitats through direct observation, data collection, and hands-on experience with marine science equipment. The programs focus on the ecology of the Bay of Fundy and how the highest tides in the world produce huge quantities of plankton to establish a diverse food web. http://www.whalecamp.com/

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Geophysical Union Fall Meeting

The fall AGU meeting, December 5-9, 2011 in San Francisco, California, provides an opportunity for researchers, teachers, students, and consultants to present and review the latest issues affecting all areas of Earth and space sciences. The deadline for session proposal submission is April 20, 2011 and for abstract submission, August 4, 2011.

http://www.agu.org/meetings/

Aquaculture in the Classroom Teacher Workshop - Florida

Harbor Branch Oceanographic Institute at Florida Atlantic University will hold an Aquaculture in the Classroom Teacher Workshop, August 1-3, 2011 in Fort Pierce, Florida. The workshop provides classroom aquaculture information to educators who have limited aquaculture experience. The Teach Aquaculture curriculum will be

introduced and selected lessons and activities will be demonstrated. Topics covered include aquarium set-up, permitting for schools, nutrition, and more. The deadline for registration is July 21, 2011.

http://www.fau.edu/hboi/Aquaculture/AQacted InTheClassroom.php

Communicating Clearly: Writeshops for Developing Country Scientists

The Stockholm Environment Institute and partners are helping early-career scientists and practitioners from developing countries to build their writing skills on climate change adaptation and disaster risk reduction through a series of "writeshops", to be held in 2011.

http://climate-l.iisd.org/guest-articles/communicating-clearly-writeshops-for-developing-country-scientists/?referrer=climate-change-daily-feed

Coral Reef and Climate Change Workshop - Hawai'i

COSEE Coastal Trends in partnership with the National Parks Service offers this professional development workshop for Hawaiian educators, June 20-24, 2011 on Coconut Island, Oahu. The workshop will focus on the science, research, and cultural aspects of coral reefs and their susceptibility to climate change. A stipend and some travel reimbursement are available.

http://www.coseecoastaltrends.net/programs/workshopsforeducators/

Data and the Estuary - Maryland

The Chesapeake Bay National Estuarine Research Reserve offers programs designed to provide teachers with the resources, knowledge, and experience necessary to integrate estuaries and related issues into their classrooms, achieved through hands-on, field-based investigations. Two workshops are offered: on the Western Shore, June 20-24, 2011, and on the Eastern Shore, August 1-5, 2011. Teachers will develop action projects that have a positive impact on the bay. Upon completion of the workshop, registration fees are refunded and a stipend or credits are available. While on the website, check out the other summer opportunities. http://www.dnr.state.md.us/bay/cbnerr/

Discovering the Waters of Tennessee - Tennessee

The Tennessee Educators of Aquatic and Marine Sciences (TEAMS) Spring Professional Development Conference, April 29–May 1, 2011 in Winchester, Tennessee, will offer concurrent sessions, field trips, and more. All conference participants receive a classroom set of Project WET's *Discovering the Waters of Tennessee* booklets. http://teamsoftn.weebly.com/conference.html

Earth and Marine Science Seminars - Hawaii

The Edge of Kauai (TEOK) offers seminar programs designed for educators to investigate the Hawaiian Archipelago and learn about its environmental systems.

- July 10-16 and Aug. 7-13, 2011, Geoscience on the Big Island
- July 24-30, 2011, The Geological, Ecological and Anthropological History of the Island of Molokai
- June 25-July 2, 2011, The Science of Ecosystems

Reservations are filled on a space available, first come basis as applications are received.

http://www.teok.com/educationalprograms.html

Engaging and Supporting Latinas in STEM - Online

Join practitioners from informal and formal education April 7, 2011 for this webcast, to discuss strategies and programming ideas for engaging and supporting Latinas in Science, Technology, Engineering, and Mathematics. Free registration is required. http://www.ngcproject.org/events/register.cfm?eventid=192

Global Climate Change Issues and Impacts - Online

This online professional development workshop through Oregon State University, June 20-July 15, 2011, is geared for teachers and will provide teaching curriculum and activities for the classroom. All materials will be posted online at the beginning of the class and students can work through the course at their own pace, however, it must be completed by July 15, 2011.

