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

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| http://www.rista.us/Resources/Pictures/RISTA%20logo%20small.png |

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| **Science Update** |
| February 18, 2016 |

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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*

**Upcoming RISTA Events**

Less than a week until the 2016 RISTA Conference!

Moving Toward an NGSS Classroom

**Saturday, March 12th** **at LaSalle Academy in Providence**

The 2016 Conference is coming together and we are looking forward to seeing the great science educators of Rhode Island!  Our keynote speaker will be Page Keeley, a past NSTA President who has authored a number of books on formative assessment techniques in science classes.  She is an engaging presenter and we welcome her to Rhode Island.  We have selected our science educators from K-16 to present on topics related to NGSS, including lesson ideas and useful resources.  Our conference registration link is on our webpage at [www.rista.us](http://www.rista.us/%22%20%5Ct%20%22_blank) along with session information.

**Page Keeley’s KeynoteAddress:**

**Uncovering Student Thinking- What Does It Really Mean to Teach for Conceptual Understanding?**

Four decades ago David Ausubel made the oft-quoted statement: "The most important single factor influencing learning is what the learner already knows. Ascertain this and teach accordingly." But for four decades, we have been trying to find out what accordingly means! K-12 students (and teachers) hold strongly held ideas about the natural world as they try to make sense of their every day and instructional experiences. Teaching for conceptual understanding involves building a bridge between students' initial common sense ideas and the core scientific ideas in the NGSS we want students to know and be able to use.

**Workshop descriptions, agenda, and online registration at [www.rista.us](http://www.rista.us/%22%20%5Ct%20%22_blank)**

**Register today!**

**NGSS Information and Resources:**

Moving Toward a New Vision of Science Teaching and Learning

Read [part two](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655404&m=12186077&u=NSTA&j=32459343&s=http://nstacommunities.org/blog/2016/02/20/teacher-professional-learning-transforming-teacher-practice-2" \t "_blank) of the blog series from Al Byers, NSTA's expert on teacher professional learning, on the [report](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655405&m=12186077&u=NSTA&j=32459343&s=http://www.nap.edu/catalog/21836/science-teachers-learning-enhancing-opportunities-creating-supportive-contexts" \t "_blank) issued earlier this year from theNational Academy of Sciences that identifies specific recommendations that will help teachers, and school and district leaders, meet the vision of the *[Next Generation Science Standards](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655406&m=12186077&u=NSTA&j=32459343&s=http://ngss.nsta.org/AccessStandardsByTopic.aspx" \t "_blank)* and the *[Framework for K–12 Science Education](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655407&m=12186077&u=NSTA&j=32459343&s=http://www.nap.edu/catalog/13165/a-framework-for-k-12-science-education-practices-crosscutting-concepts" \t "_blank)*

Twitter @RI\_STA and #NGSSchat

Follow RISTA on Twitter!  Our"handle" is RI\_STA.  You can send us information, links, resources by retweeting them with @RI\_STA added on.  Very easy to use and many great educators are connecting on twitter these days!

If you need ideas and inspiration about implementing NGSS get a Twitter account!  On the 1st and 3rd Thursdayof each month (9-10 pm EST), science educators from across the country sign on and use #ngsschat in their tweets to discuss a set of questions.  See [https://ngsschat.wikispaces.com/home](https://ngsschat.wikispaces.com/home%22%20%5Ct%20%22_blank) for some archived ‘chats’ (most recent is at the bottom of the list).  If you are new to twitter, just search for #ngsschat and read the conversation.  When you are ready to join in, just write a post and include #ngsschat so others following will see it.  Many great ideas and resources are shared! Also, if you are on Twitter, be sure to follow RISTA at RI\_STA to stay informed of the latest information!

NGSS@NSTA Hub (new resources are listed!)

55 trained curators have been seeking out quality resources.  Curators are science educators who teach K-12 and have been trained by NSTA to vet resources for each of the NGSS Performance Expectations.  The resources are being uploaded as the resources are reviewed, some PEs are not complete.  Check out the site at ngss.nsta.org and click on ‘The Standards’ tab.  Choose the PE that you need a resource for and scroll to the bottom of the page, resources will be listed at the bottom right corner.  Check back for additional resources!

