

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**INFORMATION EXCHANGE FOR MARINE EDUCATORS**

**FEBRUARY 2013**

This update is funded by the National Marine Sanctuary Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from 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.

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

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**OPPORTUNITIES OF THE MONTH**

**JASON National Argonaut Team**

Apply to join the JASON National Argonaut Team to explore oceanography. The JASON Project seeks a diverse, creative, and adventurous group of students and teachers to venture into the field with JASON scientists to perform cutting edge science explorations. Experience with the JASON program is required. Hurry - the deadline for application is February 15, 2013.

<http://www.jason.org/news/apply-now-become-2013-jason-argonaut-applications-due-feb-15>

### **Ocean Exploration Trust Expeditions**

The Ocean Exploration Trust was founded to engage in ocean exploration, with international programs centered on seafloor explorations. In addition to research, their expeditions are shared through live video, audio, and data feeds from the field. Educators and students sail aboard during *E/V Nautilus* expeditions for hands-on experience in ocean exploration, research, and communications. Check out the Student and Teacher Argonaut, Educators at Sea, and Honors Research Program opportunities, and their deadlines for application.

<http://www.oceanexplorationtrust.com/#!/opportunities/cee5>

## **GRANTS AND OPPORTUNITIES**

### **California Sea Grant Call for Proposals**

The California Sea Grant College Program is inviting pre-proposals for standard core awards for one of three strategic focus areas. The deadline for pre-proposals is March 14, 2013.

<http://www.csgc.ucsd.edu/FUNDING/APPLYING/PRELIMINARY/IndxPrelim.html>

### **Craig Tufts Environmental Education Fund**

Family Summits, Inc. and partners offer the annual Craig Tufts Educational Scholarship Award, given to a young person 8-18 years old to attend a week-long, summer outdoor educational adventure camp with a parent or guardian. The deadline for application is March 29, 2013.

<http://www.familynaturesummits.org/scholarships/craig-tufts>

### **Doodle 4 Google**

Doodle 4 Google is an annual program that invites K-12 students in the United States to use their artistic talents to redesign the Google homepage logo. This year's theme is *My Best Day Ever*. And while on the website, check out all the doodles done so far through the Doodle History link.

<http://www.google.com/doodle4google/>

### **Edge Fellowship**

The Zoological Society of London's EDGE of Existence program offers two-year fellowships to future conservation leaders for work on poorly-known EDGE species, including corals. Fellowships are specifically targeted at in-country, early career conservationists working on priority mammal, amphibian or coral EDGE species. The deadline for application is March 31, 2013.

<http://www.edgeofexistence.org/conservation/fellows.php>

### **Endangered Species Day Art Contest**

In celebration of Endangered Species Day, May 17, 2013, children are invited to learn about endangered species and express their knowledge and support through artwork. The deadline for submission is March 15, 2013.

<http://www.stopextinction.org/esd/194-esd-art.html>

### **Euan P. McFarlane Environmental Leadership Award**

Island Resources Foundation is accepting nominations for the Euan P. McFarlane Environmental Leadership Award. The award provides recognition for persons demonstrating initiative, resourcefulness, and leadership in promoting conservation and

enhancement of the environment in the insular Caribbean, with priority given to the residents of the smaller islands of the Eastern Caribbean. The deadline for nominations is March 31, 2013.

[http://www.irf.org/about/mcfarlane\\_award.php](http://www.irf.org/about/mcfarlane_award.php)

### **Environmental Literacy Grants**

NOAA's Office of Education has issued a request for applications for projects designed to build the capacity of educators to use NOAA data and data access tools to help K-12 students and/or the public understand and respond to global change. Applicants should be collaborative teams of two or more U.S. institutions or non-profit U.S. aquariums. The deadline for entry is March 12, 2013. Informational webinars will be offered February 5 and 6, 2013.

<http://www.oesd.noaa.gov/grants/funding.html>

### **Fly Guy Art Contest**

Students in grades in grades pre-K-1 are invited to draw where Fly Guy and Buzz should go on their next field trip and what they could discover there. The deadline for entry is February 12, 2013.