Contact Vicki Osis at vjosis@peak.org

Green Eggs & Sand Workshops – Georgia, New Jersey, New York

The Green Eggs & Sand workshops are designed to explore the Atlantic Coast horseshoe crab/shorebird phenomenon and management controversy. Register for these upcoming workshops soon, as space is limited and reservations are on a first-come, first-serve basis.

- April 15-17, 2011, Savannah, Georgia
- May 13-15, 2011, Cape May, New Jersey
- June 3-5, 2011, Stony Brook, New York

http://www.tydb.org/pdf/2011%20GES%20workshops%20flyer.pdf

INTECOL International Wetlands Conference – Call for Proposals

The 9th INTECOL International Wetlands Conference, June 3-8, 2012 in Orlando Florida, will provide a platform to review advances in the physical, biogeochemical, and social sciences as they are related to wetlands; to provide integrated solutions for sustainable management of wetland resources in a complex world; and to facilitate professional relationships at regional to international scales. The deadlines for session proposals is May 1, 2011 and for abstract submission is October 14, 2011. http://www.conference.ifas.ufl.edu/intecol/

Lab and Field Explorations in Marine Science - California

The Teacher Enhancement Program at Moss Landing Marine Labs is offering the free summer workshop, Lab and Field Explorations in Marine Science for middle school and high school teachers, June 20-24, 2011 in Moss Landing, California. The new curriculum focuses on key marine organisms found along the central California coast and incorporates many California State Science Standards. The deadline for application is April 18, 2011.

http://teach.mlml.calstate.edu/LabField

Long Island Sound Teacher Workshop - Connecticut

This workshop, supported by Connecticut Sea Grant and the Long Island Sound Study, offers teachers the opportunity to learn how to integrate Long Island Sound into their curriculum, April 23, 2011 in Madison, Connecticut. Participation is limited. Contact Ken Fusco at fuscokm@plainvilleschools.org

MarineLab Teacher Workshops - Florida

MarineLab will host three workshops concurrently from July 24-29, 2011: Coastal Marine Ecology of the Keys, Ecology and Research Techniques, and the Reef Check Eco Diver

Certification program. The workshops are content oriented and are designed for the middle and high school science teacher; all feature on-water field explorations. http://www.marinelab.org/Teacher Workshops.html

MATE Summer Institute - California

MATE's (Marine Advanced Technology Education Center) 2011 Summer Institutes for Faculty Development on Intermediate Level ROV Building for Classroom Projects will take place July 24-31, 2011 in Monterey, California. Participants will work in teams to design and build ROVs to accomplish a set of pre-determined mission tasks. In addition to the instruction and hands-on time, participants will have the opportunity to interact with industry professionals and participate in field trips. The deadline for application is April 14, 2011.

http://www.marinetech.org/education/summer institutes/2011 Information.php

Monterey Bay Aquarium Teacher Institutes - California

The Monterey Bay Aquarium will host four institutes for teams of full-time classroom teachers this summer. These free, grade-specific, week-long professional development opportunities use activities that are aligned with national and California state science content standards, as well as Ocean Literacy principles. Participants receive activities, resources, and materials for their classrooms; a stipend may be available.

- June 26-July 1, 2011, Splash Zone Teacher Institute for Head Start and K-2 teachers
- July 11-15, 2011 with follow-up sessions later in the year, Project Based Science Institute for grades 6-8
- July 25-29, 2011, Connecting Marine Science for grades 9-12
- July 31-August 5, 2011, Coastal Systems Teacher Institute for grades 3-5 The deadline for application is April 8, 2011.

http://www.montereybayaquarium.org/lc/teachers_place/edu_programs.aspx

National Conservation Training Center Courses - West Virginia

The U.S. Fish and Wildlife Service offers professional development courses in Shepherdstown, West Virginia. For more information about a specific course, contact the noted educator; call for availability after the registration deadline.

