

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

JUNE 2010

This update is funded by the National Marine Sanctuaries 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, CREEC, 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.

Notable References

Conservation Biology Articles

In honor of the International Year of Biodiversity, *Conservation Biology* has compiled and published three virtual issues of previously published articles focusing on Conservation Social Science, Connectivity and Corridors, and Climate Change.

<http://www.wiley.com/bw/vi.asp?ref=0888-8892&site=1>

Global Biodiversity Outlook

Global Biodiversity Outlook is the flagship publication of the Convention on Biological Diversity. Drawing on a range of information sources, including national reports, biodiversity indicators information, scientific literature, and a study assessing biodiversity scenarios for the future, the third edition of Global Biodiversity Outlook summarizes the

latest data on status and trends of biodiversity and draws conclusions for the future strategy of the Convention.

<http://gbo3.cbd.int/home.aspx>

WEBSITES OF THE MONTH

Keys Spill.Com

The Keys Spill.com website was set up to help protect the fisheries, living coral reefs, marine life, the Florida Keys economy, and the Keys way of life. The website is updated daily with the latest news on meetings and events, and works in partnership with the Nature Conservancy, U.S. Fish & Wildlife, and others. It offers information about training, volunteering, and more.

<http://www.keysspill.com/>

Marine Science Review - Oil Spills

SeaWeb produces special editions of the Marine Science Review in response to significant ocean events or issues to ensure that activities, efforts, and media are underpinned by sound science. Marine Science Review 371 is a special edition on Oil and Oil Spills: the Gulf of Mexico. The brief document offers summaries of articles and reports of relevant literature from the last three decades, to offer insights not only to the impact of oil on the marine and coastal environment in the Gulf of Mexico, but highlighting experiences, issues, and research from similar oil spills in other regions of the world.

http://www.seaweb.org/resources/documents/MSR_371SpecialEdition-Oilandoilspills.pdf

NOAA Education Oil Spill Resources

NOAA educators have compiled some oil-spill related resources. These include general websites, data sources, multimedia, classroom lessons, and more.

<http://www.education.noaa.gov/oilspill.html>

RSMAS Oil Spill Website

The University of Miami's Rosenstiel School of Marine and Atmospheric Sciences has established an oil spill educational outreach website. It offers a timeline, satellite images, modeling and predictions, and more.

<http://www.rsmas.miami.edu/oil-spill/>

MESSAGE FROM THE BRIDGE

Bridge Activities and Ocean Science Podcasts

Are you wondering how to incorporate podcasts into classroom instruction? COSEE-Networked Ocean World (NOW) partners have teamed up to produce Volume I of Ocean Gazing. This CD-ROM pairs the Ocean Gazing podcasts with related classroom-ready data activities. Students will learn about ocean science research straight from the scientists and explore actual ocean science data. Activities are aligned with National Science Education Standards for easy integration into standards-based and elective courses. The free CDs, as well as the individual podcasts and activities, are available on the COSEE-NOW website, where educators can also participate in discussions and collaborate on ocean-observing system-related education projects.

<http://coseenow.net/>

<http://www.marine-ed.org/bridge/>

GRANTS AND OPPORTUNITIES

BIC 4 GOOD Grants

BIC 4 GOOD Grants for sustainable community action projects are targeted towards established programs and organizations that have a large impact, proven sustainability, and measurable success. Projects should be unique, community-oriented, and with measurable impact. The deadline for application is June 15, 2010.

<http://www.dosomething.org/grants/bic4good>

Earthwatch Opportunity in the Caribbean

Earthwatch is seeking proposals from scientists to develop new field-based research projects for citizen scientists, focusing on coral reef ecosystems in the Caribbean. The deadline for proposals is June 15, 2010.

http://www.earthwatch.org/europe/get_involved/research_grants/research_apply/

Contact Dr. Samantha Burgess at sburgess@earthwatch.org.uk

Gulf Coast Recovery Grant Initiative

The purpose of the Gulf Coast Recovery Grant Initiative is to assist local educational agencies in improving education in areas affected by Hurricanes Katrina, Ike, or Gustav. The deadline for Notice of Intent to Apply is June 21, 2010. Check the website for complete details.