<http://clubs.scholastic.com/programs/contests.shtml>

### **From the Bow Seat Ocean Awareness Essay Contest**

The goal of this contest is to challenge high school students to think critically about challenges facing the ocean, with a focus on the biodiversity and species interdependence in the Gulf of Maine ecosystem. This year's contest theme is *Sea Animals Big and Small*. Links bring visitors to detailed information about fishery issues, lobster literacy lessons, and more. The deadline for submission is June 15, 2013.

<http://www.fromthebowseat.org/index.php>

### **Great American Teach-Off**

Good Magazine sponsors The Great American Teach-Off contest to recognize innovative grade 7-12 teachers. The deadline for nomination is February 15, 2013..

<http://www.good.is/great-american-teach-off>

### **Gulf Guardian Awards**

The Gulf of Mexico Program is accepting nominations for the 2013 Gulf Guardian Awards. Awards are given for positive steps to keep the gulf healthy, beautiful, and productive; categories include Partnerships, Youth Environmental Education, and more. The deadline for nomination is March 8, 2013.

<http://www.epa.gov/gmpo/gulfguard.html>

### **J-aRT Contest**

Send a work of art to the seafloor through this year's J-aRt Contest and watch what the intense pressure does to them. Check out the details on the website. The deadline for entry is February 28, 2013.

<http://joidesresolution.org/node/2836>

### **Junior Duck Stamp Art Contest**

The U.S. Fish and Wildlife Service oversees the Federal Junior Duck Stamp Program. Students are invited to create duck stamp drawings to show what they have learned about wetlands habitat and waterfowl conservation. Check the website for details. Most state deadlines for submission are March 15, 2013.

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

### **Kohl's Cares Scholarship Program**

The Kohl's Cares® Scholarship Program recognizes young volunteers (ages 6-18) who help make their communities a better place to live. The deadline for nomination is March 15, 2013.

<http://www.kohlscorporation.com/CommunityRelations/scholarship/index.asp>

### **Marine Debris Prevention, Education and Outreach Partnership Grant**

The NOAA Marine Debris Program offers the Prevention, Education and Outreach Partnership grant to establish national and regional projects focusing on marine debris prevention, education, and outreach activities. Projects are expected to catalyze the public or a target audience to address marine debris in a way that will benefit living marine resources and/or navigation safety. The deadline for application is February 28, 2013.

<http://www.grants.gov/search/search.do?mode=VIEW&oppld=217634>

### **My Favorite Teacher Contest**

Barnes & Noble sponsors this contest for middle and high school students who produce a winning essay, poem, or thank you note sharing how a teacher has influenced their life and why they appreciate and admire them. The deadline for entry is March 1, 2013.

<http://www.barnesandnoble.com/u/my-favorite-teacher/379002376/>

### **National Association of Biology Teachers Awards**

The National Association of Biology Teachers recognizes excellence in teaching with a variety of awards, including the Ecology/Environmental Science Teaching Award. Check the website for information about the different awards. The deadline for nomination is March 15, 2013.

<http://www.nabt.org/websites/institution/index.php?p=132>

### **National Geographic Student Expeditions Scholarship**

The National Geographic Student Expeditions Scholarship Program provides financial support to high school students seeking educational summer experiences they otherwise could not afford. The deadline for application is March 1, 2013.

<http://ngstudentexpeditions.com/about/scholarships/>

### **National Network for Environmental Management Studies Fellowship Program**

The 2013 EPA NNEMS fellowships offered are organized under three categories: Environmental Management and Administration, Environmental Science, and Public Relations and Communications. Hurry – the deadline for application is February 8, 2013.

<http://www.epa.gov/education/NNEMS/>

### **National Youth Science Camp**

Two students are selected to represent each state in the free National Youth Science Camp. The deadline for application is February 15, 2013. See the website for complete details, including international student opportunities.

<http://2013.nysc.org/about-the-national-youth-science-camp/apply/>

### **NMEA Scholarships and Stipends**

NMEA is seeking nominations for the Expanding Audience Stipend Awards, which aim to recruit and assist individuals from groups underrepresented in science or those who serve underrepresented or underserved audiences, to become a part of the NMEA family. NMEA also offers additional conference scholarships. The deadline for application is March 15, 2013. The deadline for application for the Traditional Knowledge Scholarship is April 1, 2013.