- OUT8163: Connecting People with Nature through Birds, June 6-9, 2011; the deadline for registration is May 6, 2011. Contact Michelle Donlan at <u>Michelle Donlan@fws.gov</u>
- OUT8107/NPS-INT4013: Earth to Sky V: Communicating Climate Change, September 26-30, 2011; the deadline for registration is June 15, 2011. Contact Susan DeStephanis at Susan DeStephanis@fws.gov

http://www.doi.gov/doilearn/index.cfm http://www.birdday.org/education/training http://training.fws.gov

NMEA Conference Earlybird Registration

Register early and save for this summer's National Marine Educators Association annual conference, *Cape to Cape: In the Hub of Marine Education*, June 29-July 3, 2011 in Boston, Massachusetts. The deadline for earlybird registration is April 15, 2011. http://www.massmarineeducators.org/NMEA2011/

NMEA at NSTA

The deadline for submission of session proposals to the NSTA 2012 National Conference, March 29-April 1, 2012 in Indianapolis, Indiana, is April 15, 2011. The NMEA NSTA Liaison Committee will be accepting proposals for a marine science track of sessions; please submit your proposal to NSTA as required and then send your assigned proposal ID#, session title, and abstract to the Lauren Rader at rader@oceanology.org.

http://www.nsta.org/conferences/sessions.aspx

Oceans 2011 MTS/IEEE Kona

The Marine Technology Society and the Oceanic Engineering Society of the Institute of Electrical and Electronic Engineers jointly sponsor Oceans 2011 MTS/IEEE Kona, September 19-22, 2011 in Kona, Hawai'i, an international forum for scientists, engineers, and responsible ocean users to present the latest research results, ideas, developments, and applications in oceanic engineering and marine technology. The deadline for abstract submission is April 22, 2011.

http://www.oceans11mtsieeekona.org/

Rivers to Reef Teacher Workshop - Georgia

This free teacher workshop, June 12-17, 2011 from Atlanta, Georgia, is led by staff from the Georgia Aquarium and NOAA's Grays Reef National Marine Sanctuary. Teachers will learn about watersheds, water quality, current aquatic issues, and river, marsh, and reef ecosystems. Space is limited; the deadline for application is April 15, 2011. http://www.georgiaaquarium.org/media/pdf/R2RWorkshopAnnouncementandApplication 2011.pdf

Sawfish in Peril Educator Workshop - Florida

The free Sawfish in Peril Educator Workshop, May 16, 2011 in Gainesville, Florida, will educate educators about endangered sawfish including biology, behavior, research, and conservation. The workshop will offer multimedia presentations given by elasmobranch research scientists on subjects ranging from sawfish diversity, to biology and behavior, to conservation efforts. Hurry - enrollment is limited to the first 25 people that sign up. http://www.flmnh.ufl.edu/fish/sharks/sawfish/SawfishInPeril.html

Shoals Marine Laboratory Summer Courses - Maine

The Shoals Marine Laboratory on Appledore Island, Maine, offers credit and non-credit courses for teachers, students, and families. Take classes in Field Animal Behavior, Sharks, Sustainable Marine Fisheries, and more. View the complete listings on the website, along with application instructions and registration deadlines. http://www.sml.cornell.edu/

State of the Gulf of Mexico Summit - Texas

The Harte Research Institute and partners will host Summit 2011: State of the Gulf of Mexico, December 4-8, 2011 in Houston, Texas. The summit serves as a platform for the diverse interests in the Gulf of Mexico to come together in one place for a candid discussion of what's working and where we need to go. http://www.harteresearchinstitute.org/state-of-the-gulf-summit/