<http://www.ed.gov/legislation/FedRegister/announcements/2010-2/052710e.html>

Informal Science Education Proposals

The National Science Foundation is soliciting proposals for the Informal Science Education program. The program supports innovation in anywhere, anytime, lifelong learning, through investments in research, development, infrastructure, and capacity-building for STEM learning outside formal school settings. The deadline for preliminary proposals is July 22, 2010.

http://www.nsf.gov/pubs/2010/nsf10565/nsf10565.htm?WT.mc_id=USNSF_25&WT.mc_ev=click#pgm_intr_txt

It's My Environment Video Project

The EPA's *It's My Environment* video project has been extended. Submit a video clip up to 10 seconds long of someone doing something for the environment, then reading and passing along a sign that says "It's My Environment." The deadline for submission is December 1, 2010.

<http://www.epa.gov/earthday/video/index.html>

Kavli Science Video Contest

The USA Science & Engineering Festival Kalvi Science Video Contest is looking for creative and surprising videos submitted by K-12 students that explain why science is cool. Videos might explore a scientific concept, showcase the wonders of nature or provide a glimpse into the future. The deadline for entry is July 15, 2010.

http://www.usasciencefestival.org/index.php?option=com_content&view=article&id=92&Itemid=93

Leave No Trace Connect Grants for Culturally Diverse Communities

The Leave No Trace Center for Outdoor Ethics is an educational, non-profit organization dedicated to the responsible enjoyment and active stewardship of the outdoors by all people worldwide. Connect Grants provide direct support and training grants for organizations and people that serve culturally diverse communities. The deadline for application is August 1, 2010.

<http://lnt.org/programs/grants.php>

Lindbergh Foundation Grants

The Charles A. and Anne Morrow Lindbergh Foundation provides grants for innovative research and educational projects that focus on the Lindbergh's vision of balance between the advancement of technology and preservation of the natural and human environment. The deadline for application is June 10, 2010.

<http://www.lindberghfoundation.org/docs/index.php/our-grants>

NEA Foundation Green Grants

The NEA Foundation offers its *Learning & Leadership* and *Student Achievement* grants program to individuals and teams of educators for projects that integrate green-related topics and experiences into the classroom. The deadline for application is June 1, 2010.

<http://www.neafoundation.org/pages/educators/grantprograms/nea-foundation-green-grants/>

NGen Leadership Award

The NGen Leadership Award from American Express honors an outstanding nonprofit leader under age 40 who has had a transformative impact on addressing society's critical needs. The deadline for nomination is June 14, 2010.

http://www.independentsector.org/ngen_leadership_award

Ocean Guardian Grant - California

NOAA's Office of National Marine Sanctuaries is offering Ocean Guardian grants to a number of California schools whose students create a school or community-based conservation project that protects their local watershed and the ocean. See the website for eligibility. The deadline for application is June 1, 2010.

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

Outstanding Young Educator Award

The Association for Supervision and Curriculum Development offers a yearly Outstanding Young Educator Award, recognizing a teacher under the age of 40 who demonstrates excellence in his or her profession. Criteria include a positive impact on students, creativity in the classroom, and leadership in his or her school or district. The deadline for nomination is August 1, 2010.

http://www.ascd.org/programs/Outstanding_Young_Educator_Award/Outstanding_Young_Educator_Award_Program.aspx

President's Prizes for Outstanding Achievement in Primary and Secondary Education

Funded by the Entomological Society of America, these awards recognize educators who have gone beyond the traditional teaching methods by using insects as educational tools. One winner will be chosen from among primary teachers and one from among secondary teachers. The deadline for application is July 1, 2010.

<http://www.entsoc.org/awards/professional/educational.htm>

Research Opportunities in Space and Earth Sciences

NASA is offering two education opportunities in this round of ROSES funding.

- New Investigator Program in Earth Science (for early career scientists and engineers) and Fellowships for Early Career Researchers (for early career scientists and engineers in planetary science).
- Education or Outreach awards for Principal Investigators of selected research investigations as supplements to their research awards.

