

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

**MARCH 2017**

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 eeNEWS@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](mailto: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/welcome.html#exchange>.

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## **NOTABLE REFERENCES**

### **Cultural Resources Climate Change Strategy**

The National Park Service's downloadable Cultural Resources Climate Change Strategy sets out an approach for managing impacts to and learning from cultural resources under modern climate change. It reviews four overarching goals for cultural resources and climate change: Connect Impacts and Information, Understand the Scope, Integrate Practice, and Learn and Share.

<https://www.nps.gov/subjects/climatechange/culturalresourcesstrategy.htm>

### **Cultural Resources Program Report**

The US Fish and Wildlife Service offers the downloadable Cultural Resources Program Annual Report, describing the program and its reach within the service.

[https://www.fws.gov/historicpreservation/publications/pdfs/FY16\\_CR\\_Report.pdf](https://www.fws.gov/historicpreservation/publications/pdfs/FY16_CR_Report.pdf)

### **Sustainable Finance Options for MPAs**

The Marine Protected Areas Federal Advisory Committee has released a report and recommendations on how Marine Protected Areas (MPAs) can continue to support key programs (management, education, outreach, and monitoring) with limited and often shrinking budgets. Check out the report and a webinar presentation.

<https://www.openchannels.org/webinars/2017/protecting-our-marine-treasures-sustainable-finance-options-us-marine-protected-areas>

### **PROGRAM OF THE MONTH**

#### **Maritime Archaeology: Discovering and Exploring Shipwrecks**

Introduce students in grades 6–12 to maritime archaeology and the tools scientists use to investigate shipwrecks. Produced by NOAA's Monitor National Marine Sanctuary, this curriculum guide contains lessons addressing side scan and multi-beam sonar, remotely operated vehicles, and more. The lessons can be taught as a unit, used as stand-alone activities, or combined in multiple ways to meet specific needs.

[http://monitor.noaa.gov/education/pdfs/maritime\\_curriculum.pdf](http://monitor.noaa.gov/education/pdfs/maritime_curriculum.pdf)

### **DATA SITE OF THE MONTH**

#### **CORAL Data**

The NASA-funded COral Reef Airborne Laboratory (CORAL) is making all of its data publicly available. This includes airborne spectral images, map products, and in-water validation data. As the data pass quality control, they will be uploaded to SeaBASS, the publicly shared archive of in situ oceanographic and atmospheric data maintained by the NASA Ocean Biology Processing Group.

<https://seabass.gsfc.nasa.gov/experiment/CORAL>

### **REQUESTS**

#### **Oceans Chapter of the National Climate Assessment – Webinar for Feedback**

A coauthor of the Oceans chapter of the 4th National Climate Assessment will host a webinar, March 20, 2017, with the aim of gathering feedback on the content of the chapter.

<https://attendee.gotowebinar.com/register/7271981171002454017>

#### **Seaside Naturalist Update**

The author of the book, Seaside Naturalist, is working on a revised edition and would appreciate input.

Contact Deb Coulombe at [seasidenaturalist@gmail.com](mailto:seasidenaturalist@gmail.com)

#### **Team Communication Skills Survey**

The Collaboration in the 21st Century Project seeks out-of-school time or afterschool programs for testing a teamwork skills survey. The project addresses the lack of freely available tools for evaluators and program practitioners to assess teamwork skills in their program. Please complete it by mid-March.

<https://docs.google.com/document/d/1TxpHv3e2sNug8oPbY6TTneZJcX4H0tzFyw7EnWogcWk/edit#heading=h.dyjee6e11tl6>

## **GRANTS AND OPPORTUNITIES**

### **Beautify the Bucket Competition**

Artist Boat is hosting new Beautify the Bucket Competitions where citizens can paint one of the trash barrels that goes on Galveston's beaches.

<http://www.artistboat.org/beautify-the-bucket-competition.html>

### **Call for Preliminary Proposals - California**

The California Sea Grant College Program is soliciting preliminary proposals for projects to begin on or after February 1, 2018. Faculty and academic staff from universities and scientists from research institutions throughout California are invited to apply. Focal areas are healthy coastal ecosystems, sustainable fisheries and aquaculture, and resilient coastal communities and economies. The deadline for pre-proposals is March 23, 2017.

<https://caseagrant.ucsd.edu/grants-and-funding/call-for-preliminary-proposals-2018>

### **Coastal and Marine Habitat Restoration**

NOAA's Community-based Restoration Program is currently soliciting applications for restoration projects that use a habitat-based approach to promote productive and sustainable fisheries, improve the recovery and conservation of protected resources, and promote healthy ecosystems and resilient communities. The deadline for application is March 23, 2017.

<http://www.habitat.noaa.gov/funding/coastalrestoration.html>

### **Connecting Ships, Ports and People Student Art Contest**

Students in grades K-12 are invited to participate in the annual calendar art contest sponsored by the North American Marine Environment Protection Association and partners. The deadline for submission is March 31, 2017.

