

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

October 2015

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.

The information included here has been compiled from many different sources, including EE-NEWS@NAAEE, EEinGEORGIA, the Scout Report, 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.

To subscribe or unsubscribe to this list, send information to include in the newsletter, or discuss further enhancements, please contact the editor directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074

Collected archives and issues of the newsletter, past and present, are available at <http://marineprotectedareas.noaa.gov/resources/education/>.

NOTABLE REFERENCES

Across the Spectrum: Resources for Environmental Educators, Second Edition

Across the Spectrum: Resources for Environmental Educators includes ten chapters and is available to download or read online. This collection of resources, perspectives, and examples will help nonformal environmental educators learn more about the field of EE, access resources, and more.

<http://www.naaee.net/publications/AcrosstheSpectrum>

World Database on Protected Areas User Manual

The UNEP World Commission on Protected Areas has released a user manual for the World Database on Protected Areas. The manual describes the history of the WDPA's data; how the data are collected, managed, and distributed; and how they should be interpreted and used.

[www.unep-http://www.unep-wcmc.org/resources-and-data/world-database-on-protected-areas-user-manual-10](http://www.unep-wcmc.org/resources-and-data/world-database-on-protected-areas-user-manual-10)

OPPORTUNITIES OF THE MONTH

Research Vessel Opportunity

Hello Ocean engages recreational sailors and ocean enthusiasts in ocean conservation and research initiatives through citizen science and multi-media elements. They are offering their vessel as a research/conservation platform for interested scientists.

<http://helloocean.org/>

Wild Gift Wilderness Experience – Climate Change Collective Fellowship

The Wild Gift is open to students and young professionals, ages 21-35. Wild Gift is recruiting for the 2016 Climate Change Collective Fellowship which aims to support early-stage social entrepreneurs creating break-through approaches that will help adaptation to and/or mitigation of the impact of climate change on natural and human systems. The deadline for application is January 1, 2016.

<http://wildgift.org/apply>

WEBSITE OF THE MONTH

Nature Soundmap

The Nature Soundmap provides snippets of sounds and video from the natural world. The website hosts an interactive map of the world, complete with markers which include information about the animal or setting profiled, along with a link to more information. Check this out. There are over 400 recordings from 81 countries and 93 contributors. Be sure to check out Blakiston's Fish Owl from Hokkaido, Japan.

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

SEEKING

Reviewers Wanted

The Education Department at Ecology Project International seeks volunteer teachers/collaborators with experience in curriculum writing and review, instructional techniques, and lesson delivery to improve their current curriculum guide and documentation. The products are meant to help field instructors to deliver top-quality ecology lessons.

Contact Carlos Trejos at carlos@ecologyproject.org

GRANTS AND OPPORTUNITIES

Advancing Informal STEM Learning

The Advancing Informal STEM Learning program seeks to advance new approaches to and evidence-based understanding of the design and development of nonformal STEM learning opportunities; provide multiple pathways for broadening access to and engagement in STEM learning experiences; and advance innovative research on and assessment of STEM learning in informal environments. The deadline for submission is November 4, 2015.

<http://www.nsf.gov/pubs/2015/nsf15593/nsf15593.htm>

BLUE Gulf Film Competition

The mission of the BLUE Gulf Film Competition is to engage the Gulf of Mexico Community through education and film, and to showcase the work of local filmmakers. The deadline for submission is October 15, 2015.

<http://www.hartheresearchinstitute.org/blue-gulf-film-comp>

California Whale Tail Grants

The California Coastal Commission's Whale Tail Grants Program is accepting proposals for coastal and marine education projects. The program supports marine science education and projects encouraging people to value and take action to improve the health of California's marine and coastal environments. There is a special subcategory for projects addressing climate change and/or ocean acidification. Emphasis is on reaching underserved students or members of the public. The deadline for application is November 2, 2015.

<http://www.coastal.ca.gov/publiced/plate/plgrant.html>

Community-based Marine Debris Removal

The Marine Debris Program offers funding that supports locally driven, community-based marine debris prevention and removal projects. These projects should benefit coastal habitat, waterways, and wildlife, including migratory fish. The deadline for application is Nov 2, 2015.

<http://www.grants.gov/web/grants/view-opportunity.html?oppld=278589>

Coral Reefs Program Request for Proposals

The National Fish and Wildlife Foundation offers the Spring 2016 Request for Proposals for its Coral Reefs Program. Priorities include reduction of land-based pollution inputs to coral reefs in domestic priority watersheds and increase in herbivorous reef fish biomass. The deadline for pre-proposals is October 14, 2015.