See the website for complete details, including the solicited research programs. The deadline for the Notice of Intent to Apply is August 4, 2010.

<http://tinyurl.com/y8fpbqh>

Rivers, Trails, and Conservation Assistance Program

The National Park Service provides up to two years of staff assistance to locally-led natural resource conservation and outdoor recreation projects through the Rivers, Trails, and Conservation Assistance (RTCA) Program. RTCA staff work in communities to help applicants conserve rivers; preserve natural areas; and develop trails, greenways, and blueways. Staff help with partnership-building to achieve community-set goals, organizational development, and more. Applicants are strongly encouraged to discuss their project with RTCA staff before sending in an application; check the website for local contact information. The next deadline for application is August 1, 2010.

http://www.nps.gov/ncrc/programs/rtca/contactus/cu_apply.html

Rufford Small Grants for Nature Conservation

The Rufford Small Grants Foundation provides grants for small-scale or pilot nature conservation projects in less-developed countries around the world. Projects must have a nature/biodiversity conservation focus; the scope of interest includes conservation work focused on threatened habitats; animals in their habitat; and other organisms such as plants, fungi, or insects. Grant requests are reviewed throughout the year.

<http://www.ruffordsmallgrants.org/rsq/>

Teacher Incentive Fund

The purpose of the Teacher Incentive Fund program is to support projects that develop and implement performance-based compensation systems for teachers, principals, and other personnel in order to increase educator effectiveness and student achievement, measured in significant part by student growth, in high-need schools. The deadline for the Notice of Intent to Apply is June 1, 2010.

<http://www2.ed.gov/programs/teacherincentive/applicant.html>

Teacher Travel Discounts

Edutopia offers a list of different grant funds available for teachers, along with several additional teacher travel discounts that can save you money in your travels.

<http://www.edutopia.org/travel-grants>

<http://www.edutopia.org/on-road-cheap-get-around-without-going-under>

Waste Management Charitable Giving

Waste Management recognizes that healthy, thriving communities depend on involved citizens, organizations, and corporate partners for momentum and lend their support and services to causes that promote civic pride, economic development, and revitalization, supporting nonprofits working for the environment, environmental education, and

communities. Applications are accepted year round and are reviewed on a continuous basis; expect a two-month review time.

<http://www.wm.com/WM/community/Giving.asp>

World Challenge Grants

The World Challenge, organized by BBC World News and Newsweek in association with Shell, is a global competition aimed at finding projects or small businesses from around the world that have shown enterprise and innovation at a grassroots level. Areas of interest include community welfare and enterprise, health and education, sustainable farming, energy, water, and the environment. The deadline for nomination is June 13, 2010.

<http://www.theworldchallenge.co.uk/>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Coastal Ocean Science Academy - Massachusetts

The Coastal Ocean Science Academy program, August 9-21, 2010 in Nahant, Massachusetts, offers high school students an introduction to marine science. Participants will build knowledge of coastal and marine biology; develop skills such as monitoring water quality, measuring species richness and diversity, identifying marine organisms; and explore threats facing our coastal and marine resources. Registration is first-come, first-serve.

Contact Carole McCauley at c.mccauley@neu.edu

Coastal Studies for Girls - Maine

Coastal Studies for Girls offers a residential marine science and leadership semester for 10th grade girls, located in Freeport, Maine. Girls spend the fall or spring studying hands-on marine and environmental science and experiencing outdoor leadership adventures in the classroom, laboratory, and outdoors. Scholarships may be available.

<http://www.coastalstudiesforgirls.org/>

Coral Camp - Florida

Coral Camp is a summer learning experience for 6-12 year-old students. Weekly sessions run from June 21-August 13, 2010 in Key West, Florida. Campers learn about living coral reef ecosystem through interactive field trips, film, and activities at the Reef Relief Environmental Center.

<http://reefrelief.org/2010/05/coral-camp-2010-registration-open/>

Student Conservation Association

The Student Conservation Association has opportunities available for: Conservation Internships, ages 18 and older; National Conservation Crews, ages 15-19; Community Programs, ages 15-19; Conservation Corps, ages 18 and older; and Field Leaders, ages 21 and older.