Student Opportunities - Various

The Centers for Ocean Science Excellence in Education offers this downloadable file with opportunities offered through COSEE Center partners for undergraduates, graduate students, and post-docs. These include internships, fellowships, and more. http://www.cosee.net/resources/students/index.cfm?FuseAction=ShowResourceDetails&ResourceID=340

Summer Teacher Workshops – Alabama

The 2011 Summer Teacher Workshops at the Dauphin Island Sea Lab will help you bring the oceans, marshes, and barrier islands into the classroom. The workshops are free, with registration fee refunded following completion.

- June 5-9, 2011, The Delta
- June 19-23, 2011, Fins, Fishes and Fisheries
- July 10-14, 2011, Reefs, Rhizomes and Restoration
- July 24-29, 2011, OTTER (Oceanographic Technology Tools in Education and Research)

The deadline for registration is April 30, 2011. http://dhp.disl.org/teachertraining.htm

Surfrider School Clubs Teacher Workshop - Florida

The free School Clubs Teacher Workshop Session during the Surfrider Foundation Annual Florida Conference, April 16, 2011 in St. Pete Beach, Florida, will include a panel discussion on how to start a Surfrider School Club. The workshop covers club details, how you and your students can benefit, support staff and tools, types of projects, and success stories from pilot club leaders and students. http://florida.surfrider.org/2011conference

Teacher Workshops and Student Opportunities – Various

NMEA News, the National Marine Educators Association's newsletter, keeps members up-to-date with news from regional chapters and committees, information about professional development opportunities, and communications from NMEA leadership. NMEA News is published exclusively online. Check out the **many** upcoming teacher workshops and other opportunities in the Spring issue, including *Sink into Science*, *Exploring Ocean Literacy through Science and Children's Literature*, *Ocean Expo Summer Camp*, and more.

http://www.marine-ed.org/docs/nmeanews.pdf

Teachers on the Estuary – New England

The New England National Estuarine Research Reserves offer free Teachers on the Estuary (TOTE) professional development workshops. The workshops are research and field-based professional development opportunities designed to improve teachers' and students' understanding of estuaries using local research examples. The workshops will provide resources and hands-on experiences to support the incorporation of estuary and watershed topics into classroom teaching.

- July 11-14, 2011 in Wells, Maine
- July 25-28, 2011 in Bristol, Rhode Island
- August 8-11, 2011 in Falmouth, Massachusetts

Space is limited; the deadline for application is April 29, 2011.

http://www.estuaries.gov/GetInvolved/Default.aspx?id=401

Tiny But Toxic - Online

COSEE-West invites educators to participate in *Tiny but TOXIC! Harmful algal blooms: science, technology and YOU*!, a free, online workshop on harmful algae and their impacts on coastal systems, marine life, and human health, March 21-April 8, 2011. Participants have the opportunity to interact with marine scientists online and access free videos, slide shows, virtual field trips, information, and lesson ideas for teaching about harmful algal blooms. Materials are archived for future reference. http://www.coexploration.org/cosee_west/spring2011/

WETMAAP Workshops – Alabama and Texas

The U.S. Geological Survey's National Wetlands Research Center and partners are sponsoring free WETMAAP (Wetland Education through Maps and Aerial Photography) workshops for middle and high school teachers, June 8, 2011 in Mobile Bay, Alabama and Fall, 2011 in Houston, Texas.

Contact Jessica Kastler at Jessica.Kastler@usm.edu.

