*RI Science Teachers Association shares opportunities in science education for teachers and students.*

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| Science Update |
| January 14, 2017 |

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***Save the Date for RISTA's Annual Conference!!*****Saturday, March 25th at New England Institute of Technology in East Greenwich.*****Featuring Keynote Speaker, Brian Reiser******Request for Proposals for breakout sessions are being accepted until January 20th.***[***Click Here to submit.***](https://goo.gl/forms/S1axPbCIxiKA5Tg62)\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**If you are interested in any of the opportunities listed, please contact the organization that is listed. Send any items that you consider relevant to other science educators to**ristanewsletter@gmail.com*Professional Resources*from Achieve's NGSS Network Bulletin***California Science Curriculum Framework**On November 3rd, the California State Board of Education approved a new science curriculum framework,making California the first state in the nation to produce a curriculum framework based on the NGSS for K-12 grades. The curriculum framework, which represents a major overhaul of how science is taught to the state's 6.2 million K-12 students, is a blueprint for creating a curriculum based on the new standards that can be implemented in the classroom. **#NGSSChat Archives**This website archives a regular twitter chat with the hash tag #NGSSChat, which provides an opportunity for those in the education community all over the country to ask questions and share ideas about the NGSS. These conversations, commonly co-moderated by stars in the NGSS world such as Tricia Shelton, TJ McKenna, Kathy Renfrew, and Fred Ende, among others, have been going on since the release of the NGSS. For more information, follow @NGSSChat on twitter.**American Museum of Natural History: Introduction to the Five Tools and Processes**The AMNH just released introduction handouts for its Five Tools and Processes professional development resource for NGSS. The website includes a Forward by Rodger Bybee (one of the writers of the NGSS), PowerPoint slides, and an introduction facilitation guide. **NGSS Screening Tool**The NGSS Screening Tool will help users to more quickly screen lessons for indications of NGSS design to determine whether they warrant a full review using the *EQuIP Rubric for Lessons & Units: Science.* As always, the *Primary Evaluation of Essential Criteria*(PEEC*)* should be used for evaluating full curricula or instructional materials programs.**Heuristic for Identifying Phenomena**At the Connecticut Science Center Teacher Conference, TJ McKenna, a lead facilitator for the NGSX project, shared a tool to help with the brainstorming process for identifying phenomena for NGSS units.**Infographic: Essential Practices for K-12 Science Classrooms**The National Academies Press released an interactive infographic that defines each essential practice for K-12 science classrooms from *A Framework for K-12 Science Education*with links showing the user where to learn more about each in the full report. This is a great resource for those in the education community who want to learn more about the Scientific and Engineering Practices (SEP) dimension in the NGSS.**Call for Submissions of Lessons and Units**The EQuIP Peer Review Panel (PRP) for Science is up and running! On December 1st, Achieve released an official Call-to-Action for submissions from the field. If you or any educators in your networks have a science lesson or unit you'd like reviewed by the PRP to determine alignment to the NGSS, please click here for more information.**Equity Indicators in ESSA Accountability Plans**On November 15th, The National Education Policy Center (NEPC) published the report, *Making the Most of the Every Student Succeeds Act (ESSA) - Helping States Focus on School Equity, Quality, and Climate.*The policy memo provides guidelines to states for selecting indicators that support equity in their accountability systems. Professional Opportunities**Free NGSS Workshop for Teachers and Educational Administrators**Thursday, February 2 | 8:30 am – 2:30 pmLearn how two nationally recognized non-profit organizations and regional leaders for science education can help you create and support an effective curriculum & implementation for the Next Generation Science Standards (NGSS) for 2017, K-12.NESS is recognized for student engagement in experiential learning through ocean learning! EBEC is recognized for cost effective researched NGSS aligned science curriculum materials programs and professional development supporting NGSS and Common Core!Learn:• An overview of the Next Generation Science Standards (NGSS).• How you can utilize nationally developed science kit programs, specifically aligned to NGSS, such as FOSS and SEPUP for K-8 in an affordable manner!• The latest high school programs developed nationally and about current grant supported opportunities;• Learn about a cost-effective approach for implementation and continuing science materials resources support ;• Learn about free professional development opportunities and other grant opportunities!Morning Coffee, Luncheon, and door prizes will be provided! Please note this facility is not handicap accessible at this time!Online advance registration by January 24, 2017 is required on the EBEC website - http://ebecri.libcal.com/event/3016496**Modeling Workshops -Summer, 2017**[Attached](https://rista.wildapricot.org/resources/Documents/Modeling%20Workshops.docx) find the list of the scheduled workshops; we are constantly updating the list which is also available on our website: http://modelinginstruction.org/professional-development/upcoming-workshops/ Workshops can now be search by state and by content area.