<http://www.nfwf.org/coralreef/Pages/spring2016rfp.aspx#.VgbyqSvD6p0>

Discovery Research PreK-12

The Discovery Research PreK-12 program seeks to enhance the learning and teaching of science, technology, engineering and mathematics (STEM) by PreK-12 students and teachers, through research and development of STEM education innovations and approaches. Proposals should address immediate challenges that are facing STEM education as well as those that anticipate radically different structures and functions of preK-12 teaching and learning. The program has three major research and development strands: Assessment; Learning; and Teaching. The deadline for proposals is December 7, 2015.

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=500047

Diversity in Marine Science

The Elasmobranch Society welcomes applications for the Young Professional Recruitment Fund, a new diversity initiative. Awardees will receive professional development training, mentorship, and networking opportunities specific to their needs. The deadline for application is November 16, 2015.

<http://elasmoblog.org/blog/applications-now-open-young-professional-recruitment-fund>

EcoChallenge

The EcoChallenge is a Northwest Earth Institute event that demonstrates the collective impact of many people making sustainable changes in their everyday lives. For two weeks every October, participants are challenged to change one habit for the Earth. Choose your challenge and connect with other EcoChallengers, and collectively, prove that small actions create real change. This year's EcoChallenge runs October 15-29, 2015.

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

EPP/MSI Undergraduate Scholarship Program

The EPP/MSI Undergraduate Scholarship Program provides scholarships for two years of undergraduate study to rising junior undergraduate students majoring in STEM fields that directly support NOAA's mission. Participants conduct research at a NOAA facility during two paid summer internships. Students attending Minority Serving Institutions are eligible to apply for the program. The deadline for application is January 29, 2016.

http://www.epp.noaa.gov/spp_undergrad_page.html

Every Day Capacity Building Grants

With support from Toyota Motor Sales USA, Inc., the National Environmental Educational Foundation (NEEF) is offering Every Day Grants to public land organizations or Friends Groups, to engage their community on a public land site. The events can be educational, recreational, and/or volunteering-based. The deadline for application is October 30, 2015.

<http://www.publiclandeveryday.org/grants/capacity-building-grants>

Future City Competition

The Future City Competition is a program developed for students in grades 6-8 to help them foster interest in STEM. Student teams, along with an educator and volunteer mentor, research and design a solution to a city-wide challenge; this year's challenge, *Waste Not, Want Not*, encourages students to design waste management systems for residential use and small businesses.

<http://futurecity.org/>

Get to Know Contest

Youth ages 19 and under are invited to get outside and create original works of art, writing, photography, video, and/or music inspired by nature or the outdoors. The contest urges youth to get outdoors, get inspired, and share their outdoor experiences. The deadline for submission is November 1, 2015.

<http://www.get-to-know.org/contest/us/>

Greening STEM for Educators Grant

NEEF and Mitsubishi offer funding to teachers, after-school programs, and nature organizations for projects that support the development and innovation of school programs and projects connecting STEM with environmental education. Hurry - the deadline for application is October 8, 2015.

http://eeweek.org/sites/default/files/greening_stem_for_educators_2015_rfp.pdf

Hollings Undergraduate Scholarship Program

NOAA's Ernest F. Hollings scholarship program provides undergraduates with awards that include academic assistance for full-time study; a 10-week, full-time internship position during the summer at a NOAA or partner facility; and, if reappointed, academic

assistance during a second academic year. The internship provides hands-on, multi-disciplinary educational training experience involving students in NOAA-related scientific, research, technological, policy, management, and education activities. The deadline for application is January 29, 2016.

<http://www.oesd.noaa.gov/scholarships/hollings.html#page=program>

International Coral Conservation Cooperative Agreements

The NOAA Coral Reef Conservation Program provides matching grants for international coral reef conservation projects. This solicitation is for proposals that will support the NOAA Coral Reef Conservation Program's International Strategy 2010-2015 focused on building international capacity for the effective ecosystem-based management of coral reef ecosystems. The deadline for pre-application is November 19, 2015.

<http://www.federalgrants.com/Coral-Reef-Conservation-Program-International-Coral-Reef-Conservation-Cooperative-Agreements-53466.html>

Make a Difference Day Awards

USA TODAY and Newman's Own honor the efforts of outstanding people who lead Make a Difference Day projects. Project activity must occur on October 24, 2015. The deadline for nomination is November 30, 2015.

http://makeadifferenceday.com/documents/Make_A_Difference_Day_Brochure.pdf

Marine Debris Prevention through Education and Outreach

NOAA offers funding to support activities to educate the public about the issue of marine debris. The grant's purpose is to involve audiences in measurable behavior-changing activities and limit the increase of marine debris in the world's oceans. The deadline for letters of intent is October 26, 2015.