<http://www.namepa.net/art-contest>

### **Coral Reef Conservation Fund**

The Coral Reef Conservation Fund will award grants to reduce land-based sources of pollution, advance coral reef fisheries management, support recovery and resiliency of coral reef systems, and improve watershed management planning. The geographic focus is tropical coral reefs in Florida, U.S. Virgin Islands Puerto Rico, Hawaii, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands. The deadline for pre-proposals is March 10, 2017.

<http://www.nfwf.org/coralreef/Pages/2017rfp.aspx>

### **Discovery Education 3M 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. The deadline for entry is April 19, 2017.

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

### **Dorothy Stout Professional Development Grants**

The National Association of Geoscience Teachers awards grants to K-12 teachers and faculty and students at two-year colleges. The grants support professional growth in, or classroom teaching of, Earth science. The deadline for application is April 15, 2017.

<http://www.nagt.org/nagt/programs/stout.html>

### **Ezra Jack Keats Mini-Grant Program for Public Libraries and Public Schools**

The Ezra Jack Keats Foundation is accepting applications from public schools and libraries for program or event mini-grants. The deadline for application is March 31, 2017.

<http://www.ezra-jack-keats.org/section/ezra-jack-keats-mini-grant-program-for-public-libraries-public-schools/>

### **Gloria Barron Prize for Young Heroes**

The Gloria Barron Prize recognizes young people, ages 8-18, who have shown leadership and courage in public service to people and the planet. The deadline for application is April 15, 2016.

<http://barronprize.org/>

### **Gulf of Maine Council Awards**

The Gulf of Maine Council Annual Recognition Awards are presented annually to an individual or organization within each of the five Gulf of Maine jurisdictions of Massachusetts, New Hampshire, Maine, New Brunswick, and Nova Scotia. The awards recognize efforts by individuals, groups, or organizations that seek to protect, enhance, and restore the ecosystem of the Gulf of Maine region and safeguard and improve the wellbeing of the communities that depend on its resources. The deadline for nomination is March 31, 2017.

<http://www.gulfofmaine.org/2/gomc-home/awards/>

### **High Impact/Broad Implementation STEM Education Partnerships**

NASA seeks to complement its education activities by partnering with organizations to leverage resources, reach wider and more diverse audiences, and achieve mutually beneficial objectives. The deadline for proposals is December 31, 2017. NASA will conduct periodic teleconferences.

<http://www.nasa.gov/education/express>.

<https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={7C51B84E-3890-A80F-6259-F8A1D67F83F9}&path=open>

### **J.M.K. Innovation Prize**

The J.M.K. Innovation Prize from the J.M. Kaplan Fund awards those tackling pressing needs through social innovation. The funds support innovation in the fields of the environment, heritage conservation, and social justice, particularly early stage ideas being piloted or prototyped. The deadline for application is April 28, 2017.

<http://www.jmkfund.org/introduction2017-j-m-k-innovation-prize/>

### **Karma for Cara Foundation Micro-Grants**

The Karma for Cara Foundation encourages kids 18 and under to apply for micro-grants to complete service projects in their communities. The deadlines for application are April 1, July 1, October 1, and January 1.

<http://karmaforcara.org/get-involved/apply-for-a-microgrant/>

### **Momentum for Change**

Applications are being accepted for Momentum for Change's 2017 Lighthouse Activities. Spearheaded by the United Nations Climate Change Secretariat, Momentum for Change highlights innovative, scalable, and replicable examples of what people around the world are doing to tackle climate change. The deadline for application is April 9, 2017.

<https://momentum.unfccc.int/>

### **NAI Awards**

The National Association for Interpretation offers a variety of professional and interpretive awards. The deadline for nomination is May 31, 2017.

[http://www.interpnet.com/NAI/interp/Resources/Awards\\_Programs/Professional\\_Awards/nai\\_resources/Professional\\_Awards.aspx](http://www.interpnet.com/NAI/interp/Resources/Awards_Programs/Professional_Awards/nai_resources/Professional_Awards.aspx)

### **North American Native Fishes Association Grant**

The North American Native Fishes Association's Gerald C. Corcoran Education Grant funds projects to educate the general public about native North American fishes and their environments. The deadline for proposals is March 31, 2017.

<http://www.nanfa.org/corcoran.shtml>

### **Power of Children Awards**

Sponsored by The Children's Museum of Indianapolis, the Power of Children Awards: Making a Difference recognize youth in grades 6–11 that make significant contributions and create projects to benefit others. The deadline for submission is March 19, 2017.

<https://www.childrensmuseum.org/about/power-children-awards>

### **Presidential Award for Excellence in Mathematics and Science Teaching**

NSF is accepting nominations for the Presidential Awards for Excellence in Mathematics and Science Teaching. The award recognizes teachers for their contributions in the classroom and to their profession. The deadline for nomination is April 1, 2017.

<https://www.paemst.org/>

### **Resilient Communities Request for Proposals**

Wells Fargo and partners support the Resilient Communities program. Through improvements to natural features and enhanced community capacity, the program will help communities prepare for future impacts associated with sea level rise, water quantity and quality and forest conservation. The program places special emphasis on inclusion and helping traditionally underserved, low- and moderate-income communities build capacity for resiliency planning and investments in greener infrastructure. See the website for complete details. The deadline for pre proposals is March 30, 2017.