**Marine Science Educator Positions- Summer, 2017**The Narragansett Bay National Estuarine Research Reserve is now accepting applications for 2 seasonal positions as marine science educators to work at the Reserve on Prudence Island for the spring/summer and summer/fall 2017. Complete information and application instructions can be found on our website at www.nbnerr.org   [as well as here](https://rista.wildapricot.org/resources/Pictures/Marine%20Science%20Educator.pdf)**CDC Science Ambassador Fellowship**Open to teachers and educational leaders interested in bringing public health into middle and high school classrooms. It includes a 5-day summer course (July 10-14, 2017) at CDC headquarters in Atlanta, GA and a 1-year distance-based professional development opportunity. Applications are due February 15, 2017.   For more information, please watch our video and visit our website. We look forward to your application. Please share these materials with other teachers and educational leaders in your network who may be interested.**Six Star Science Online Teacher Professional Development Fellowship (American Physiological Society)**$1,400 STIPENDS PAID (for completed work)This program is a 10-month online pedagogy-based professional development that focuses on the three Dimensions in the Next Generation Science Standards: Scientific Practices; Cross Cutting Concepts (especially “Cause and Effect” and “Structure and Function”), and Core Ideas (Life Sciences) and on expanding teacher skills in three major areas: 1) Updating Teacher Content and Pedagogy Knowledge; 2) Understanding the Research Process; and 3) Applying Six Star Science in the Classroom. Fellows receive stipends for completion of their online work.Online Teacher (OT) Fellows participate in interactive virtual learning community that focuses on exploring effective teaching strategies, understanding the research process, and enhancing classroom materials. Application deadline: January 31, 2017. More info on the program can be found at: www.frontiersinphys.org**Earth Expeditions and the Global Field Program**Miami University’s Project Dragonfly is accepting applications for 2017 Earth Expeditions graduate courses that offer extraordinary experiences in 16 countries throughout the world. New in 2017 is a course in Brazil. http://EarthExpeditions.MiamiOH.edu/16-17\_newsEarth Expeditions can build toward the Global Field Program (GFP), a master's degree that combines summer field courses worldwide with web learning communities so that students can complete the GFP master's part-time from anywhere in the United States or abroad. http://GFP.MiamiOH.edu/16- 17\_newsProject Dragonfly also offers the Advanced Inquiry Program (AIP) master's degree that combines web instruction from Miami University with experiential learning and field study through several AIP Master Institution zoos in Chicago, Cincinnati, Cleveland, Denver, San Diego and Seattle. Applications for Miami's 2017 AIP cohorts are being accepted now through February 28. http://AIP.MiamiOH.edu/16- 17\_news**Become a STEMscopes Trainer!!**We are looking for passionate science educators with availability during August and the school year to train on the implementation of the award winning, digital science curriculum, STEMscopes™. We serve Pre-K through high school teachers. This is a consultant position with the Professional Services Team that allows you to make your own schedule and has opportunities to grow with the company, Accelerate Learning Inc. For more information and interest please send your resume and inquiries to pd@acceleratelearning.com. To learn more about our products please go to www.acceleratelearning.com**Are You Ready for the Astronomical Event of the Decade?**August 21,2017 will be the first total solar eclipse visible in the US in almost 40 years.  Everyone in the US will see a partial eclipse, but only those people in a narrow 60-mile across band will see the total eclipse.  The website <http://eclipsewise.com/solar/SEgmap/2001-2100/SE2017Aug21Tgmap.html> provides an interactive map where you can get details regarding the eclipse for your location and where you have to go to see the total eclipse.NSTA (National Science Teachers Association) produced an Eclipse Observing Guide [http://www.nsta.org/publications/press/extras/files/solarscience/SolarScienceInsert.pdf](http://www.nsta.org/publications/press/extras/files/solarscience/SolarScienceInsert.pdf%C2%A0) that you will find useful. It provides details about the solar eclipse, what causes it, and how to view it safely.The eclipse may seem some time away, but housing along the path of totality is already filling up, so the time is now to beginning planning for this astronomical event of the decade.**The** **Presidential Awards for Excellence in Mathematics and Science Teaching**(PAEMST), the nation’s highest honor for teachers of mathematics and science (including computer science), has opened its 2016 – 2017 nomination and application period for 7-12th grade teachers.  We encourage you to nominate an exceptional teacher you may know. If you’re a teacher yourself, we encourage you to begin an application online today. Being a PAEMST awardee is a tremendous honor. Recipients will gather in Washington, D.C., for [a series of events](https://www.whitehouse.gov/blog/2016/09/09/honoring-nations-leading-science-and-mathematics-teachers-and-announcing-active) as tribute to their accomplishments, will receive a certificate signed by the President and a $10,000 award from the National Science Foundation (NSF).  