<http://www.grants.gov/view-opportunity.html?oppld=279133>

Marisla Environmental Program

The Marisla Foundation offers Environmental Program Grants for activities which promote the conservation of biological diversity and advance sustainable ecosystem management. Primary emphasis is on marine resources conservation with a geographic focus on western North America, Chile, and the western Pacific. The next deadline for application is October 15, 2015.

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

NMSF Hollings Grants

The National Marine Sanctuary Foundation (NMSF) is accepting pre-proposals for its 2015 Hollings Grants program. Projects should engage the public in ocean issues and ocean conservation through National Marine Sanctuaries; engage the public in efforts that support sustainable marine fisheries or the recovery of protected species consistent with NOAA Fisheries mission; and/or provide immersive educational experiences to 4th grade students in sanctuaries or other public waters in support of President Obama's *Every Kid in a Park* initiative. A webinar will be held October 7, 2015 to review criteria and process for 2015 grants. The deadline for pre-proposals is October 22, 2015.

<http://nmsfocean.org/hollings-grants>

National Youth Leadership Council Awards

The NYLC offers awards recognizing service-learning leaders. The NYLC Service-Learning Practitioner Award recognizes those who have equipped young people to lead and serve, both through their direct work with youth and by nurturing other practitioners.

The Youth Leadership for Service-Learning Excellence Award recognizes service-learning programs and projects that demonstrate outstanding youth leadership. Check the website for additional awards. The deadline for applications is December 4, 2015.
http://www.ysa.org/nylc_youth_leadership_for_service_learning_excellence_award
http://www.ysa.org/nylc_service_learning_practitioner_leadership_award

Ocean Exploration Funding Opportunity

The NOAA Office of Ocean Exploration and Research announces the 2016 Federal Funding Opportunity for Ocean Exploration for interdisciplinary ocean exploration expeditions and projects. The deadline for pre-proposals is October 23, 2015.
<http://oceanexplorer.noaa.gov/about/what-we-do/funding-opps/ffo-fy16-full.pdf>

Prudential Spirit of Community Awards

The Prudential Spirit of Community Awards honor young people in grades 5-12 for outstanding volunteer service to their communities. The deadline for application is November 3, 2015.
<http://spirit.prudential.com/view/page/soc>

Shell Science Lab Challenge

NSTA and Shell support the Shell Science Lab Challenge, a competition for middle and high school teachers that awards laboratory resources and other prizes to school districts nationwide. Entries will be judged on the basis of several criteria, including uniqueness, creativity, and a replicable approach. The deadline for submission is December 16, 2015.
<http://www.nsta.org/shellsciencelab/>

Solve for Tomorrow Contest

Samsung and its partners offer the Solve for Tomorrow contest to foster an increase in the pursuit of STEM education and illustrate the practical impact that applying these subjects can have. Selected participants create a video showing how STEM can help improve the environment in their community. The BrainPOP website supports participants in the contest with a collection of free, STEM-themed content they can turn to as they craft their submission. This year's challenge is *Show how STEM can be applied to help your local community*. The deadline for application is October 31, 2015.
<http://www.samsung.com/us/solvefortomorrow/contest/>

Teens for Wildfire Safe Communities Grants

The National Fire Protection Association offers this grant to youth ages of 13-22 for community service projects that reduce wildfire risks or post-fire impacts and improve the area's chances of surviving a future wildfire, flooding, or mudslide. The deadline for submission is November 15, 2015.
<http://www.nfpa.org/TakeAction>

Toshiba/NSTA ExploraVision Competition

The Toshiba/NSTA ExploraVision science competition encourages K-12 students to imagine what technology might be like in the future. The competition also helps teacher sponsors meet many of the National Science Education Standards while letting students experience scientific process and discovery. The project deadline is February 1, 2016.
<http://www.exploravision.org/>

Women Divers Hall of Fame Scholarships

The Women Divers Hall of Fame offers 28 different scholarship and training programs, from dive medicine to marine conservation. The deadline for application is November 20, 2015.

<http://www.wdhof.org/scholarships/scholarships.shtml>

FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES

Boston Sea Rovers Internship – New England

The Boston Sea Rovers are currently accepting applications for the 2016 Sea Rovers Annual Summer Internship for graduating high school seniors, college freshmen, and sophomores interested in pursuing underwater careers. The internship will provide advanced dive training courses and opportunity to train with a variety of dive professionals in a broad cross section of diving environments. The deadline for application is November 14, 2015.

<http://internship.bostonsearovers.com/>

CEQ Internships

The Council on Environmental Quality coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. Internship opportunities are available on various teams. The deadlines for application are February 15 (Summer), June 1 (Fall), and October 1 (Spring).