<http://www.marine-ed.org/scholarships-stipends.html>

### **Norm Strung Youth Writing Award**

The Outdoor Writers Association of America offers the annual Norm Strung Youth Writing Contest to students in grades 6-12 for published poetry and prose with an outdoor focus. The deadline for submission is March 15, 2013.

<http://owaa.org/programs/contests/norm-strung-youth-writing-awards/>

### **NSTA Student Essay Contest**

The National Science Teachers Association will award a limited number of scholarships to preservice teachers planning to attend the 2013 National Conference in San Antonio, Texas, April 11-14, 2013. Applicants must be 18 years of age or older and enrolled in an accredited college or university as a student with an interest in science education. The essay topics are: What has inspired you to become a teacher? or, Tell us about a teacher who had a profound influence on you. Hurry – the deadline for submission is February 8, 2013. Check out the Student Poster Session for a one-year NSTA e-student membership.

<https://www.surveymonkey.com/s/2013studessay>

<https://www.surveymonkey.com/s/2013stuposter>

### **One Ocean Student Film Festival**

The purpose of the competition, One Ocean, What Will You Do? is to inspire, encourage, recognize, and promote the work of student filmmakers who are passionate about the ocean. Hosted by NOAA's Monitor National Marine Sanctuary, the festival will be held on April 12-13, 2013 in Beaufort, North Carolina. Festival entries are open to students in grades 6-12. The deadline for submission is March 15, 2013.

<http://monitor.noaa.gov/>

### **Science Without Borders Challenge**

The Khaled bin Sultan Living Oceans Foundation hosts the Science Without Borders Challenge, asking high school students to answer the question, How Are We All Connected to the Oceans? Each participant will submit a multi-media video presentation including any combination of interviews, comic storyboards, photography, and original footage to present an answer to the challenge question. Each submission should convey a connection between everyday life and our oceans that can serve as a public service announcement to other students, teachers, parents, and the general public. The deadline for submission is April 2, 2013.

[http://www.livingoceansfoundation.org/index.php?option=com\\_content&view=article&id=198&Itemid=567](http://www.livingoceansfoundation.org/index.php?option=com_content&view=article&id=198&Itemid=567)

### **SIGMS Technology Innovation Award**

The International Society for Technology in Education presents this award to teams of a school librarian and collaborating teacher from one primary and one secondary school. Winning teams will have planned a collaborative project involving technology, received

support from administration, and successfully executed the project with supportive data and evidence for others to replicate the project. The deadline for nomination is February 28, 2013.

<http://www.iste.org/membership/awards-recognition/sig-media-specialist-technology-innovation-award>

### **State-Fish Art Project**

The Wildlife Forever State-Fish Art Project challenges young artists to create an illustration of their state fish and a written composition on its behavior, habitat, and efforts to conserve it. The deadline for entry is March 31, 2013.

<http://www.wildlifeforever.org/contest/details>

### **Support for International Scientific Meetings**

The Academy of Sciences for the Developing World offers grants to support the organization of high-level international and regional scientific activities in developing countries by offering financial assistance for conferences, workshops, symposia, and special meetings. See the website for details. The deadlines for application June and December 1 of each year.

<http://twas.ictp.it/prog/meetings/support-for-international-scientific-meetings>

### **Texas Sea Grant Call for Proposals**

The Texas Sea Grant College Program is inviting pre-proposals for the next two-year grant cycle, for innovative research that has public relevance and is aligned with one or more of their four focus areas. Proposed research projects must integrate outreach or education activities. They are especially interested in receiving pre-proposals to support multi-disciplinary research, beginning investigators, underrepresented investigators, proposals that involve undergraduate and graduate students in research, and collaborations between institutions of higher education and industry. The deadline for pre-proposals is February 15, 2013.