**Opportunities & Resources for Teachers:**

RI Teacher at Sea

The [official flyer](http://www.rista.us/resources/Documents/RITAS%20Flyer%202016.pdf%22%20%5Ct%20%22_blank) announcing the upcoming RITAS educators cruise has finally been released.  There is only a very short window of time for educators to submit their application and it is a great opportunity, and we are inviting informal educators to apply; museum/zoo interpreters, boy/girl scout leaders, home school educators, after school educators, etc.  The flyer does not specifically state that there are three other research cruises leaving from and returning to the GSO dock in May and June, that have room for at least one if not more educators. The only stipulation for an applicant is that they have to live and work in RI.

Lab Out Loud

*[Lab Out Loud](http://www.mmsend53.com/link.cfm?r=2061533959&sid=91008359&m=12229284&u=NSTA&j=32525846&s=http://laboutloud.com/about" \t "_blank)* is a podcast and blog that began in October 2007 to examine topics relevant to teachers of science and the science classroom. Lab Out Loud, hosted by two science teachers, discusses science news and science education with leading scientists, researchers, science writers and other important figures in the field.

Mentor Action Guide

Million Women Mentors is excited to release the first of four new mentor action guides. The action guide provides mentors who are working with middle school students with 20 weeks/hours of activities to do with their mentees. Within the guide, mentors will find a mix of hands-on and online activities as well as touch points for conversations around things like goal setting. The action guide for middle school is integrated with Learning Blade®,an online STEM career awareness curriculum, and has information on how mentors can access an account to use with their mentees. To download a copy of the mentor action guide, visit the Resources Page on the [Million Women Mentors website](http://www.mmsend53.com/link.cfm?r=2061533959&sid=91008362&m=12229284&u=NSTA&j=32525846&s=http://www.millionwomenmentors.org/sites/default/files/resources" \t "_blank)

The ACT National STEM Report

The Condition of STEM 2015 reviews the 2015 graduating class in the context of STEM (Science, Technology,Engineering, Mathematics)-related fields to determine student interest levels in specific STEM fields and, more importantly, readiness in math and science of those interested in STEM careers. [Download the full report](http://www.mmsend53.com/link.cfm?r=2061533959&sid=91008363&m=12229284&u=NSTA&j=32525846&s=http://www.act.org/stemcondition/15" \t "_blank)

Are You Ready for the Astronomical Eventof the Decade?

Eighteen months from today (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](http://eclipsewise.com/solar/SEgmap/2001-2100/SE2017Aug21Tgmap.html%22%20%5Ct%20%22_blank)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 TeachersAssociation) 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%22%20%5Ct%20%22_blank) ) 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.

RI Educator Aboard Joides

Follow your colleague, Nina Rooks Cast, as she sails aboard the JOIDES Resolution for two months on Expedition 361: Southern African Climates.  You can follow her blog posts on joidesresolution.org , and checkout the other social media outreach information available via links on the website. There are also over 180 curriculum lesson plans available through the resources page that can be narrowed down by specific subject matter and/or age/grade level.  There's also a link to the live broadcast request page, where you can sign up for a 40 minute zoom chat with Nina for your classroom - most slots in February are already filled, but there are plenty available in March.  Lastly, there is also a link to sign up yourself for this once-in-a-lifetime opportunity - they are currently accepting applications for the next FIVE expeditions!  Hope to hear from you all!

Free Resource from Everfi

We are excited to share with you a new science, technology, engineering, and math (STEM)resource provided by the Boston Bruins, Future Goals - HockeyScholarTM.This digital course is available to all schools throughout Massachusetts at **no cost!**The curriculum leverages hockey simulations to build students' understanding of STEM concepts, develop scientific and critical thinking skills, and highlight careers in STEM related fields found in Hockey.