<http://www.nfwf.org/resilientcommunities/Pages/2017rfp.aspx>

### **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 Fish On! Lesson Plan is written for educators teaching grades 4-12. The deadline for entry is March 31, 2017.

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

### **Stockholm Junior Water Prize**

The Stockholm Junior Water Prize is a youth award for a water-related science project. High school students submit their research papers online. The deadline for entry is April 15, 2017.

<http://www.wef.org/sjwp/>

### **Student Grants-in-Aid of Caribbean Marine Research**

The AMLC Student Grants-in-Aid of Caribbean Marine Research Program supports student research and increased collaboration and diffusion of knowledge among the

member institutions of the Association of Marine Laboratories in the Caribbean. Preference is given to proposals that involve comparisons or collaboration among AMLC institutions. The deadline for application is April 1, 2017.

<http://www.amlc-carib.org/awards/grants.html>

### **Tennessee Mapping Contest**

Tennessee students in middle and high school can enter this mapping contest hosted by the Tennessee Geographic Alliance and partners. Students use ESRI's ArcGIS Online platform (free for school use) to conduct geospatial analyses that focus on the state and share their results in an online map. The deadline for registration is April 5, 2017.

<https://sites.google.com/utk.edu/tn-ago-contest/>

### **Virginia Space Grant Consortium Scholarships**

The Virginia Space Grant Consortium is offering STEM Bridge and Community College Bridge scholarships to undergraduate students studying science, technology, engineering or mathematics (STEM). See the websites for complete details. The deadline for applications is March 13, 2017.

<http://vsqc.odu.edu/sf/Bridge/>

<http://vsqc.odu.edu/sf/ccstem/>

### **Voya Unsung Heroes Awards**

The Voya Unsung Heroes program helps K-12 educators and their schools fund innovative classroom projects. The deadline for application is April 30, 2017.

<https://www.scholarsapply.org/unsungheroes/>

### **Witnessing Change Video Competition**

This competition is a grassroots documentary and investigative reporting project on current climate related impacts already affecting American communities. Students explore the personal costs of climate disruption by interviewing impacted individuals and creating two-minute videos. The Climate Cost Project website offers interdisciplinary classroom materials, including an interactive game. Films can be submitted April 15-May 1, 2017.

[http://media.wix.com/ugd/7fc012\\_451f32f9cd50403e99a980d29cf52f8f.pdf](http://media.wix.com/ugd/7fc012_451f32f9cd50403e99a980d29cf52f8f.pdf)

## **FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES**

### **Deep Green Wilderness Summer Programs**

Deep Green Wilderness uses science and the sea to inspire stewardship. High school students spend 2 or 3 weeks exploring the Salish Sea by sailing ship. Scholarships may be available.

<http://www.deepgreenwilderness.com/summer-programs.html>

### **Internship – Alaska**

The Prince William Sound Science Center offers a summer internship with their environmental summer camps which focus on the habitats of coastal Alaska. The 10-12 week internships include housing and a weekly stipend.

Contact Lauren Bien at [lbien@pwssc.org](mailto:lbien@pwssc.org)

### **Laureate Global Fellowships**

Sponsored by the Sylvan/Laureate Foundation, the Laureate Global Fellowship recognizes young leaders, ages 18-29, from around the world who have pioneered solutions to challenges in their communities and beyond. The deadline for application is March 6, 2w017.

<http://www.youthactionnet.org/apply>

### **MATE Internships**

The Marine Advanced Technology Education Center offers an At-Sea Technical Internship Program. Interns work as marine technicians aboard sea-going research vessels that are part of the University National Oceanographic Laboratory System, the United States Coast Guard, and the Ocean Exploration Trust. A stipend is available. The deadline for application is March 15, 2017.

<http://www.marinetech.org/internships/>

### **NCPTT Internships - Louisiana**

The National Center for Preservation Technology and Training offers ten-week paid summer internships, providing students and recent graduates an opportunity to undertake laboratory or field research in archeology, architecture, engineering, collections management, historic landscapes, and materials science. The deadline for application is March 17, 2017;

<https://www.ncptt.nps.gov/about-us/intern/>

### **Sea Grant Marine Education Internships - Georgia**

Georgia Sea Grant is accepting applications for paid Marine Education Intern positions, September 2017-August 2018. The internships are designed for recent college graduates in marine education. The deadline for application is March 17, 2017.

[http://marex.uga.edu/sea\\_grant\\_internship/](http://marex.uga.edu/sea_grant_internship/)

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

### **Analyzing and Visualizing Data with Excel - Online**

Develop your skills with Excel, one of the tools that data scientists depend on to gather, transform, analyze, and visualize data. This self-paced, six-week MOOC (Massive Open Online Course) is part of the Microsoft Professional Program Certificate in Data Science.