<http://texas-sea-grant.tamu.edu/WhatWeDo/Proposals2014-2016.html>

### **Thacher Environmental Research Contest**

The Thacher Environmental Research Contest, held by the Institute for Global Environmental Strategies, challenges students in grades 9-12 to conduct innovative research demonstrating the best uses of geospatial tools and data to study the Earth. The deadline for entry is April 15, 2013.

<http://strategies.org/education/student-contests/thacher-contest/>

### **Voyage to Discovery**

The National Marine Sanctuary Foundation in collaboration with the NOAA Office of National Marine Sanctuaries is conducting a national essay contest open to middle and high school students in the United States. The purpose of this contest is to encourage students to research and learn about African-American contributions to the maritime history of the United States. See the website for details. The deadline for submission is April 15, 2013.

[http://www.voyagetodiscovery.org/essay\\_contest.htm](http://www.voyagetodiscovery.org/essay_contest.htm)

### **Young Scientist Challenge**

Discovery Education 3M challenges students in grades 5-8 to make a short video describing a new innovation or solution that could solve or impact an everyday problem

related to the way we move, keep ourselves healthy or make a difference. The deadline for entry is April 23, 2013.

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

## **INTERNSHIPS AND TEMPORARY OPPORTUNITIES**

### **Geoscience Summer Program for Students - Maryland**

The University of Maryland Eastern Shore and partners offer an annual summer bridge program for graduating high school seniors or rising seniors who wish to pursue further education in any of the geosciences. The free program, June 30-August 2, 2013 in Princess Anne, Maryland, offers the opportunity for students to work closely with graduate students and research faculty on current research projects. The deadline for application is March 29, 2013.

<http://www.umes.edu/cscgeosciences/Default.aspx?id=39798>

### **Seafloor Mapping Internship**

The NOAA Ship *Okeanos Explorer* is dedicated to ocean exploration and the *Okeanos Explorer's* Seafloor Mapping Internship offers hands-on at-sea experience in the operation of state of the art multibeam sonar technology, water sampling techniques, and the design of seafloor maps using sonar data and geographic software packages. Internships are 2-3 weeks long, will occur from February to August 2013, and are open to undergraduates, graduate students, and recent graduates. The deadline for application is March 20, 2013.

<http://www.regonline.com/Register/Checkin.aspx?EventId=1139351>

### **Summer Undergraduate Research Fellowships**

The Center for Coastal and Ocean Mapping at the University of New Hampshire's Summer Undergraduate Research Fellowship program is designed to create research experiences for undergraduate students who are interested in pursuing graduate work. The program is aimed primarily at students who are working toward a degree in science, engineering, or math and are completing their junior year. The deadline for application is March 1, 2013.

<http://ccom.unh.edu/surf>

## **CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT**

### **Climate Adaptation Training for Coastal Communities – Louisiana and Mississippi**

This course gives participants a grounding in the topic of adaptation and time in class to apply what has been learned to their own adaptation projects. The course covers understanding climate science and impacts; determining community vulnerabilities; communicating effectively; identifying adaptation strategies; and finding mechanisms to implement those strategies. Scholarships may be available.

- February 25-26, 2013 in Baton Rouge Louisiana with Louisiana Coastal Management Program
- February 27-March 1, 2013 in Biloxi, Mississippi with Grand Bay National Estuarine Research Reserve

<http://csc.noaa.gov/training/calendar/>



### **Climate Change in Urban Estuaries Symposium - California**

Join Santa Monica Bay Restoration Commission and partners for a scientific symposium focusing on the impacts of changing climate on the ecology and resilience of urban wetlands, March 25, 2013 in Los Angeles, California. Topics will range from sea level rise to erosion and thermal stress. The symposium is part of a week's focus in Los Angeles on climate change. The deadline for registration is February 28, 2013.

<http://www.santamonibay.org/CoastalWetlands/Symposium2013/registration.html>

### **Coastal Marine Sciences Workshop For Teachers - Maryland**

The paid CMARS workshop, July 7-19, 2013 in Princess Anne, Maryland, promotes environmental literacy among high school and middle school teachers and students by infusing ocean science educational materials into the existing curricula. Check out the website for extended details. The deadline for application is March 29, 2013.