<https://www.whitehouse.gov/administration/eop/ceq/internships/ceq-internships>

Delta Science Fellows Program

The Delta Science Fellows Program offers graduate students and postdoctoral researchers the opportunity to collaborate with Bay-Delta agency scientists and senior research mentors on data analysis and research projects applicable to the California Bay-Delta system. Six fellowships are expected. Check out the informational webinar, October 8, 2015. The deadline for application is November 18, 2015.

<https://caseagrant.ucsd.edu/fellowships/delta-science-fellowship>

Earth Expeditions and Global Field Master's Program

Miami University's Project Dragonfly and partners offer Earth Expeditions graduate courses and the Global Field Program master's degree, many with an emphasis on marine science and education. Sites for 2016 include Australia, the Galapagos, and many more. The deadline for application is January 28, 2016.

<http://earthexpeditions.miamioh.edu/marine>

Einstein Fellowship

The Albert Einstein Distinguished Educator Fellowship is a paid fellowship for K-12 math, science, and technology teachers. Einstein Fellows spend a school year in Washington, D.C. serving in a federal agency or on Capitol Hill. The deadline for application is November 19, 2015.

<http://science.energy.gov/wdts/einstein/>

Environmental Leadership Program Fellowships

Applications for Environmental Leadership Fellowship programs are accepted on a rolling basis. The program offers intensive leadership and skills training, national networking opportunities, and more.

<http://www.elpnet.org>

FATHOMS Program

SeaTrek's FATHOMS program offers students Focused Adventure Through Hands On Marine Science in the Caribbean's U.S. and British Virgin Islands. Students live aboard a sailing catamaran that serves as their mobile research station, affording them opportunities to study and experience the ecology and dynamics of the ocean that surrounds them. FATHOMS is based on the integration of marine science, community service, and cultural interaction.

<http://www.seatrekbvi.com/fathoms/fathoms-science-voyages/>

Fulbright Distinguished Awards in Teaching Program

The Fulbright Distinguished Awards in Teaching Program provides funding for highly accomplished U.S. primary and secondary level teachers to take part in an intensive professional development program abroad. The deadline for application is November 4, 2015.

<http://fulbrightteacherexchange.org/applicants/getting-started/us-applicants>

Ocean Exploration Trust Opportunities

The Ocean Exploration Trust has a variety of opportunities available for students and educators to become involved in the 2016 expeditions in the eastern Pacific Ocean aboard E/V *Nautilus*. The Science & Engineering Internship Program offers undergraduate and graduate student interns the opportunity to spend 2-5 weeks at sea (application deadline, January 18, 2016); the Honors Research Program is for rising high school seniors (application deadline, February 1, 2016); and the Science Communication Fellowship is for formal and informal educators (application deadline, January 4, 2016).

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

Our World-Underwater Scholarship Society Internships

Our World-Underwater Scholarship Society offers a variety of internships to develop future leaders for the marine environment. Summer internships are primarily directed at college undergraduates and graduating seniors. Internship recipients will receive a grant to help fund travel to/from site, room and board, and a stipend to cover living expenses. The deadline for application is January 31, 2016.

<http://www.owuscholarship.org/index.php?q=internships>

Student Opportunities

The Student Opportunities website from NOAA Education Resources is designed to provide information about educational opportunities that are available throughout NOAA. On this site, you can find information on scholarships, internships, fellowships, and post doctoral opportunities, including a brief description of each program, a link to the website, and more.

http://www.education.noaa.gov/Special_Topics/Student_Opportunities.php#page=page-

[1](#)

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

CERF Conference

The Coastal and Estuarine Research Federation's 2015 conference, November 8-12, 2015 in Portland, Oregon includes a special focus on the Grand Challenges in Coastal and Estuarine Science.

<http://www.erf.org/cerf2015>

Circular Economy: Reduce, Reuse, Recycle - Online

This free edX MOOC from Delft University of Technology discusses how to contribute to a sustainable economic system by implementing novel business and design approaches. Instructors include experts in the fields of industrial ecology, cradle to cradle, and biomimicry. The seven-week course starts October 20, 2015.

<https://www.edx.org/course/circular-economy-reduce-reuse-recycle-delftx-circularx>

Climate Change: The Science - Online

This free edX course from the University of British Columbia will provide an introductory level course on climate science to help participants better understand the news, evaluate scientific evidence, and explain global warming to anyone. The course begins October 14, 2015.