<https://www.edx.org/course/analyzing-visualizing-data-excel-microsoft-dat206x-4>

### **American Wilderness Leadership School - Wyoming**

This eight-day course provides educators with an understanding of science-based conservation and land management techniques, and the supplies needed to pass this knowledge on to their students. Teachers should apply for course sponsorship to their local Safari Club International chapter. See the website and application for workshop dates and possible scholarships.

<http://safariclubfoundation.org/education/american-wilderness-school>

### **A Century of Wildland Fire Research - Washington, D.C. and Online**

This free workshop, March 27, 2017 in Washington, D.C., will look at how wildland fire science can inform more cost-effective strategies for living with fires. Topics include the ecological role of fire in the landscape, mapping fire and fire effects, risk perceptions and

mitigation behavior, and more. The workshop will be recorded and the presentations will be made accessible online for viewing after the meeting.

<http://dels.nas.edu/Upcoming-Workshop/Century-Wildland-Fire-Research/AUTO-5-97-34-D?bname=besr>

### **CERF Conference**

The call for abstracts is open for the Coastal and Estuarine Research Federation's 2017 conference, November 5-9, 2017 in Providence, Rhode Island, focusing on Coastal Science at the Inflection Point: Celebrating Successes and Learning from Challenges. Topics include fisheries, ecosystem based management, and much more. The deadline for submission is May 1, 2017.

<https://cerf.memberclicks.net/cerf-2017-call-for-abstracts>

### **Connecting with Marine Science Teacher Institute – California**

This free institute for teams of teachers of grades 9-12, June 25-30, 2017 in Monterey, California, will examine the role that humans have played in the stability and change of Monterey Bay. Topics include: climate change science; sustainable seafood, and more. The deadline for application is March 13, 2017.

<http://www.montereybayaquarium.org/education/teacher-professional-development/connecting-with-marine-science-teacher-institute>

### **Earth Right Now: The Sun and the Water Cycle - Online**

This NASA webinar for informal educators of grades 3-6, March 6, 2017, will focus on the NASA storybook The Sun and the Water Cycle and its accompanying classroom activities. The webinar also will demonstrate and create a bright, vivid sun for building a 3-D mobile of the sun and the water cycle.

<https://www.etches.com/223559>

### **Explore Your Own Watershed with Underwater ROVs - Online**

The next webinar from NOAA's National Marine Sanctuary Series, March 22, 2017, will follow students in a sanctuary community who are designing and building their own ROVs to explore the Thunder Bay River and Lake Huron, as well as participate in environmental stewardship projects.

<http://sanctuaries.noaa.gov/education/teachers/webinar-series.html>

### **Financing for Development: Unlocking Investment Opportunities - Online**

Learn from government and international organization leaders about innovations to finance the Sustainable Development Goals in this free MOOC from the World Bank Group. The four-week course starts March 1, 2017 but participants can catch up from a late start.

<https://www.edx.org/course/financing-development-unlocking-wbgx-f4d01x>

### **From the Surface of the Sun to the Depths of the Ocean – Maryland**

Session 2 of the free 2017 NOAA Science - From the Surface of the Sun to the Depths of the Ocean Workshop Series, March 3, 2017 in Silver Spring, Maryland, will feature how changes in Earth's systems are changing water levels in the Chesapeake Bay, and how this could affect coastal communities. The workshop will look at Blue Carbon and its role in the carbon cycle. In addition, the workshop will host a Maker Fair, creating models, games, and monitoring tools to support student understanding of Earth System Science.

<http://events.r20.constantcontact.com/register/event?oeidk=a07edtcn4616368fec&llr=4gpktedab>

### **Green Eggs and Sand Workshop – Virginia and New Jersey**

Green Eggs and Sand Workshops will take place May 12-15, 2017 on Wallops Island, Virginia and June 2-4, 2017 in Stone Harbor, New Jersey. Participants will receive a curriculum for middle and high school students.

[http://dnr.maryland.gov/education/Documents/GES\\_Workshops.pdf](http://dnr.maryland.gov/education/Documents/GES_Workshops.pdf)

### **Green STEM Course – Online**

The National Wildlife Federation supports STEM disciplines, and has teamed with Eco-Schools USA to provide teachers with STEM opportunities through the lens of sustainability. This free, online course will be offered several times this year. Free registration is required. Be sure to check out the resources on the website.

<http://www.nwf.org/Eco-Schools-USA/About-Eco-Schools-USA/STEM.aspx>

### **JASON National Educators Conference**

The JASON National Conference, June 22-24, 2017 in Ashburn, Virginia, provides an opportunity to obtain resources and develop skills for bringing STEM education to your teachers and students.

<http://www.jason.org/national-educators-conference>

### **Kelp Can Help - Online**

The webinar, Kelp Can Help! Climate Action for Students through Kelp Aquaculture, March 6, 2017, will look at the impacts of climate change on Maine's ocean environment and the community-based approach the Island Institute takes to support island and coastal schools as they teach students how to plan for and adapt to climate change.