<http://www.thesca.org/>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Animals in Curriculum-based Ecosystem Studies Workshop - California

The Signals of Spring - ACES (Animals in Curriculum-based Ecosystem Studies) workshop teaches science within the context of the ocean, using satellite data to develop inquiry skills. Participants use Earth imagery and remote sensing data to explain the movement of animals that are tracked by satellites. The ACES curriculum also introduces the environmental issues the animals face, and the environments of NOAA's National Marine Sanctuaries and beyond. The summer teacher workshop will be held June 28-30, 2010 in San Francisco, California.

<http://www.signalsofspring.net/aces/about.cfm>

Communicating Ocean Sciences Instructors' Workshop - California

The Communicating Ocean Sciences courses are designed to be co-taught by an ocean scientist and a science educator. This instructors' workshop, June 7-9, 2010 in Berkeley, California, prepares science educators (classroom or informal) and scientists interested in teaching these courses at their institutions.

<http://www.coseeca.net/programs/communicatingoceansciences>

DataStreme Ocean - Various

DataStreme Ocean is a precollege teacher enhancement program of the American Meteorological Society/NOAA Cooperative Program for Earth System Education. The program explores the ocean in the Earth system with special emphasis on the flow and transformations of water and energy into and out of the ocean; the internal properties and workings of the ocean; interactions between the ocean and the other components of the Earth system (hydrosphere, atmosphere, lithosphere, and biosphere); and the human/societal impacts on and response to those interactions. Teachers of grades K-12, and especially middle school teachers, wishing to participate in the course are encouraged to contact their Local Implementation Team Leaders.

<http://www.ametsoc.org/amsedu/DS-Ocean/index.html>

De-Mystifying Weather and Climate Science – New Jersey

The Jacques Cousteau National Estuarine Research Reserve will hold this workshop June 30, 2010 in Tuckerton, New Jersey. Participants will explore the difference between weather and climate, factors determining Earth's climate, how a changing climate is affecting wildlife and our wild lands, and much more.

<http://www.jcnerr.org/education/educators.html>

Exploring Ocean Literacy through Science and Children's Literature - Maine

Participants in this professional development opportunity, June 28-30, 2010 in South Portland, Maine, will use hands-on science activities, field experiences, relevant children's literature, and local scientific data to learn about the marine life, water quality, and environmental issues of coastal waters.

Contact keeper@cascobay.org

Gulf and Caribbean Fisheries Institute – Puerto Rico

The 63rd Annual meeting of the Gulf and Caribbean Fisheries Institute will be held November 1- 5, 2010 in San Juan, Puerto Rico. The deadline for abstract submission is August 15, 2010. Check out the student awards.

<http://www.gcfi.org/>

Inspiring Climate Education Excellence - Colorado

The Inspiring Climate Education Excellence: Teacher Professional Development for Effective Instruction in Climate Science Literacy project is a teacher professional development that addresses climate science content along with the pedagogical skills necessary for effective instruction. The program for math and science teachers of grades 6-12, June 10-16, 2010 in Boulder, Colorado, will showcase NASA data and platforms, especially those associated with Arctic climate systems and global sea level change.

<http://cires.colorado.edu/education/outreach/ICEE/>

Learning Ocean Science through Ocean Exploration - Various

NOAA's Ocean Exploration Program and partners will offer Learning Ocean Science through Ocean Exploration professional development workshops for science teachers. Participants will receive the curriculum with CD-ROM's, certificates of participation, and more. Contact the noted educator for registration and more information.

- June 21-22, 2010 with Gulf Coast Research Laboratory Marine Education Center in Mississippi, an introductory and follow-up workshop. The deadline for registration is June 7, 2010. Contact Dr. Shelia Brown at shelia.brown@usm.edu
- July 27-28, 2010 with University of Rhode Island, an introductory and follow-up workshop. The deadline for registration is July 13, 2010. Contact Carol Englander at englanca@etal.uri.edu
- August 7, 2010 with Nauticus, The National Maritime Center in Virginia, a follow-up workshop. The deadline for registration is July 16, 2010. Contact Jennifer Tabor at jennifer.tabor@norfolk.gov
- August 14, 2010 with Audubon Aquarium of the Americas in Louisiana, a follow-up workshop. The deadline for registration is July 30, 2010. Contact Tricia LeBlanc at tbleblanc@AudubonInstitute.org

<http://oceanexplorer.noaa.gov/edu/development/development.html>

National Conservation Training Center Courses – Michigan and Utah

The U.S. Fish and Wildlife Service offers professional development courses. For more information about a specific course, contact the noted educator.