EDUCATIONAL RESOURCES

Alaska Fisheries Science Center Resources

The mission of the Alaska Fisheries Science Center is to generate the scientific information and analysis necessary for the conservation, management, and utilization of the region's living marine resources. The website offers numerous resources, including a Marine Science Resource Activity Guide, online Rockfish games, the Marine Mammal Education Web and much more. The Multimedia Gallery offers award-winning videos, photos, and much more. Additional sections include data and tools, publications, and species information. Spend some time on this website. http://www.afsc.noaa.gov/default.htm

ARKive and Universities Scheme

ARKive is giving university students of relevant subjects the opportunity to research and write ARKive species profiles as part of the ARKive and Universities Scheme. The writing of ARKive species profiles gives students the opportunity to put their scientific writing skills into practice, further develop the research and writing skills they have gained throughout their studies, and see their work published on ARKive's website. The current need is for profiling threatened and endangered species in the U.S. http://www.arkive.org/about/universities.html

Baby Grouper Adrift!

Researchers from REEF's Grouper Moon Project released satellite drifters at the largest remaining Nassau grouper spawning aggregation, and the Adrift! website will follow the location of the drifters. Scientists are studying the passive transport of Nassau grouper larvae spawned at the protected aggregation sites in the Cayman Islands to better understand the importance of place.

http://www.reef.org/programs/grouper_moon/adrift/

BirdSleuth

Bring science to life through inquiry with BirdSleuth's resources. Through citizen science, students observe the world, ask questions about the environment, and investigate natural relationships. The website offers kits, downloads, and more. http://www.birds.cornell.edu/birdsleuth/

Chesapeake Bay - Views of the National Parks

The National Park Service features the Chesapeake Bay for its latest edition of Views of the National Parks, an online educational resource. This edition of Views provides readers with a background in the natural world of the Chesapeake, its geologic formation as an estuary, and its diverse ecosystems and species, as well as an understanding of the human history and cultural environment of the Bay watershed. Photographs, pop-up sidebar text, maps, a glossary, and links to additional resources are among the variety of teaching tools offered.

http://www.nature.nps.gov/views/layouts/Main.html#/CBPO/

Climate Change Response Strategy

The National Park Service's Climate Change Response Program provides direction for addressing the impacts of climate change in national parks. The program fosters communication and provides guidance, scientific information, and recommendations that support stewardship actions to preserve our natural and cultural heritage from the detrimental impacts of global climate change. The website offers background information about climate change and climate change effects, along with links to further resources for education, research, and more.

http://www.nature.nps.gov/climatechange/index.cfm

Climate Wizard

The Nature Conservancy's ClimateWizard lets technical and non-technical audiences access leading climate change information and visualize its impacts anywhere on Earth. Users can choose a state or country and assess how the climate there has changed over time and project what changes are predicted to occur in the future. http://www.climatewizard.org/

Deep Time

Teachers' Domain hosts these resources on geological time for grades 6-12 from WGBH Educational Foundation. In order to understand how such slow processes like geologic change and evolution could produce massive physical and biological changes on Earth, one must try to grasp "deep time." The website offers a timeline, background essay, links to additional resources, and more.

http://www.teachersdomain.org/resource/tdc02.sci.life.evo.deeptime/

Earth Day

Earth Day, April 22, inspires and mobilizes individuals and organizations worldwide to demonstrate their commitment to environmental protection and sustainability. Check out the education resources, including the Green Your School Guide, Student Activist Toolkit, and more.

http://www.earthday.org/education

Earth: The Operators' Manual

This PBS Special premieres nationwide at 10pm EST on April 10, 2011. *EARTH: The Operators' Manual* is a three-part series, targeted for PBS TV, a website, and on-site events at science centers across America. Its mission is to use Earth science to explain our planet's climate history and to describe sustainable energy options. Check back for the updated project website, or follow along on facebook.

http://cleanet.org/cln/ccep/earththe operat.html

http://www.facebook.com/pages/EARTH-The-Operators-Manual/118133928201961

Exploring Environmental History Podcast

Environmental History Resources explores how environmental changes have caused historical trends. Each podcast episode has a written synopsis, literature cited, and more. Be sure to check out the wide range of topics reflecting the interdisciplinary nature of environmental history, including landscape history, forestry and land use, pollution, and ideas and perceptions of nature.