<https://attendee.gotowebinar.com/register/5514414032892830977>

### **Living Shorelines Workshop – Florida and Mississippi**

These workshops, March 7, 2017 in Biloxi, Mississippi and March 14, 2017 in Eastpoint, Florida, will introduce participants to living shorelines and more. See the websites for details.

<http://www.gulfalliancetraining.org/detail.aspx?id=144>

<http://www.gulfofmexicoalliance.org/events/ms-living-shorelines-workshop/>

### **MATE Workshops - Various**

MATE and partners offer professional development workshops studying project-based engineering design, underwater robotics, and more. Locations (including online), financial resources, and curriculum products are listed.

<http://www.marinetech.org/workshops/>

### **Microplastics Webinar – Online**

The NOAA Marine Debris Program and partners will host Microplastics: What we know and discussion of research needs, April 13, 2017. Learn about the various types and sources of microplastics and the impacts associated with microplastic marine debris.

<https://attendee.gotowebinar.com/register/5580307763312728833>

### **NAAEE Annual Conference**

The North American Association for Environmental Education Annual Conference 2017, Imagine a World, will take place October 18-21 in San Juan, Puerto Rico, with the 14th

Annual Research Symposium, October 17-18, 2017. Join environmental educators, take advantage of the field experiences offered, and more. The deadline for submission is April 10, 2017.

<https://naaee.org/conference>

### **NAI National Conference**

The National Association for Interpretation's National Conference will take place November 14-18, 2017 in Spokane, Washington. The deadline for submission is April 3, 2017.

[http://www.interpnet.com/NAI/interp/Events/NAI\\_National\\_Workshop/nai\\_events/NAI\\_National\\_Workshop.aspx?hkey=881321c0-ef64-4783-84bb-67a3edcc12e3](http://www.interpnet.com/NAI/interp/Events/NAI_National_Workshop/nai_events/NAI_National_Workshop.aspx?hkey=881321c0-ef64-4783-84bb-67a3edcc12e3)

### **NASA STEM Webinars - Online**

The NASA STEM Educator Professional Development Collaborative presents a series of free webinars open to all educators. Upcoming Earth Right Now webinars include Mission Geography, GLOBE Atmosphere, and more. Be sure to check out both upcoming and archived webinars.

<https://www.txstate-epdc.net/events/>

### **National Hurricane Conference**

The National Hurricane Conference, April 17-20, 2017 in New Orleans, Louisiana, will examine ways to improve hurricane preparedness, response, and mitigation in the United States and the Caribbean. Topics include changes to the National Hurricane Center, hurricane threat communication, social media in hurricanes, and more.

<http://hurricanemeeting.com/>

### **Natural Hazards Research and Applications Workshop**

The theme for the annual Natural Hazards Research and Applications Workshop, July 9-12, 2017 in Broomfield, Colorado is Knowledge to Action: Reducing Hazards Losses and Promoting Disaster Resilience. Attendance is by invitation only. Check out the student volunteer opportunities or request an invitation.

<https://hazards.colorado.edu/workshop/2017>

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

NOAA's Ocean Exploration Program and partners offer Exploring the Deep Ocean with NOAA 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.

- April ,1 2017 with the Audubon Aquarium of the Americas in Ruston, Louisiana. The deadline for registration is March 10, 2017. Contact Stephanie Smith at [educationprograms@auduboninstitute.org](mailto:educationprograms@auduboninstitute.org)
- May 13, 2017 with the North Carolina Aquarium at Fort Fisher in North Carolina. The deadline for registration is April 21, 2017. Contact Casey Radley at [casey.radley@ncaquariums.com](mailto:casey.radley@ncaquariums.com)
- May 20, 2017 with the North Carolina Aquarium at Pine Knoll Shores in Pine Knoll Shores, North Carolina. The deadline for registration is April 28, 2017. Contact Pam Pittman at [pamela.pittman@ncaquariums.com](mailto:pamela.pittman@ncaquariums.com)
- June 20, 2017 with the Science and Technology Education Center in Ruston, Louisiana. The deadline for registration is May 30, 2017. Contact Tricia LeBlanc at [tleblanc@AudubonInstitute.org](mailto:tleblanc@AudubonInstitute.org)

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

### **Ocean Policy Course - California**

The Monterey Area Research Institution's Network for Education (MARINE) Ocean Policy Course, July 16-28, 2017 in Monterey, California, will introduce early career professionals to ocean policy and governance, and how science influences public policy decisions at the international, national, and state levels. The intensive course is free. The deadline for application is March 24, 2017.

[https://stanforduniversity.qualtrics.com/jfe3/form/SV\\_bxOxV1pZh6FiJs9](https://stanforduniversity.qualtrics.com/jfe3/form/SV_bxOxV1pZh6FiJs9)

### **Project Atmosphere Summer Workshop for Teachers - Missouri**

This free teacher professional development program, July 16-28, 2017 in Kansas City, Missouri, is directed towards improving Earth science literacy and teacher effectiveness by generating interest in STEM among students at pre-college levels. The workshop will introduce teachers to technologies and techniques for sensing, analyzing, and forecasting weather, as well as explore ways these concepts can be implemented in the classrooms. The deadline for application is March 27, 2017.