<https://www.edx.org/course/climate-change-science-ubcx-climate1x>

DataStreme Courses - Various

The American Meteorological Society's DataStreme Project is an expenses-paid professional development program for in-service K-12 educators. Graduate-level courses in meteorology, oceanography, and climate science are offered by Local Implementation Teams across the country. To register, contact your nearest LIT leader. The Spring semester starts January 18, 2016.

<http://amsedu.ametsoc.org/amsedu/DataStremeFrames.html>

Georgia Shorebirds Conservation Teacher Workshop - Georgia

The Sapelo Island National Estuarine Research Reserve is hosting this teacher workshop December 4-6, 2015 on Sapelo Island, Georgia. The workshop is open to formal and informal educators of all grade levels. Participants will receive curriculum and resource materials. The deadline for registration is November 15, 2015.

<http://eeingeorgia.org/net/calendar/details.aspx?c=5384982&s=121901.0.68.4863>

IMCC4 and OceansOnline

The International Marine Conservation Congress will take place July 30-August 3, 2016 in St. John's, Newfoundland and Labrador. OceansOnline is a full day add-on to IMCC4, August 4, 2016, with a theme of *Making Marine Science Matter through communication and online resources*. The deadline for proposals is November 16, 2015.

<http://conbio.org/mini-sites/imcc-2016>

Inspire Ocean and Climate Literacy and Conservation through MPAs – Online

The MPA Center offers a monthly webinar series, co-sponsored with EBM Tools Network, focused on building and strengthening MPA networks. This free webinar, October 8, 2015, will feature the National Marine Sanctuary System's education and outreach programs which inspire ocean and climate literacy and stewardship of the

national marine sanctuaries through hands-on, STEM field programs, teacher workshops, student activities, social media, and free online resources.

<https://attendee.gotowebinar.com/register/4767509171814859778>

NOAA Why Do We Explore? - Alabama

Join Dauphin Island Sea Lab for an Okeanos Explorer Education Materials Collection Why Do We Explore? Professional Development Workshop for Educators, November 7, 2015 on Dauphin Island, Alabama. Educators who attend both Part I AND Part II: How Do We Explore will receive a stipend. The deadline for registration is October 16, 2015. <http://www.disl.org/educational-programs/professional-development-for-educators/list-of-workshops/>

Ocean Exploration Workshops – Various

NOAA's Ocean Exploration Program and partners offer the Okeanos Explorer Education Materials Collection Why Do We Explore? Professional Development Workshops for Educators. Participants will receive classroom-ready lessons, certificates of participation, and other resources. Contact the noted educator or check out the website for registration and more information. Please note that the contact information for New England Aquarium has changed.

- October 17, 2015 with the New England Aquarium, Boston, Massachusetts. Why Do We Explore? Professional Development Workshop for Educators. Contact Christine Chirch-Cassidy at cchirchcassidy@neaq.org
- December 5, 2015 with the Aquarium of the Pacific, Long Beach, California. The deadline for registration is November 13, 2015. Contact Staci Wong at swong@lbaop.org
- December 5, 2015 with the South Carolina Aquarium, Charleston, South Carolina. The deadline for registration is November 13, 2015. Contact Jaime Thom at jthom@scaquarium.org

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

Maritime Cultural Landscape Symposium – Wisconsin and Online

Join NOAA and partners for an exploration of Maritime Cultural Landscapes, October 14-15, 2015 in Madison, Wisconsin. The symposium will explore how the terrestrial and submerged resources near and in the nation's oceans, rivers, and lakes might be identified, characterized, and evaluated, and what benefits may be derived from the broader recognition of these landscapes as unique entities. Online participation is available. Hurry – the deadline for registration is October 2, 2015.

<http://www.wisconsinhistory.org/Content.aspx?dsNav=N:4294963828-4294963805&dsRecordDetails=R:CS4545>

NSTA Conferences on Science Education - Various

National Science Teachers Association conferences offer science content, teaching strategy, and more. Each year NSTA hosts a national conference on science education, a STEM Forum & Expo, and three area conferences. Upcoming conferences with open submission deadlines are:

- 5th Annual STEM Forum & Expo, July 27–29, 2016
- Minneapolis Area Conference, October 27–29, 2016
- Portland Area Conference, November 10–12, 2016
- Columbus Area Conference, December 1–3, 2016
- Los Angeles National Conference, March 30–April 2, 2017

See the website for submission deadlines and new proposal guidelines. Free registration is required.

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

Seminars on Science - Online

Registration is open for Seminars on Science from the American Museum of Natural History. Courses are co-taught by an experienced classroom teacher and a research scientist. Upcoming courses include Climate Change, Earth: Inside and Out, The Ocean System, and more. Fall Session 2 runs October 26-December 6, 2015, with a registration deadline of October 12, 2015. A stipend may be available for those completing the climate change course. See the website for complete details.