http://www.eh-resources.org/podcast/podcast.html

Faces of Climate Change

The Alaska Marine Conservation Council, COSEE Alaska, in partnership with Alaska Sea Grant program, has produced three short videos showcasing the dramatic changes in Alaska's marine ecosystems. These introductions to the impacts of climate change in Alaska include interviews with Alaska Natives, commentary by scientists, and footage from Alaska's Arctic.

http://www.aoos.org/

Floods - Too Much of a Good Thing

This module from the National Computational Science Leadership Program focuses on the natural disaster of flooding, covering both human and environmental influences. The website offers background information, lesson plans, an assessment, and more. While on the website, check out the other modules, including carbon cycle, Florida red tides, and much more.

http://www.ncsec.org/models.cfm

http://www.ncsec.org/cadre2/team26 2/ModulePage/default.htm

GecoServ

The Harte Research Institute's Socio-Economics Group supports GecoServ, an online Gulf of Mexico Ecosystem Services Valuation Database. Goals of the database are to distribute and share information about ecosystem services valuation studies relevant to Gulf of Mexico region, and to identify current gaps in the literature. The studies summarized are for habitats that are relevant to the Gulf region even though they may have been conducted elsewhere.

http://www.gecoserv.org/

Groundwater Animations

Carleton College offers this website with computer animations related to groundwater. They contrast the permeability of gravel, sand, silt, and clay, as well as the speed of groundwater movement in rivers, lakes, and aquifers. Animations also outline the hydrologic cycle, exhibit groundwater overdraft, and show how groundwater can erupt as a geyser. While on the website, check out the rest of the visualizations collection. http://serc.carleton.edu/NAGTWorkshops/visualization/collections/groundwater.html

I Love Sharks.org

A group of sixth grade students in California took the QuikSCience Challenge and formed a leadership team on shark preservation. This website offers middle school science lessons on sharks and materials for students and teachers, including shark labs, persuasive letter writing, and more.

http://www.ilovesharks.org/

IGES Classroom Resources

The Institute for Global Environmental Strategies (IGES) works with educators and scientists to develop educational resources for the classroom. Materials include Investigating the Climate System, Discover Earth Classroom Materials, and more. http://www.strategies.org/education/index.aspx?sub=education&sub2=productdevelopm ent

JASON Live

JASON Live delivers interactive events produced by The JASON Project, Immersion Learning, and Nautilus Live, with scientists and explorers sharing their expeditions of discovery. The research of marine biologist Emma Hickerson from NOAA's Flower Garden Banks National Marine Sanctuary focuses on mapping, habitat characterization, and the biology of sea turtles, corals, manta rays, and other marine life, and her interests include underwater photography, videography, and exploration technology. Join her on April 7, 2011 – the video will be shown at four different times. While on the website, check out other upcoming and previously broadcast events and links to educational materials.

http://www.jason.org/public/whatis/live.aspx

Joides Resolution Expeditions

The Ocean Drilling Research Vessel JOIDES Resolution is at sea for Expedition 334: Costa Rica Seismogenesis Project, March 15-April 13, 2011. The current expedition is designed to better understand the processes that control large earthquakes at subduction zones, at the only known erosional end-member of convergent margins within reach of scientific drilling. Expedition 335: Superfast Spreading Rate Crust will take place April 14-June 3, 2011. This upcoming expedition will be the fourth ocean cruise of the "Superfast" campaign to drill a deep hole into intact oceanic basement and will return to Ocean Drilling Program Hole 1256D to deepen this scientific reference penetration a significant distance into cumulate gabbros. Sign up for a live video event with the crew, and follow along on the blogs.