<https://www.ametsoc.org/ams/index.cfm/education-careers/education-program/k-12-teachers/project-atmosphere/>

### **Reflecting on Practice - Various**

The Reflecting on Practice program is a professional learning program for informal science educators, preferably in teams. Check out the upcoming workshops in Texas, California, and elsewhere.

<http://missionaransas.org/reflection-practice>

### **Sea Turtle Conservation Teacher Workshop - Georgia**

Join educators at the Sapelo Island National Estuarine Research Reserve, June 12-14, 2017 on Sapelo Island, Georgia, for the Georgia Sea Turtle and Conservation Teacher Workshop. The deadline for registration is May 15, 2017.

Contact Georgia Graves at [georgiabeachwalk@bellsouth.net](mailto:georgiabeachwalk@bellsouth.net)

### **Sea Turtle Workshop – Texas and Online**

The Sea Grant Oil Spill Science Outreach Team offers this free sea turtle workshop, March 23, 2017 in Brownsville, Texas and through a webinar online. Topics will include oil spill science, emergency response, natural resource management, and more while discussing the impacts of oil spills on sea turtles.

<http://gulfseagrant.org/sea-turtles-oil-spills/>

### **Sensing Planet Earth – From Core to Outer Space - Online**

This MOOC from Chalmers University of Technology will cover different Earth observation tools for studying the solid Earth, atmosphere, and biosphere. Learn why, where, and how these techniques are applied. The five-week, self-paced course starts March 1, 2017, but late starters can catch up.

<https://www.edx.org/course/sensing-planet-earth-core-outer-space-chalmersx-chm003x-0>

### **Summer Institutes for Climate Change - Minnesota**

Participants in Climate Generation's 2016 Summer Institute, June 26-28, 2017 in St. Paul, Minnesota, will engage with hands on activities that help bring climate change

concepts into the classroom. The Institute for Non-formal Climate Change Education will take place March 13-15, 2017 in Sandstone, Minnesota.

<https://www.climategen.org/what-we-do/education/professional-development/summer-institute/summer-institute-2017/>

<https://www.climategen.org/what-we-do/education/professional-development/summer-institute/institute-non-formal-climate-change-education/>

### **Summer Institute for Teachers - California**

Middle and high school science teachers can join the Exploratorium Teacher Institute, June 19-July 7, 2017 in San Francisco, California for three weeks of science exploration. The free institute supports the content and pedagogy described in the Next Generation Science Standards. The deadline for application is March 15, 2017.

<https://www.exploratorium.edu/education/teacher-institute/summer>

### **Summer Teacher Institutes – Washington, D.C.**

The Library of Congress offers free, week-long Summer Institutes for K-12 educators in Washington, D.C. Education specialists facilitate sessions modeling strategies for using primary sources to engage students, build critical thinking skills, and construct knowledge.

- General Institutes: June 19-23, June 26-30, and July 10-14, 2017
- Science, Technology & Engineering: July 17-21, 2017

The deadline for application is March 17, 2017.

<http://www.loc.gov/teachers/professionaldevelopment/teacherinstitute/>

### **Teachers on the Estuary Workshops - Various**

NOAA's National Estuarine Research Reserves are offering many Teachers on the Estuary programs this spring and summer around the country. Check out the 2017 Workshop Calendar page for the specific workshops.

<https://coast.noaa.gov/estuaries/teachers-on-the-estuary/calendar.html>

### **Under the Sea Mosaic – Massachusetts**

Northeastern University Marine Science Center will offer the Marine Science and Mosaic Art Program, April 18-21, 2017 in Nahant, Massachusetts. Open to students in grades 7-12, participants will learn about marine habitats via hands-on activities led by NUMSC educators, and learn and practice techniques to build a marine mosaic from a professional mosaic artist.

<http://www.northeastern.edu/cos/marinescience/outreach/under-the-sea-mosaic/>

### **Why Bad Presentations Happen to Good Causes**

Join NAAEE's monthly webinar series, Bringing New Ideas and Innovation to the field of EE, for a two-part webinar, March 28-29, 2017. Learn how to reach more people with more impact. Be sure to submit your questions in advance.

<https://naaee.org/eepro/learning/webinars/why-bad-presentations-happen-good-causes>

### **Wildfire Community Preparedness Day Grants**

The National Fire Protection Association is accepting applications for Wildfire Community Preparedness Day grants to help communities create wildfire hazard mitigation projects. Free registration is required. Hurry – the deadline for application is March 3, 2017.

<http://www.nfpa.org/public-education/campaigns/national-wildfire-community-preparedness-day>

## **EDUCATIONAL RESOURCES**

### **50 Simple EE Activity Ideas for the K-12 Classroom**

This article from Clearing Magazine answers the question, What can I do Monday morning? Activities are listed by grade and curriculum topic.