- OUT8164: Creating a Schoolyard Habitat/Outdoor Classroom, October 18-22, 2010 in Mancelona, Michigan. The deadline for registration is August 16, 2010. Contact Julie Study at Julie_Study@fws.gov
- OUT8163: Connecting People with Nature through Birds, June 21-24, 2010 in Brigham City, Utah. Slots are still available. Contact Jim Siegel at Jim_Siegel@fws.gov

http://training.fws.gov/documents/Section1_NCTC_Sponsored_Courses.pdf

Puget Sound Workshops - Washington

Padilla Bay National Estuarine Research Reserve and partners will host a free workshop, August 10-12, 2010 in Olympia, Washington, for teachers of grades 4-6. The focus of the workshop will be the science of estuaries, marine life, and curriculum to support teaching those topics. A second workshop for K-6 teachers, July 14, 21, and 28, 2010 will be held near Mt. Vernon, Washington. The deadline for registration is June 18, 2010.

Contact Alex at alex@padillabay.gov

Reef Resilience Course - Online

The Nature Conservancy is offering a free online training program on Reef Resilience to provide coral reef managers, trainers, and policymakers guidance on building resilience to climate change into the design of MPAs and daily management activities. The 12-week online course incorporates the new science, lessons learned, case studies, and practices that have been included in the Coral Reefs module of the Reef Resilience toolkit, and is designed to accelerate the knowledge of and facilitate access to essential information and tools needed to incorporate resilience principles into management strategies.

http://www.reefresilience.org/Training_Online.html

Science at Sea - Texas

The Flower Garden Banks National Marine Sanctuary will host the Science at Sea workshop, June 21-25, 2010 from Galveston, Texas, designed to give educators first hand knowledge and experience of the role science and technology play in managing and protecting natural resources. Workshop participants will learn to identify phytoplankton and determine its significance in harmful algal blooms, conduct water quality sampling, use a remotely operated vehicle to explore the sanctuary, and investigate the workings of the sanctuary research vessel. Hurry - there are still several spots available. Note that participants are responsible for their own lodging during the land portion of the workshop.

<http://flowergarden.noaa.gov/education/workshops.html>

Summer Institute – New Jersey

The Liberty Science Center, in collaboration with the Institute of Marine and Coastal Sciences at Rutgers University, will offer a week-long summer institute, August 9-13, 2010 in Jersey City, New Jersey, for Earth and Marine Science teachers in grades 6-9. Participants will work with research scientists, teacher educators, college faculty, and science journalists in learning about an inter-disciplinary mission in January 2011 to Antarctica's Ross Sea to characterize the connection among ocean currents, ocean chemistry, and climate change. Teachers and students can also follow the mission and interact with the researchers in the mission blog and website and then through live audio broadcasts in January from the Antarctica research vessel. Teachers will be provided a stipend for their involvement, contingent upon completion of all phases of the teacher training, including participating in a live audio broadcast. The deadline for application is June 28, 2010.

http://www.lsc.org/assets/files/Prof%20Dev/Summer_Institute_2010.pdf

Using Ocean Data in Education - Online

COSEE NOW has been presenting a free webinar series, Using Ocean Data in Education. The series explores effective strategies for incorporating ocean data in formal and informal education products and programs, as a way to connect students to scientific concepts and real-time science. The session, COOL Classroom: Building a Collaborative Design Team for Science Curriculum Development, will be held online at a future date; register to join.