http://joidesresolution.org/

MathScience Innovation Center Resources

The MathScience Innovation Center's mission is to be the innovator, incubator and advocate of 21st Century math and science programs for the Capital region's K-12 educators and students. The website offers a searchable database of resources, including lesson plans, activities, tutorials, and more. Resources can be searched by subject, core area, resource type, grade level, and more. http://www.mathinscience.info/

NOAA Photo Library's Photostream

NOAA has launched the social media photo sharing website, NOAA Photo Library's Photostream on Flickr, the Internet photo sharing website. A selection of over 4,000 photos (a subset of the 47,000 public domain images presently on the NOAA Photo Library) can be viewed in collections, sets, in slideshow format, and by using the Flickr search engine to search for imagery thematically. Themes include Weather and Related Events, NOAA's Ark, and more.

http://www.photolib.noaa.gov/ http://www.flickr.com/photos/noaaphotolib

OCRM in Your State

The Office of Ocean and Coastal Resource Management (OCRM) offers this interactive website that employs GIS/web technology to illustrate the nation's investments in coastal management programs in 34 states and territories. *OCRM in Your State* allows users to click on a map to view current federal funding and state/territory matching funds for coastal programs administered by NOAA. Thumbnail descriptions highlight successes and link to more information.

http://coastalmanagement.noaa.gov/inyourstate/#

O*Net OnLine

This website is dedicated to career exploration and the art and science of finding a new job. It doesn't list available jobs, rather it gives the visitor the tools to find where the jobs are, or aren't, what jobs are up-and-coming, and which are dying out. This site helps jobseekers and students looking for a career path to look for careers that play to their skills, preferences, strengths, geographic location, education level, and many other criteria.

http://www.onetonline.org/

Operation IceBridge

Operation IceBridge, a six-year NASA mission, is an airborne survey of Earth's polar ice, offering a three-dimensional view of Arctic and Antarctic ice sheets, ice shelves, and sea ice. These flights will provide a yearly, multi-instrument look at the behavior of the rapidly changing features of the Greenland and Antarctic ice. Check out the blog, twitter, and more.

http://www.espo.nasa.gov/oib/

Papahānaumokuākea Marine National Monument

The Papahānaumokuākea Marine National Monument is the single largest conservation area under the U.S. flag, and one of the largest marine conservation areas in the world. The website hosts information about the coral reefs and shipwrecks found in Papahānaumokuākea, along with resources about its cultural importance to Native Hawaiians. Check out the images and videos, news, educational resources, and much more on this website.

http://www.papahanaumokuakea.gov/welcome.html

Reefs at Risk Revisited

The Reefs at Risk Revisited report is available to download on The World Resources Institute website. Available materials include the report and executive summary, downloadable high-resolution maps, an interactive map on Google Earth, a 4-minute overview video, downloadable GIS data, and more. http://www.wri.org/publication/reefs-at-risk-revisited

Science Minutes

Science Minutes from Mote Distance Learning is a series of short videos that teach to National and Next Generation Sunshine State Science Standards. The video segments introduce basic science concepts and help prepare students for standardized testing. Topics include climate, tides, and more. Science Minutes includes a DVD of 10 science segments plus an online classroom guide and activity for each segment. Check out the online example on Weather.

http://www.seatrek.org/scienceminutes/

Teaching Time Savers

Teaching Time Savers are articles designed to share easy-to-implement activities for streamlining the day-to-day tasks of faculty members everywhere. This series is edited by Professor Michael E. Orrison of Harvey Mudd College and is hosted on the Mathematical Association of America's website.

http://www.maa.org/features/TeachingTimeSavers.html

Top Ten Tips for Assessing Project-Based Learning

Project-based learning helps students build skills such as collaboration, critical thinking, and global awareness. Educators need to assess the learning that occurs. Edutopia offers the downloadable classroom guide, *Top Ten Tips for Assessing Project-Based Learning*. Tips include Keep It Real with Authentic Products, Gather Feedback – Fast, and more.