<http://www.amnh.org/learn/>

Water Wits Workshop - Oregon

The Oregon State Marine Board is seeking Pacific NW educators to pilot its new K-12 education program, WATER WITS: Aquatic Safety, Science, and Stewardship. The interdisciplinary lessons can help students better understand how to responsibly enjoy Oregon's aquatic and marine resources. Participants in the free workshop, November 7, 2015 in Salem, Oregon, will receive activity guides and a starter kit with activity materials.

<http://www.oregon.gov/OSMB/BoatEd/Pages/WaterWits.aspx>

Contact Sara Shaw Roberts at shawsar@oregonstate.edu

Wild Careers Webinar - Online

The National Wildlife Federation's EcoLeaders Initiative hosts the Wild Careers webinar, October 15, 2015. It is the first webinar of the 2015-16 leadership and career skills webinar series from the NWF EcoLeaders Career Center.

<http://online.nwf.org/site/Calendar?id=108241&view=Detail>

Wilderness Training - Online

Free, on-line courses are offered by the Arthur Carhart National Wilderness Training Center. Courses include Natural Resource Management in Wilderness, Managing Cultural Resources in Wilderness, and more. Registration is open; prerequisites may be required.

<http://www.wilderness.net/NWPS/elearning>

Youth Ocean Conservation Summit

The fifth annual Youth Ocean Conservation Summit will be held November 14, 2015 in Sarasota, Florida. Youth participants will learn from marine scientists and conservationists about current threats facing marine ecosystems; will work with mentors to develop action plans for their own ocean conservation projects; and will take part in workshops designed to give them the skills necessary to successfully implement these projects. The deadline for registration is October 15, 2015. See the website for additional opportunities.

http://www.stowitdontthrowitproject.org/pb/wp_a9baf081/wp_a9baf081.html

EDUCATIONAL RESOURCES

4SciFunFree

The free 4SciFunFree iPad app features hands-on science experiments preK–6 students can do with their parents using household materials. The experiments address biology, chemistry, physics, and space topics.

<https://itunes.apple.com/us/app/4scifunfree/id987792377?mt=8>

Climate Change and the Pacific Islands

Through this collection hosted by PBS LearningMedia, students examine the impact of climate change in the Pacific Islands and the ways local communities are responding to the challenges they face. New resources include interactives on the carbon cycle and energy flow. Check back, as additional materials will be added.

<http://www.pbslearningmedia.org/collection/pacific/>

Climate Change & Remote Sensing Online Webinars

The Wayne County Regional Educational Service Agency hosts the ICCARS (Investigating Climate Change and Remote Sensing) Project Professional Learning Community. Join the learning community to participate in one-hour webinars. Check out the schedule for workshop dates and times (hurry – a climate change webinar is on October 5), and browse the website for resources.

<http://www.iccarsproject.net/resources/lifelines-plc>

<http://www.resa.net/curriculum/curriculum/science/professionaldevelopment/climatechange/>

Climate Classroom

This website from the National Wildlife Federation is based on the documentary series, Years of Living Dangerously. The website contains educational materials for grades six and up to use with video clips from the documentary series, and contains guides for student action, case examples of on-campus greenhouse gas reduction programs, and educational standards alignments.

<http://climateclassroom.org>

Climate Classroom Kids

The National Wildlife Federation hosts this website to provide children with brief, accurate information at a level they can understand and relate to, in hopeful ways. Resources include educator's guides, activities, and photo galleries. Climate 101 follows an easy to understand question/answer format. The lessons focus on polar bears, birds, African wildlife, and more to illustrate different concepts.

<http://climateclassroomkids.org/>

Difference Between

Differencebetween.net not gives concise definitions of different topics and enables visitors to differentiate two similar subjects. Multiple resources for each topic are listed on a single page, so readers can gather adequate information quickly and easily. Categories include Science, Language, Technology, and more. It's easy to spend lots of time exploring this website.

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

Earth is Blue

Earth is Blue is a social media awareness campaign to highlight NOAA's National Marine Sanctuary System and its fourteen marine protected areas across the country. The campaign began on October 24, 2014, and shares one photo each day and one video each week highlighting these special places and the work NOAA does to protect them. Check out the beautiful archive of these resources.

<http://sanctuaries.noaa.gov/earthisblue.html>

Explore.org

Explore.org from Annenberg Media offers a portal to a myriad of live nature cams. The cameras take visitors to remote places around the globe, from Hawai'i to the riverbanks of Katmai, Alaska. Check out the five live web camera from OrcaLab, watch honeybees, and much more. The website also offers off hour highlights and more.