<http://www.umes.edu/CREST/Default.aspx?id=33372>

### **Ocean Exploration Workshops – Various**

NOAA's Ocean Exploration Program and partners offer the Okeanos Explorer Education Materials Collection, How Do We Explore? Professional Development Workshop for Educators. Participants will receive curriculum with CD-ROM's, certificates of participation, and more. Contact the noted educator or check out the website for registration and more information.

- **Note:** There has been a change in schedule and the workshop scheduled with the National Aquarium in Baltimore, Maryland will now be held March 23, 2013. The new deadline for registration is March 1, 2013. Contact David Christopher at [dchristopher@aqua.org](mailto:dchristopher@aqua.org)
- April 6, 2013 with Hatfield Marine Science Center, Newport, Oregon. The deadline for registration is March 15, 2013. Contact Tracy Crews at [tracy.crews@oregonstate.edu](mailto:tracy.crews@oregonstate.edu)
- April 6, 2013 with Aquarium of the Pacific, Long Beach, California. The deadline for registration is March 15, 2013. Contact Alie Lebeau at [alebeau@lbaop.org](mailto:alebeau@lbaop.org)
- April 13, 2013 with John G. Shedd Aquarium, Chicago, Illinois. The deadline for registration is March 22, 2013. Contact Jackie Formoso at [jformoso@shedd Aquarium.org](mailto:jformoso@shedd Aquarium.org)
- April 27, 2013 with Birch Aquarium at Scripps, San Diego, California. The deadline for registration is April 5, 2013. Contact Adrienne Marriott at [Creec9a@hotmail.com](mailto:Creec9a@hotmail.com)

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

### **Scaling Up Workshops - Maryland**

Undergraduate and graduate students are invited to apply for the Ecological Society of America workshop, Scaling Up: Future of Environmental Decisions, June 2–7, 2013 in Baltimore, Maryland. Scholarships may be available. The deadline for submission is February 8, 2013.

<http://www.esa.org/scalingup/>

### **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 Investigative Marine Biology, Ecology and the Marine Environment, and more. View the complete listings on the website, along with application instructions and registration deadlines.



[http://www.sml.cornell.edu/sml\\_students\\_creditcourses.html](http://www.sml.cornell.edu/sml_students_creditcourses.html)

### **Summer Programs – Alabama**

Dauphin Island Sea Lab Discovery Hall Programs promote conservation through education, research, and outreach. Through hands-on activities in vibrant marine habitats, people can see the impact of science on their daily lives.

Students

- Barrier Island Explorer, for rising 5th-6th grade students
- Gulf Island Journey, for rising 7th-9th grade students
- Marine Science Course, for rising 10th-12th grade students

Teachers – all programs are fully sponsored; registration fees and priority registration may apply

- Reefs, Rhizomes and Restoration
- Fins, Fishes and Fisheries
- Climate Change in the Gulf of Mexico
- Technology in Marine Science - ROV

See the website for details and for additional programs, including day camps and field trips.

<http://dhp.disl.org/>

### **Teacher Workshop - Florida**

MarineLab will host a marine science weekend workshop for teachers, February 15-17, 2013 in Key Largo, Florida. Join marine biologists on an exploration of the seagrass, mangrove, and coral reef communities. Be sure to check out the Summer Teacher Workshops, July 29-August 3, 2013 while on the website.

[http://www.marinelab.org/Teacher\\_Workshops.html](http://www.marinelab.org/Teacher_Workshops.html)

## **EDUCATIONAL RESOURCES**

### **ArcGIS Online**

Field data from water quality to tree species to wildlife sightings can be mapped and analyzed within a web-based Geographic Information Systems (GIS) mapping environment. ArcGIS Online is available for free online and allows users to upload data, map it, and more. Check out the featured maps and apps.

<http://www.arcgis.com/home/>

### **Climate Change & Biodiversity Curriculum**

The Center for Essential Science at the University of Michigan has developed SPECIES (Students Predicting the Effects of Climate In Ecological Systems), an eight to twelve-week online curriculum that focuses on climate change and climate change impacts. The curriculum fuses core science content with scientific practices and includes a species distribution modeling tool for teaching students about the effects of warming temperatures on biological communities. Check out the archived webinar, example lessons, and further information about trying out the curriculum.