http://www.edutopia.org/10-tips-assessment-project-based-learning-resource-guide

Voyages! Titanic 2012

A cruise ship and an expedition ship will be at the wreck site of *Titanic* to commemorate the 100th anniversary of the ship's sinking. There will be a series of programs beginning April 9, 2012 aimed at grades 3-7 to be streamed into classrooms. In addition, related lesson plans will be available through the website for subscribing schools. http://www.voyages-to-remember.com/

Weather and Climate

This unit from Phil Medina, a Junior High School science teacher, introduces students to concepts of weather and climate. Topics include the structure of the atmosphere, the definitions of weather and climate, and temperature and how it is measured. There are also discussions of heat transfers, larger-scale weather systems, and much more. While on the website, be sure to check out the sections on weathering and earthquakes. http://www.mrsciguy.com/weather.html

World Ocean Day - June 8

World Ocean Day is June 8, 2011, when organizations and individuals from around the world come together to celebrate our world ocean; reflect on the ocean's importance in our lives; and take time to do something good for our blue planet. The theme for 2011 is *Youth: the Next Wave for Change*. The Ocean Project sponsors this website to coordinate World Ocean Day events with resources, tools, and activities. http://worldoceansday.org/wod-theme.php

YouthGo

The Youth Portal at YouthGo.gov is the Department of Interior's primary source for youth-related online content. The Department of the Interior oversee one-fifth of the nation's land mass, including National Parks, National Monuments, and National Wildlife Refuges that stretch across every state. As custodians of our nation's recreational, natural, cultural, and historic resources, and trustees to honor America's responsibilities to Tribal Nations, the department is positioned to help people of all ages and backgrounds connect with their land and heritage. Get Out helps visitors get connected; Get Smart offers educational resources and links; and Get a Job helps youth find job, volunteer, and internship opportunities. http://www.youthgo.gov/

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INITIATIVES, JOURNALS, and MORE

Aquatic Invasions

Aquatic Invasions is an open access, peer-reviewed international journal focusing on biological invasions in inland and coastal waters of Europe, North America, and other regions. The journal provides the opportunity for publication of first records of aquatic invaders and other relevant information needed for risk assessments and early warning systems.

http://www.aquaticinvasions.net/

Biodiversity in a Rapidly Changing World

The National Council for Science and the Environment offers this website featuring efforts to advance science and public understanding of the loss of biodiversity and life on Earth.

http://www.NCSEonline.org/biodiversity

GeoMentor Program

National Geographic and ESRI have created this program to inspire educators and community members to work together to improve student learning. The GeoMentor program is designed to inspire volunteers to work with a teacher or youth club leader to help kids see, use, and do more geography in and out of classrooms. http://edcommunity.esri.com/geomentor/

Great Lakes Climate Change Science and Education Systemic Network

The Climate Change Education Partnership is creating an online community and resource database for climate change research and education in the Great Lakes region. Be sure to add your programs.

http://www.coexploration.org/greatlakesclimatechange/index.html

Scuba Explorers

Scuba Explorers is a program for middle school and high school students to promote exploration of the marine sciences. Scuba certification is the centerpiece of the program and is available to students regardless of geographic location. Students are not required to purchase any equipment - all equipment is supplied including mask, fins, and snorkel. Students have the opportunity to take part in community service projects, participate in other water related activities, meet guest speakers from various maritime related careers, and participate in field trips to explore the many opportunities in the maritime industry.

http://www.scubaexplorers.org/

Youth Venture

Ashoka's Youth Venture inspires and invests in teams of young people (leaders age 12-20) to design and launch their own lasting social ventures, enabling them to have a transformative experience of leading positive social change. Venturers start businesses, civil society organizations, and informal programs that address social issues, including the environment, education, diversity issues, and more. Youth Venture helps Venturers through the process of designing and launching their ventures, providing guidance, a process for designing and pitching a venture idea, and more. http://www.genv.net/