<http://clearingmagazine.org/archives/13262>

### **American Samoa Expedition**

From February to April 2017, NOAA and partners will conduct two telepresence-enabled ocean exploration cruises on NOAA Ship *Okeanos Explorer* to collect critical baseline information of unknown and poorly known deepwater areas in American Samoa and Samoa, with an emphasis on Rose Atoll Marine National Monument, National Marine Sanctuary of American Samoa, and National Park of American Samoa. Follow along with daily updates, mission logs, educational materials, and more.

<http://oceanexplorer.noaa.gov/okeanos/explorations/ex1702/welcome.html>

### **Anthropocene**

Anthropocene is a magazine initiative of Future Earth, with an aim to build a thought-leader publication for the sustainability and development world. It follows the former publication of Conservation magazine.

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

### **Arctic Climate Game Jam**

The PoLAR Partnership, NOAA, and partners are organizing a Climate Game Jam focused on the Arctic, April 21 - 30, 2017 at multiple sites. The jam will encourage the creation of new game prototypes that allow players to learn about the effects of as well as solutions to climate change in the Arctic through a science-based, interactive experience.

<http://climategamejam.org/>

### **Ask Us Anything Microplastics Archive**

Check out this Reddit Ask Us Anything archive on microplastics from January 12, 2017.

[https://www.reddit.com/r/science/comments/5nj6d1/science\\_ama\\_series\\_hi\\_we\\_are\\_no\\_aa\\_scientists\\_amy/](https://www.reddit.com/r/science/comments/5nj6d1/science_ama_series_hi_we_are_no_aa_scientists_amy/)

### **AskScience**

AskScience is a forum for answering science questions. It aims to promote scientific literacy by helping people understand the scientific process and what it can achieve. The website offers a FAQ page for in-depth answers on popular topics. There is also a discussion group for broader questions, a reading list, and more. Consider joining as a panelist.

<https://www.reddit.com/r/askscience/>

### **Be an Everyday Young Hero Tipsheets**

The Be an Everyday Young Hero tipsheet series provides project replication guides to help you to tackle pressing local, national, and global community issues.

<https://ysa.csod.com/LMS/BrowseTraining/BrowseTraining.aspx?s=570#f=1&s=534,570&o=1>

### **Caribbean Marine Atlas**

The CMA-2 Project (Caribbean Marine Atlas Phase 2) aims to support Integrated Coastal Zone Management and Ecosystem-based Management for Caribbean Large Marine Ecosystem.

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

### **Celebrate Women's History Month**

NASA's Digital Learning Network will celebrate Women's History Month with a series of four webcasts during March. Each 45-minute program will feature a different female lead at the agency and how they started their career with NASA.

<https://www.nasa.gov/dln/virtual-visit>

### **Chasing Coral**

A team of divers, photographers, and scientists combined time-lapse photography with underwater technology and, guided by NOAA Coral Reef Watch's products, worked to capture the process of bleaching and death of corals. Sign up if you would like to host a screening in the future.

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

### **Click and Learn**

Interactively explore topics in biology with the free Click and Learn app from the Howard Hughes Medical Institute. Each module features supporting videos and animations. Apps include BiomeViewer, EarthViewer, and more. The apps are available from Google Play, Amazon Apps and Apple App Store.

<https://itunes.apple.com/us/app/click-and-learn/id443814512?mt=8>

### **Climate Access**

Climate Access is a global network of climate and clean energy communicators. The resource hub hosts links to papers about public engagement strategies, policy and public support, impacts and adaptation, and more.

<http://www.climateaccess.org/resource-hub>

### **Documenting and Assessing Learning in the Outdoors - Online**

This introductory webinar from the Natural Start Alliance introduces practical alternatives to worksheets that are effective for documenting outdoor learning. Check out this and other free webinar resources.

<http://naturalstart.org/training>

### **EE Week**

National Environmental Education Week (EE Week), April 23-29, 2017, is a celebration of environmental education, aimed at inspiring environmental learning and stewardship among K-12 students. Register your events, check out the blogs and news feeds, view archived webinars, and more.

<https://www.neefusa.org/greening-stem/environmental-education-week>

### **Endangered Species Act Success Stories**

The Endangered Species Act has helped stabilize populations of species at risk, prevent the extinction of others, and conserve the habitats on which many animals depend. The U.S. Fish & Wildlife Service has created an interactive map of the United States that presents information about the endangered species in each state and what is being done to help conserve them.

<https://www.fws.gov/endangered/map/index.html>

### **Environmental Film Festival – Washington, D.C.**

The 2017 Environmental Film Festival will take place March 14-26, 2017 in Washington, D.C. Films will be shown in many venues, including museum auditoriums, libraries, and more. For those not in the area, many can be watched online for free or for a small fee.

<http://dceff.org/>

### **Finding Climate Data**

To help guide you to climate data of interest, this section from NOAA's Climate.gov features the Dataset Gallery, a visual catalog of data. Thumbnail images show an example of the data you can find through each entry. Additionally, each entry has a description telling where the data came from and how to use the site to get them. The second sub-page of this section describes a range of strategies that can help you navigate data access interfaces to get the data you want.