The 2016-2017 nomination deadline is April 1, 2017, and the application deadline is May 1, 2017, so consider nominating a talented teacher or submitting a self-nomination on the [PAEMST website](https://www.paemst.org/?campaign=2017CycleLaunch) today.The **Captain Planet Foundation** is accepting applications for small grants totaling $500-$2,500. Grant activities must be project-based, performed by youth and have real environmental outcomes. Visit the Web site to learn more about eligibility and restrictions and to fill out an application. The next deadline for applications is January 31, 2017. [http://captainplanetfoundation.org/apply-for-grants/](http://captainplanetfoundation.org/apply-for-grants)Are you a science teacher succeeding in providing exemplary lab instruction with minimal equipment and resources? [**The Shell Science Lab Challenge**](http://www.nsta.org/shellsciencelab) offers you a chance to compete to win a school science lab makeover, valued at $20,000, by sharing your creative approach. Middle and high school science teachers (grades 6–12) in the United States and Canada are encouraged to apply. The deadline for submissions is January 23, 2017.**Student Opportunities****NASA's Cassini Scientist for a Day essay contest**NASA's Jet Propulsion Laboratory in Pasadena, California, is excited to announce that the 2016-17 edition of its Cassini Scientist for a Day essay contest will be taking place this year. Since the Cassini mission to Saturn will be ending on September 15, 2017, this will most likely be the last essay contest for the Cassini mission.The contest is open to all students in grades 5-12 in the United States, as well as in other countries that have national contest coordinators. Students may work alone or in groups of up to four students. Students write an essay of up to 500 words about one of three possible imaging targets that the Cassini spacecraft has taken during the past few years.The 2016-17 essay contest topics are:1. The ice plumes at the south pole of Saturn's moon, Enceladus2. The lakes of Titan3. The hexagon at Cassini's north poleStudents will justify their choice as to which one they think would potentially yield the best science. Winners and their classes are invited to participate in a teleconference with Cassini scientists from NASA's Jet Propulsion Laboratory.All essays must be submitted by the student's teacher. Cassini scientists and educators will read all the entries and choose the winners. The contest deadline is February 24, 2017 at noon, Pacific Time (3:00pm Eastern Time). For contest rules, a downloadable contest flyer, frequently asked questions, and more information, visit:http://solarsystem.nasa.gov/Scientist-For-A-Day**National Youth Science Camp**The application portal for the National Youth Science Camp program is now open. The NATIONAL YOUTH SCIENCE CAMP is an honors program for two high achieving high school students from each state in the United States and others from around the world. This residential summer experience is held in West Virginia and has honored and challenged over 5,000 participants since it began in 1963. NYSC 2017 will be June 14 – July 8, 2017. The NYSC is operated by the National Youth Science Foundation® , a nonprofit organization.The goals of the NYSC program are to:* Honor high-achieving science-oriented students Introduce new scientific topics, especially those not typically covered in traditional secondary curriculum
* Encourage lifelong learning in science, technology, engineering, and mathematics
* Demonstrate relationships among the sciences and between science and other disciplines
* Prepare students to face challenges of college, career, and life-long education
* Develop creativity, instill self-confidence, and foster camaraderie among future leaders

Graduating high school seniors representing each state and several countries are selected to attend the NYSC through state and country-based competitions. Selection criteria include demonstrated achievement in science, technology, engineering, and mathematics and participation in school and community activities, with leadership potential.Please find an [attached flyer](https://rista.wildapricot.org/resources/Pictures/NYSC%20Handout%202017%20RS.pdf) with more information about this great opportunity. Feel free to print out or attach to distribution lists that will reach high school educators in the state. If you know of a current senior who meets the selection criteria, please encourage them to go to the website and apply.For additional information, please visit www.nysf.com, call (304) 205-9724 or send an E-mail message to office@nysf.com.**26th Annual MSMR Student Competition**Students in grades 7 – 12 are invited to submit an essay, poster or website in response to the Competition Challenge. The Student Competition is open to students from all New England states and from public, charter, parochial, independent/private and home schools. Students in grades 7 and 8 will be in the Level 1 group and students in grades 9 – 12 will be in the Level 2 group. The Challenge is the same for both Levels.Winning students receive awards up to $500 plus certificates and books; their teacher or mentor will receive a classroom grant of up to $100. Winning students, their parents and teachers are invited to the MSMR Annual Meeting luncheon in Boston in late June, where the awards will be presented and their work will be posted.Please tell your students – and colleagues – about this opportunity. Here is a link to detailed information, the Student Packet and Entry Form. The deadline for submissions is May 8th, 2017.