<http://coseenow.net/blog/using-ocean-data-in-education/>

Why Do We Explore? - Online

For those who missed the first offering, NOAA's Ocean Exploration and Research Program and the College of Exploration offer this free Okeanos Explorer Online Teacher Professional Development Series, June 21–July 2, 2010. The workshop features

keynote addresses by ocean explorers who have made significant ocean discoveries, inquiry-based lessons for all grade-levels, and facilitated online reflective conversations about the importance of ocean exploration on a global scale. Areas of focus include climate change, energy, human health and ocean health. This workshop will be available 24 hours a day, 7 days a week.

<http://www.coexploration.org/oe/>

EDUCATIONAL RESOURCES

Acronym Finder

Find out what an acronym, abbreviation, or initialism stands for on this easy-to-use webpage.

<http://www.acronymfinder.com/>

Air: The Search for One Clean Breath

The film, Air: The Search for One Clean Breath, produced by the Ventura County Air Pollution Control District with a cooperative grant agreement from the EPA, acts as a biography of air. With animation and live action, viewers take a guided tour of the story of air, from its ancient beginnings to today's clean air technologies. In addition, the downloadable Educator's Guide for middle and high school instructors and accompanying classroom lessons enable students to not only see the film, but understand more about air quality by expanding upon the material presented in the film.

<http://www.vcapcd.org/AirTheFilm/teacher.htm>

The Bay Game

The University of Virginia's Bay Game simulation allows players to take the roles of stakeholders, make decisions about their livelihoods and professional expertise, and see the impacts of these decisions on the watershed and on each other over a twenty-year period. The website provides information about the simulation, along with materials on the different simulation events and the participating groups. Visitors can review the Bay Resources with links to organizations and interactive maps of the Chesapeake Bay. Additional web pages include links to news and more.

<http://www.virginia.edu/vpr/sustain/BayGame/>

Casco Bay Curriculum

Friends of Casco Bay developed the place-based Casco Bay Curriculum to help teachers of grades 4-6 incorporate locally-focused environmental education into their classrooms to instill an ethic of stewardship by helping students understand the immediate marine world around them through the use of hands-on science, inquiry activities, and actual data.

<http://friendsofascobay.org/curriculum.aspx>

EasyBib

The EasyBib website helps visitors create bibliographies in a variety of different citation styles, including MLA and APA. Users type in the item they need to cite, and EasyBib will provide the correct citation for each entry.

<http://www.easybib.com/>

EPA Wastes Website

This website from the EPA provides materials for teachers, students, and researchers to develop an increased knowledge of solid waste issues. The resources are divided into four sections: What You Can Do, Resource Conservation, Hazardous Waste, and Nonhazardous Waste. Students can find activities and project ideas to learn more about waste reduction, reuse, and recycling, along with information sources, tools, and data to enable student researchers to collect environmental information for use in projects and reports. The website also offers links to curriculum, activities, games, and other educational materials, along with grant and career information.

<http://www.epa.gov/epawaste/index.htm>

False Assumptions

This false assumption activity from the Evolution & the Nature of Science Institutes at Indiana University teaches high school students about the nature of science, its uncertainty, and the need to consider multiple perspectives and ask different questions. Students solve short problem scenarios by only asking yes/no questions. Recognizing the false assumption makes the solutions tricky.

<http://www.indiana.edu/~ensiweb/lessons/falsasum.html>

FMSEA 2010 on the Web

FMSEA 2010, *Changing Reefs: Corals on Acid*, took place May 14-16 2010 in Key Largo, Florida. Some of the conference highlights, curricula, and other resources from speakers and participants are available for downloading from the website. Be sure to check back as additional materials are offered.

<http://fmsea.org/events/conferences/2010/>

GIS at Lane Community College

Lane Community College offers geospatial education across the curriculum for college and high school students. Web-based GIS modules are designed to engage students in real-world scenarios that teach geospatial thinking while reducing the complexities of traditional desktop GIS. MAPS-GIS (Mapping, Analyzing and Problem Solving Using Geographic Information Science) focuses on embedding web-based GIS learning modules across curriculum at the Lane Community College, focusing on lower division college courses. GeoSTAC is a professional development opportunity for Language Arts, Math, Social Science and Science high school teachers.