<http://essentialscience.umich.edu/essentialscience/home>

### **Comic Book Super Powers in Real Life – Southern Fried Science**

Check out this Southern Fried Science article about five organisms with real super powers that rival their comic book counterparts. And while there, check out the rest of the website, a marine science, environmental science, and conservation blog by a team

of scientists who love the ocean, science, conservation, philosophy, education, and outreach.

<http://www.southernfriedscience.com/?p=14057>

### **Communicating for Conservation**

The toolkit, *Communicating for conservation: a communication toolkit for Caribbean civil society organisations working in biodiversity conservation*, was developed to provide civil society organizations involved in biodiversity conservation with a guide that will help them to develop a strategic approach to building the critical knowledge, attitudes, and behaviors of the public and policymakers, as they take action to respond to these challenges.

<http://www.eldis.org/go/display&type=Document&id=63121#.UQk7R2cUqTk>

### **Community Education Programs - Florida**

The Guana Tolomato Matanzas National Estuarine Research Reserve offers a variety of free weekly Community Education Programs. Check out the EcoGeek Series, Outdoor Adventures, and more.

<http://www.gtmnerr.org/events.htm>

### **Digital Learning Resources**

Edutopia celebrates the second annual Digital Learning Day, February 6, 2013, with a compilation of useful resources on digital learning. Topics include teaching with new media tools, video games in the classroom, and more.

<http://www.edutopia.org/digital-learning-technology-resources>

### **Endangered Species Act 40th Anniversary**

The U.S. Fish and Wildlife Service, co-administrator of the Endangered Species Act (ESA) with NOAA Fisheries, has already kicked off their ESA 40th celebration. The website offers This Day in History, Media Kit/Resources, Know Your Species, and more. Be sure to also check out the NOAA Fisheries and Endangered Species Day websites for resources, events, and more.

<http://www.fws.gov/endangered/ESA40/index.html>

<http://www.nmfs.noaa.gov/pr/species/>

<http://www.stopextinction.org/esd.html>

### **Fish and People**

Fish and People is a five module video education series with accompanying lesson plans and teaching resources (on the DVD) intended for use in the Solomon Islands, but with broader applicability. It uses animation to visualize invisible life cycle and fishery management concepts. Check out the modules from this Vimeo website.

<http://vimeo.com/channels/fishandpeople/56892703>

### **Guided Discovery Problems**

The Science Education Research Center at Carleton College has worked with a team of colleagues to create a series of Guided Discovery Problems with materials to help students learn about the world of geology through puzzles, hands-on activities, leading questions, and hints. Problems include Density, Buoyancy and Convection, Seasons and Why the Equator is Warmer than the Poles, and more.

[http://serc.carleton.edu/sp/library/guided\\_discovery/index.html](http://serc.carleton.edu/sp/library/guided_discovery/index.html)

### **Hurricane Webinars for 5th Grade Classes**

The Hurricanes: Science and Society team at the University of Rhode Island's Graduate School of Oceanography in partnership with the National Hurricane Center will offer hurricane preparedness webinars for 5th grade students in U.S. regions that are impacted by hurricanes. A presentation on region-specific hurricane science and preparedness will be given with interactive questions prompting student responses. Advanced registration is required; see the website for details and registration deadlines.

<http://www.hurricanescience.org/resources/nhc5grade/>

### **International Year of Water Cooperation**

The United Nations General Assembly declared 2013 as the United Nations International Year of Water Cooperation, and World Water Day, March 22, 2013, will also be dedicated to water cooperation. The objective of this International Year is to raise awareness, both on the potential for increased cooperation, and on the challenges facing water management in light of the increase in demand for water access, allocation, and services. Check out the UNESCO-Water link for resources, including the Water Channel, Water Links Worldwide, and more.