<https://www.climate.gov/maps-data/primer/finding-climate-data>

### **From Provocative to Productive: Teaching Controversial Topics**

This activity From Newseum Education offers first steps for creating a respectful yet vibrant environment for students to explore diverse ideas on controversial topics. Free registration is required.

<https://newseumed.org/activity/from-provocative-to-productive-teaching-controversial-topics/>

### **Grades of Green**

Grades of Green offers activities aimed at instilling environmental values in students. Free registration is required.

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

### **In Hot Water: Glacier Change and Sea Level Rise**

This lecture from NASA's Theodore von Kármán Lecture Series discusses how the loss of glacial ice, due to melting as the climate warms or from calving of icebergs, can impact the Earth system and society. Check out this archived webinar along with others.

[http://www.jpl.nasa.gov/events/lectures\\_archive.php?year=2017&month=2](http://www.jpl.nasa.gov/events/lectures_archive.php?year=2017&month=2)

### **JOIDES Resolution Expedition – South China Sea Rifted Margin**

Connect live to the *JOIDES Resolution* at sea. Live ship-to-shore event sign-ups are on a first-come, first-served basis. Sign up for live events with Expedition 367: South China Sea Rifted Margin, February 8-April 9, 2017. Check out the expedition pages as the research continues.

<http://joidesresolution.org/node/4771>

<http://joidesresolution.org/node/1746>

### **Lionfish Reddit Ask Us Anything**

Join NOAA scientists March 3, 2017 for a live Reddit Ask Us Anything session.

<http://oceanservice.noaa.gov/news/mar17/reddit-lionfish.html>

### **Mangrove Restoration Primer**

This downloadable brochure offers a primer on mangrove restoration.

<https://www.wetlands.org/publications/mangrove-restoration-to-plant-or-not-to-plant/>

### **Materials Science and the Problem of Garbage**

Equip students to make informed choices about materials use and disposal with a series of lessons in which they investigate the technological and engineering ingenuity involved in making materialism, and also the environmental ramifications.

[http://static.nsta.org/files/tst1608\\_32.pdf](http://static.nsta.org/files/tst1608_32.pdf)

### **Monitoring Large Marine Areas**

The European DEVOTES Project (DEvelopment Of innovative Tools for understanding marine biodiversity and assessing good Environmental Status) developed and tested approaches and made advances in a variety of areas for monitoring large marine areas. Check out this EBM Toolbox review. Be sure to check out the DEVOTES website for additional project outcomes.

<http://www.devotes-project.eu/>

<https://meam.openchannels.org/news/meam/ebm-toolbox-new-ways-monitor-large-marine-areas>

### **Natural Disasters and Severe Weather**

This website from the Centers for Disease Control and Prevention is an informational resource providing guidance on health- and safety-related issues related to preparing for natural disasters and severe weather. Information is categorized by hazard, and includes guidance on what individuals and communities can do to protect themselves before, during, and after the hazard occurs, along with links to additional resources.

<https://www.cdc.gov/disasters/index.html>

### **Pre-Disaster Recovery Planning Guide for Local Governments**

This guide is designed for local governments to help them prepare for recovery from future disasters by engaging with the whole community and planning for recovery activities that are comprehensive and long term.

<https://www.fema.gov/media-library/assets/documents/129203>

### **Sharing the Climate Story with Young Learners through Elementary Globe**

This archived webinar from NOAA's Climate Stewards Education Project is available through YouTube. Please remember to answer the post-webinar poll.

<https://www.youtube.com/watch?v=yYqd5BNpWJI&feature=youtu.be>

### **Shipwrecked!**

NOAA's Ocean Today Every Full Moon is a multimedia kiosk that features videos about all aspects of the ocean and was originally designed for the National Museum of Natural History's Sant Ocean Hall, with a new collection of videos released each month. Check out the latest, Shipwrecked, along with others on the website.

<http://oceantoday.noaa.gov/every-full-moon/>

### **Solar Week**

Solar Week, March 27-31, 2017, provides a weeklong series of web-based educational classroom activities and games with a focus on the sun-Earth connection. This spring's activities highlight safe solar viewing and the total solar eclipse happening on Aug. 21, 2017.

<http://multiverse.ssl.berkeley.edu/Solar-Week>

**Song Sleuth**

Song Sleuth is a bird song identification app developed by Wildlife Acoustics, which can help identify the most likely bird species that it heard.

<https://www.songsleuth.com/>

**State Climate Summaries**

From NOAA's National Centers for Environmental Information, these state summaries were produced to meet a demand for state-level information in the wake of the Third U.S. National Climate Assessment, released in 2014. The summaries cover assessment topics, including historical climate variations and trends, future climate model projections of climate conditions during the 21st century, and past and future conditions of sea level and coastal flooding.

<https://statesummaries.ncics.org/>

**STEM Sims**

This subscription-based program offers over 100 interactive simulations of laboratory experiments and engineering design projects to draw grade 4-12 students into virtual worlds that promote inquiry. There are lessons, video walkthroughs, and more. There is a seven-day free trial subscription.

<https://stemsims.com/>