<http://gis.lanecol.edu/>

Gray's Reef Expedition

Join NOAA's Gray's Reef National Marine Sanctuary as scientists and crew conduct a research mission aboard the NOAA ship *Nancy Foster*, May 18-June 8, 2010. Read the blogs, watch video, and more from this website. Investigations include tagging and tracking of reef fish, habitat mapping, invertebrate studies, marine debris and CO₂ monitoring, and fish predation behaviors

http://sanctuaries.noaa.gov/missions/2010nancy_foster/welcome.html

Hurricane Preparedness Websites

NOAA teams up with the Gulf of Mexico Alliance and the Environmental Protection Agency to offer two websites to bolster gulf readiness for the 2010 hurricane season. StormSmart Coasts assists in identifying what can be done before, during, and after a storm to enhance community resilience. The sister website, StormSmart Connect,

provides a venue for real-time collaboration, allowing users to share documents and expertise.

<http://stormsmartcoasts.org/>

<http://stormsmartconnect.org/>

Long Island Sound Study

The Long Island Sound Study website offers teachers different ways to incorporate Long Island Sound into their curriculum and classroom. The newly redesigned website offers a section for Educators, including a virtual tour of the sound, classroom resources, and links to other websites. Check out the downloadable Long Island Sound Curricular Resource Guide.

<http://longislandsoundstudy.net/get-involved/teaching-resources/>

Marine Renewable Energy

The June 2010 issue of *Oceanography* focuses on marine renewable energy. The contributing authors to this special issue come from many areas of the marine renewable energy arena—academia, industry, federal and state government, social science, and commercial fishing. Visitors can read it online.

<http://www.tos.org/oceanography/issues/current.html>

National Geographic: Environment

The Environment section of the National Geographic website has photos, quizzes, blogs, games, and news. Check out the Ocean Extremes Quiz, The Hidden Water We Use, and much more.

<http://environment.nationalgeographic.com/environment/?source=NavEnvHome>

Not Just Mine: Kids and Plovers on the Beach

The Western Snowy Plover website is devoted to the protection and recovery of the Western Snowy Plover, and offers resources for information, education, and community involvement. Not Just Mine is a movie about kids and plovers on the beach and can be downloaded fast, in low quality, or more slowly at a higher quality. In addition, the film is available at no charge to marine educators for classroom use and distribution.

<http://www.westernsnowyplover.org>

Contact Marla Morrissey at marlamorrissey@gmail.com

OzCoasts

OzCoasts represents a collaborative effort between coastal scientists from a range of government agencies and universities across Australia, to provide comprehensive information about Australia's coast, including its estuaries, coastal waterways, and climate change impact. This helps to generate a better understanding of coastal environments, the complex processes that occur in them, the potential environmental health issues, and how to recognize and deal with these issues. The materials are divided into six primary areas, including Coastal Indicators, Habitat Mapping, Natural Resource Management, and more. Each section documents a wide range of natural and man-made phenomena including beach erosion, sea level rise, and more.

<http://www.ozcoasts.org.au/>

Papahānaumokuākea Marine National Monument Explorations 2010

Follow along on a 25-day research expedition to Papahānaumokuākea Marine National Monument in the Northwestern Hawaiian Islands. The multidisciplinary scientific party includes a maritime archaeology team, shark researchers, invertebrate and invasive

species specialists, ecologists conducting work at maritime heritage sites, and a television newscaster. The main objectives of the expedition for the maritime heritage team are to interpret these diverse archaeological sites through underwater mapping, video, and photography.

<http://sanctuaries.noaa.gov/missions/2010monument/welcome.html>

Plastic Oceans

Plastic Oceans offers a documentary film about plastic in our oceans.

<http://www.plasticoceans.net/>

Protect Your Climate Curriculum

The (California) Bay Area Air Quality Management District offers Protect Your Climate, a comprehensive climate protection curriculum with 16 lessons for grades 4-5, which can be easily adapted for other grades. The lessons investigate the science and causes of climate change and how students can take action to protect our climate through hands-on activities.