<http://www.unwater.org/watercooperation2013.html>

[http://www.unesco.org/water/water\\_links/](http://www.unesco.org/water/water_links/)

### **Living Oceans Foundation Education Materials**

The Living Oceans Foundation conducts coral reef research expeditions and offers real-time access to coral reefs and coral reef health to educators, students, parents, and the public. The website offers a variety of education materials and opportunities, including photos and videos, archived classroom broadcasts, a marine-themed reading list, and more.

[http://www.livingoceansfoundation.org/index.php?option=com\\_content&view=article&id=182&Itemid=551](http://www.livingoceansfoundation.org/index.php?option=com_content&view=article&id=182&Itemid=551)

### **Ocean Acidification Antarctic Cruise**

A five-week expedition to the Antarctica aboard the *RRS James Clark Ross* will study the effect of ocean acidification in the Southern Ocean. Scientists will study the impact of the changing chemistry on marine organisms and ecosystems, on the cycling of carbon and nutrients in the sea, and on how the sea interacts with the atmosphere to influence climate. Follow along with the cruise with daily blogs and more.

<http://www.antarcticoacruise.org.uk/sample-page/>

### **Ocean Literacy Summit Materials**

The Northeastern Regional Association of Coastal and Ocean Observing Systems has compiled speakers' materials on their website from the 2012 Ocean Literacy Summit. Presentations discussed telepresence, citizen science, and much more.

<http://neracoos.org/OLSummit2012>

### **Research-Supported PBL Practices**

This article from Edutopia highlights one high school's strategies backed by research which make project-based learning (PBL) effective and engaging for teachers and students. Links include a guide to best projects, PBL from start to finish, and more.

[www.edutopia.org/stw-project-based-learning-best-practices-new-tech-research](http://www.edutopia.org/stw-project-based-learning-best-practices-new-tech-research)

### **Sealtag**

Engage students, grades 6-12, with research and remote monitoring technology used to study endangered Steller sea lions. The website offers a hands-on STEM curriculum aligned to Ocean Literacy Principles and Science Content Standards. Activities include learning how your cell phone acts like a transmitter, designing a seal tag, animal crime scene investigations, and more.

<http://sealtag.org/TeacherToolbox.html>

### **SlideShare**

SlideShare is an online community for sharing presentations, documents, pdfs, videos, and webinars. Check this out.

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

### **Sound Health Blog**

Sound Health 2012 discusses water quality, coastal and animal populations, climate, habitats, and land use in and around the Long Island Sound. Dr. Jason Krumholz is a marine scientist serving as NOAA liaison to the EPA Long Island Sound Office and he will be selecting questions to answer on his new Sound Health blog.

<http://longislandsoundstudy.net/category/media-center/ask-dr-k/>

### **TED Radio Hour**

Based on talks given by riveting speakers on the TED stage, each show is centered on a common theme, such as the crowd-sourcing innovation, inexplicable connections, and more – and injects soundscapes and conversations that bring these ideas to life.

<http://www.npr.org/templates/archives/archive.php?thingId=57>

## **INITIATIVES, JOURNALS, and MORE**

### **Extreme Weather Map 2012**

This interactive map from the Natural Resources Defense Council allows visitors to view an easy-to-understand graphic showing the record-breaking drought, high temperatures, and large-scale fires by month, either for the entire country or by individual state.

<http://www.nrdc.org/health/extremeweather/>

### **Fish Recycling**

Check out this good idea: A newly launched fish recycling program, sponsored in part by the Mississippi-Alabama Sea Grant Consortium, is repurposing fish parts that are left behind after charter boat crews clean their customers' catch.

<http://d276864.h39.zee-hosting.com/page.asp?id=783>

### **Next Generation Science Standards Draft**

Check out the final review draft of the Next Generation Science Standards for Today's Students and Tomorrow's Workforce, based on the Framework for K–12 Science Education developed by the National Research Council.

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

### **Seaside Chats - Texas**

Flower Garden Banks National Marine Sanctuaries will host a series of free Seaside Chats each Wednesday in February. The presentations will take place at the Galveston

Fishing Pier, followed by an informal chat time and light refreshments.  
<http://flowergarden.noaa.gov/newsevents/calendar.html>