**Washington University’s 2nd Annual Chemistry Tournament**The Washington University Chemistry Tournament (WUCT) is an annual chemistry competition held on Washington University’s campus in St. Louis, MO. The competition invites high school students across the nation to participate in a series of individual and team-based chemistry exams, engage with college students and faculty, and earn recognition at an awards ceremony. WUCT emphasizes real world applications of science and promotes fundamental problem-solving and teamwork skills.The first tournament was held in April 2016 and had 180 high school students across the nation travel to our campus. We are planning to host over 300 participants in our upcoming 2017 competition.Registration is open through February 24th at wuct.wustl.edu For more information including need-based financial assistance, visit our website or email usEngage students in STEM education with [**The Bright Schools Competition.**](http://brightschoolscompetition.org/) In this free competition, middle school students (grades 6–8) explore the links among light, sleep, and student health and performance. Registration is now open, and projects are due on February 6, 2017.Registration is open for the [**2016–2017 Toshiba/National Science Teachers Association (NSTA) ExploraVision competition**,](http://www.exploravision.org/) kicking off the 25th year of the world's largest K–12 science competition! Student participants will have a chance to win a number of great prizes, including $10,000 U.S. Series EE Savings Bonds (at maturity). Learn more and register by February 6, 2017.**Classroom Resources****Society of Women Engineers**Are you looking for some enthusiastic female engineering undergrads to conduct exciting hands-on engineering design activities with your students?  The Society of Women Engineers (SWE) at Brown University is a non-profit organization that is aimed at supporting and empowering female engineers while making the field of engineering more desirable to women.  The SWE has held some great events both on campus as well as in districts to engage both elementary and secondary students in engineering.  Some examples of SWE’s outreach events are:  STEM Fair presentations, after school tutoring, summer camps and on-campus tours and classroom activities.For more information or to book this awesome group of women for your district, please see the [attached flyer](https://rista.wildapricot.org/resources/Pictures/SWE%20Handout.pdf)and/or email brownUSWE@gmail.com or go to the website BrownU.swe.org**Field Trip Scholarship Program at NESS**New England Science & Sailing (NESS) has a wonderful scholarship opportunity available to send your students to one of our unique and curriculum enriching field trip programs this winter! NESS is able to provide **free** programming to those schools with a Free and Reduced lunch rate 80% or over, all you need to do is get your students to our waterfront location! If you are not familiar with NESS, we are a nationally recognized, award winning nonprofit 501(c)(3) adventure education organization based in Stonington CT.  We provide students of all ages with year-round programming that includes marine science, sailing and ocean adventure sports with an exceptional combination of on-the-water and in-the-classroom lessons intended to build confidence, teamwork, and leadership.  Our programs support and enhance STEM/STEAM based curriculum, utilizing an inquiry-based approach to learning, where we emphasize “hands on, minds on”. All our programs incorporate the Next Generation Science Standards (NGSS), the Ocean Literacy Principles and can be adopted to meet individual classroom needs.  Feel free to visit our Educator Guide for further insight into our programs: http://www.nessf.org/schools/invitation-to-educators.  In addition, you may enjoy spending 2 minutes to watch our school program video: http://www.nessf.org/schools/invitation-to-educators.We are excited to share this opportunity with your school district this winter. Our goal is to provide your school with a program that will challenge your students and assist in developing the next generation of STEM based learners.  A few of our top recommendations include: STEAM Challenges, the Augmented Reality Sandbox, NESS Tech using ROV’s (Remotely Operated Vehicles), Land Sailors, Simple Machines, and our brand new Aquaculture Investigations program. **FREE Seeds from URI**URI Cooperative Extension is pleased to offer **FREE SEEDS**! This program is made possible annually through the generous donation of seeds by **Ocean State Job Lot**, and through the efforts of our **URI Master Gardener Program** volunteers. Vegetable, flower and herb seed packets are now available for schools, Boy Scout and Girl Scout troops, 4-H clubs, community gardens and any education-based or youth groups. You may pick up seeds in person (free seed starting workshops on pickup days!) or include the price of postage!*Special offer!    Free mailing for the first 250 orders received from Rhode Island nonprofit groups. Submit seed order form and proof of nonprofit status by January 31.*[Click here to download form](http://web.uri.edu/mastergardener/files/2017-Seed-Order-Form_FINAL-01.10.17.pdf) |
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