<http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/Climate%20Protection%20Program/protectyourclimate.ashx>

Salmon & Steelhead: A Time for Recovery

The Steelhead and Stream Recovery Coalition has recently created and released a movie about the plight of Steelhead Salmon and how we can protect them. The QuickTime movie is downloadable from the website or available at no charge to marine educators for classroom use and distribution.

<http://www.steelheadrecovery.org>

Contact Marla Morrissey at marlamorrissey@gmail.com

Water Basics

The Water Basics website from Environment Canada includes the hydrologic cycle; rivers; lakes; snowfall; and measuring, storing, and controlling water. Check out the interesting Quick Facts along with the more detailed Water Sources.

<http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=A6A15B0B-1>

Water Sourcebooks

The EPA offers the downloadable Water Sourcebooks, with activities for grades K-12 divided into four sections: K-2, 3-5, 5-8, and 9-12. Each section is divided into five chapters: Introduction to Water, Drinking Water and Wastewater Treatment, Surface Water Resources, Ground Water Resources, and Wetlands and Coastal Waters.

This environmental education program explains the water management cycle using a balanced approach showing, how it affects all aspects of the environment. All activities contain hands-on investigations, fact sheets, reference materials, and a glossary of terms.

<http://www.epa.gov/safewater/kids/wsb/>

Wilkes Land Expedition Videos

Check out the videos from the *Joides Resolution* expeditions through Penguin TV, PEAT News Network, and more at this website. Each video update includes an interview with a scientist aboard the 470' *JOIDES Resolution* during a seafloor coring expedition off the Antarctic coast earlier this year. The videos tie paleoclimate research to modern climate change discussions and allow students to get an idea of what it's like to live and work at sea, with a little comic relief thrown in.

<http://joidesresolution.org/node/52>

World Environment Day

World Environment Day, June 5, was started in 1972 by the United Nations General Assembly, to stimulate worldwide awareness about environmental issues and their impact on humans. Learn more about this year's theme, *Many Species. One Planet. One Future*, download posters, and more.

<http://www.unep.org/wed/2010/english/theme.asp>

INITIATIVES, JOURNALS, and MORE

Fish2Fork

This website rates restaurants that serve fish, not only for the quality of their food but also for the effect they are having on the seas and on marine life.

<http://fish2fork.com/apps/welcome>

Ocean Voices

A sound artist and a marine biologist have joined forces to collect the voices of people around the world recounting their personal experiences with the ocean. When combined with music, these voices become an integral part of audio collages which listeners can create to suit their own preferences. Help by sharing your voice and spreading the words of all participants around the globe. An iPhone application and an Internet website allow anyone to participate.

<http://www.oceanvoices.org/>

People in Fisheries

The Fall 2009 issue of *Eddies*, an online magazine from the Fish and Wildlife Service, explores the diverse careers of the fisheries workforce, from geneticists, maintenance workers, and veterinarians to pharmaceutical researchers, animal caretakers, and fish culturists. Be sure to check out all the archived issues.

<http://www.fws.gov/eddies/>

Smithsonian Folklife Festival

The Smithsonian Folklife Festival is a free international exposition of living cultural heritage annually produced outdoors on the National Mall of the United States in Washington, D.C., by the Smithsonian Institution's Center for Folklife and Cultural Heritage. This year's festival will be held June 24–28 and July 1–5, 2010.

<http://www.festival.si.edu/>

Springer Publishing

As a global scientific publisher, delivering quality content through innovative information products and services, Springer offers a variety of options for you to publish your research as open access with free use to everyone, everywhere. The open access choices allow you to easily comply with the open access requirements of institutions, governments, and funders. Visitors can sign up for new book alerts on topics of interest. One recent addition in the Aquatic Sciences is *The Comparative Embryology of Sponges*; it can be downloaded by chapter.

<http://www.springer.com/?SGWID=0-102-0-0-0>

To the Everglades

The Everglades Eco Tour is a collaboration between the U.S. Army Corps of Engineers and Everglades National Park. Student from Paxon Middle School in Jacksonville Florida took the field trip and wrote and performed in this music video about Everglades restoration.

http://www.evergladesplan.org/get_involved/ecotour_2010.aspx