<http://explore.org/live-cams/player/orcalab-base>

Exploring Our Fluid Earth

Exploring Our Fluid Earth has four content modules focusing on aspects of physical, chemical, biological, and ecological aquatic science, in addition to Practices of Science. Browse the modules and join the free interactive community to comment on activities and share resources. Note that additional resources will be added in the future.

Teachers' guides and how-to videos are available for a nominal fee.

<https://manoa.hawaii.edu/exploringourfluidearth/#>

Kilroy Academy

Kilroy Academy is a collection of Science, Technology, Engineering, Art and Math (STEAM) resources, including video tutorials, hands-on demonstrations, and more. Links include worksheets and other resources designed to make data accessible to students from water quality monitors in Florida's Indian River Lagoon.

<http://www.kilroyacademy.org/index.html>

Magnetic Anomalies of the World's Largest Volcano

Follow along with the Schmidt Ocean Institute's R/V *Falkor* to the western Pacific Ocean's Shatsky Rise, an undersea oceanic plateau where the Tamu Massif is located. The six-week expedition starts early October 2015. Sign up to connect your classroom in real-time to learn about the voyage.

<https://texasstateaquarium.org/programs-camps/stem-professional-in-residence/>

National STEM Centre: Technology Resources

Britain's National STEM Centre website offers resources related to science, technology, engineering, and math, with an emphasis on technology. Topics are aimed at different age groups. Check out Water for the World, The Splitting Earth, and more. Free registration is required.

<http://www.nationalstemcentre.org.uk/elibrary/technology/>

NCSEteach

The National Center for Science Education offers educators resources to teach about evolution and climate change. They are starting a teacher network with opportunities to connect with teachers across the country, connect with local scientists, and more. The website also offers links to online teaching resources.

<http://ncseteach.com/>

Ocean Literacy Corner

The New England Ocean Science Education Collaborative offers an Ocean Literacy Corner, a column in their newsletter which will focus on one of the ocean literacy principles and offer curriculum associated with it. The information can also be found on their website. Sign up for their newsletter, and check out Principle 1: The Earth has one big ocean with many features.

<http://www.neosec.dreamhosters.com/ocean-literacy/>

Oil Spill Science Seminars and Publications

The Gulf of Mexico Sea Grant program offers the Oil Spill Science Outreach Program, with downloadable publications, and a series of webinars that can be viewed live or downloaded as archived files. Sign up to be informed about upcoming seminars.

<https://gulfseagrant.wordpress.com/oilspilloutreach/>

Place Based Walking Tours & Mobile Technology - Online

NOAA's Climate Stewards Education Project offers the archived webinar, Place Based Walking Tours & Mobile Technology: Teaching Climate Literacy and the Impacts of Climate Change.

<https://www.youtube.com/watch?v=Dv33l6Bq3V>

Schoolyard Cleanup

The California Coastal Commission supports a program that encourages schoolyard cleanups. The website offers instruction and resources for a student-led investigation and data analysis, pre-cleanup, during, and after the cleanup.

<http://www.coastal.ca.gov/publiced/schoolyard/>

Science Communication Tools

The Integration & Application Network at the University of Maryland Center for Environmental Science offers a variety of free resources to help users create conceptual diagrams. These include symbol and image libraries, an online conceptual diagram creator, demos and webinars, and more.

http://ian.umces.edu/symbols/#_Resources

Science in Your Watershed

The USGS Science in Your Watershed website offers scientific information organized on a watershed basis. This information, coupled with observations and measurements made by watershed groups, provides a foundation for characterizing, assessing, and analyzing the health of a watershed. Using the information on water levels and flow from rivers across the nation, students can see how seasonal trends of freshwater outflow impact ocean circulation and material distribution in the Atlantic.

<http://water.usgs.gov/wsc/>

Sea Level, Currents, and Monsoon Evolution in the Indian Ocean

Follow along with the Consortium for Ocean Leadership's Deep Earth Academy and the Integrated Ocean Drilling Program Expedition 349: Sea Level, Currents, and Monsoon Evolution in the Indian Ocean, September 30-November 30, 2015. Sign-ups are now open (first-come, first-served) for 45-minute live interactive broadcasts from the ship for your class, museum, camp group, professional development group, or special event.

<http://joidesresolution.org/node/4182>

Search for the Lost Whaling Fleets of the Western Arctic

In 1871, 33 American whaling ships were lost along Alaska's Chukchi Sea coast in a series of disasters that are widely believed to be a major cause for the decline of the U.S. whaling industry. Through the Search for the Lost Whaling Fleets of the Western Arctic expedition conducted in August of 2015, explorers headed to the nearshore waters of the Chukchi Sea. The expedition focused on using non-invasive mapping technologies to search for what remains of the ill-fated fleet, and to capture photo-documentation of what remains.

<http://oceanexplorer.noaa.gov/explorations/15lostwhalingfleets/welcome.html>

Show Me the Money

Education World offers Show Me the Money: Tips and Resources for successful Grant Writing. The web page also offers additional resources for grant writing, and grant resources.

http://www.educationworld.com/a_curr/profdev/profdev039.shtml

Smithsonian Science How? Webcast Schedule

Smithsonian Science How? delivers real-world science through free, interactive, live webcasts and supporting resources. The programs feature the research and personalities of the Smithsonian's National Museum of Natural History, providing students with STEM role models, information about science careers and pathways, and connections to current research. All webcasts are archived for use at a convenient time. Resources include a teacher guide, assessment, and more. Check out the upcoming season programs, including Culture and Climate Change in the Arctic with Archaeologist Bill Fitzhugh, November 5, 2015.

<http://qrius.si.edu/webcast/science-how-schedule>

SOS Explorer

SOS Explorer™ (SOSx) uses the NOAA-developed Terraviz™ visualization engine to create an interactive Earth on a flat screen display. This provides teachers and students access to a library of selected Science On a Sphere® datasets and movies. The visualizations show information provided by satellites, ground observations, and computer models, which rapidly animate through real-time global data.

http://sos.noaa.gov/SOS_Explorer/

Teacher Resource Center

The New England Aquarium's Teacher Resource Center hosts books, curriculum guides, videos, theme-based kits and more, all of which are available by loan. Downloadable resources include teacher guides to Fishworks, Penguins, and much more. Check out the downloadable Blue Impact videos about sea jellies, shorebirds, and more. Loanable kits include Language Arts and Scientific Writing, Mammals, Classification, and much more. Check out the website for more information.

http://www.neaq.org/education_and_activities/teacher_resources/teacher_resource_center/resources_of_the_trc.php

Contact trc@neaq.org for details

Teaching with Maps

This resource list from the National Education Association hosts links to map-related resources with lesson plans about latitude and longitude, topographic maps, and more. The Activities & Games section links to activities like Galaxy Zoo, which invites students to learn about galaxies according to their shape, and ISS EarthKAM, in which students

may take pictures of earth from a digital camera on the International Space Station. Also included are background resources, multimedia, and much more

<http://www.nea.org/tools/teaching-with-maps.html>

Tour de Turtles

Tour de Turtles is an educational journey through the science, research, and geography of sea turtle migration using satellite telemetry. This event follows the migration of 13 sea turtles from their nesting beaches to their foraging grounds. The website hosts links to educational resources, games, and more.

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

Virtual Turtle Field Trip

Loggerhead Marinelife Center, a sea turtle hospital in Juno Beach, Florida, has received grant funding that will support ten free virtual field trips, scheduled any time now through December 31, 2015. The field trips allow students to journey through the sea turtle hospital for a lesson on sea turtle ecology, an introduction to each of the sea turtle patients, and a look into the hospital and how it functions.

<http://marinelife.org/page.aspx?pid=389>

Virtual Urchin

Virtual Urchin offers classroom support for microscopy and basic biology (focused often on sea urchins) with interactive, web based tutorials and virtual labs. Topics include microscope basics, ecology & environment, and more. Check out the teacher resources for more information.

<http://web.stanford.edu/group/inquiry2insight/cgi-bin/vu-r1a/vu.php>

When Nature Strikes - Science of Natural Hazards

The National Science Foundation's Directorate for Geosciences and partners have produced a 10-part video series that explores the science of natural disasters and research to avert their human and economic toll. The online videos include hurricanes, flash floods, and more.

http://www.nsf.gov/news/special_reports/naturestrikes/index.jsp

INITIATIVES, JOURNALS, and MORE

Crowdsourcing Online Surveillance

The Cocos Island National Park is a no-take zone and World Heritage site off the Pacific coast of Costa Rica. They have partnered with DigitalGlobe and Turtle Island Restoration Network to create one of the first crowdsourced digital patrols of an MPA. The public can visit DigitalGlobe's online Tomnod platform and search satellite images of the MPA, looking for boats and ships and marking them on a map, which authorities can then use as evidence to prosecute violators.

<http://blog.tomnod.com/protecting-cocos-island/>

mPING

Meteorological Phenomena Identification Near the Ground (mPING) is a project designed to collect weather information from the public through smart phones or mobile devices with GPS location capabilities. Through these crowdsourcing weather reports using the free mPING app, anyone can submit an anonymous weather observation. The data is displayed on an accessible map.

<http://www.nssl.noaa.gov/projects/ping/>