**Grade Level:** 6-8
**Course Length:** 3-4 hours
**Standards Aligned:** Next Generation Science, State and Common Core Math

**Sample Topics Covered:**

· Engineering behind skates, sticks & goalie padding

· Ice surface area & volume

· Geometric constructions and angles

· States of matter - solid,liquid, gas

· Mass, velocity and kinetic energy as based on player speed

Detailed course information can be found in the [Course Outline](http://info.everfi.com/rs/410-YCZ-984/images/Hockey%20Scholar%20Module%20Cheatsheet.pdf%22%20%5Ct%20%22_blank) and [Demo Video](https://vimeo.com/132331177%22%20%5Ct%20%22_blank)

See below to get started:

1. Get started on your own at everfi.com/register using the attached [Teacher QuickStart Guide](http://www.rista.us/resources/Documents/Teacher%20Quick%20Start%20Guide%202015-16%20MM.docx%22%20%5Ct%20%22_blank).

2. Contact Luke Martin by email (lmartin@everfi.com)or phone [(772-559-1539](file://localhost/tel/%2528772-559-1539%22%20%5Ct%20%22_blank)) to set up a brief 15-20 training, either in person or on the phone.  \*\*Additionally, EverFi is offering "First Day Launches" for Hockey Scholar in March.

Summer Teacher Seminar at the National WWII Museum

Come to the National WWII Museum in July of 2016 to learn how to teach science in the context of history, with hands-on activities and literacy connections. Open to 28 5th-8th grade teachers from around the country. The seminar is free, we reimburse for travel, and pay for hotel and most meals. Learn more and apply at:

[http://www.nationalww2museum.org/learn/education/for-teachers/summer-teacher-seminar.html](http://www.nationalww2museum.org/learn/education/for-teachers/summer-teacher-seminar.html%22%20%5Ct%20%22_blank)

NELMS partners with Red Sox for STEM Event

Groups may participate in pregame STEM activities:
Egg Drop off the GREEN MONSTER, Wildlife Show, and in seat educational workbooks for the **Thursday, April 21st,1:35pm game against Tampa Bay**.

**STEM Egg Drop** (pregame event for groups who register)
\*Students will DROP the EGG from the top of the GREEN MONSTER onto the LF Warning Track!
\*The guidelines for building the device that will hold the egg will coincide with Common Core Standards for the NE states

**STEM Wildlife Education** (pregame event for groups who register)
\*Curious Creatures will bring their live animal show into Fenway Park and talk about animal habitats, diet, and more!

**In-Game Education Booklets** (during the game for groups who register)
\*Elementary or Middle School booklets correlated to the Common Core Standards
\*Booklets will have questions relating to Fenway Park, baseball, math, science, and more!

Tickets giving access to all educational pregame events and the game start at $10!(Limited number of $10 tickets available, other seat locations/price is also available)

Schools and groups can participate in any number of events for the day! All children (14 and under)who are part of any sized group will get to run the bases after thegame! (This event is subject to change)
Please RSVP if you are interested. I look forward to hearing from you!
Matt Labossiere, Senior Account Executive, Group Sales
Boston Red Sox
4 Yawkey Way
Boston, MA 02215
direct: 617.226.6834 cell: 617.851.9444
email: mlabossiere@redsox.com

Egg Drop Rules in a pdffile

NECAP Test Development

The Office of Instruction, Assessment and Curriculum has two opportunities each year for classroom teachers and other educators to participate in the development of the NECAP tests for grade 4, 8 and 11 in science. Teacher committees are essential to the work of creating a valid and reliable assessment system. Many educators have participated in test development committees and have learned a lot not only from the process but also from educators representing all three NECAP Science States (New Hampshire, Rhode Island and Vermont).

Educators must complete an application and meet minimum criteria in order to be considered for participation on one of the committees. **Applications are due by 4 p.m. on Friday, May 27, 2016**. **NOTE:** Even if you have applied and/or attended in the past you still must complete an application each year in order to be considered for participation. Successful applicants will be notified by Friday, June 10, 2016.

**Location and Dates:**The “Item Review Committee” (IRC) and “Bias & Sensitivity Review Committee” meetings will be held in **Concord, NH.** The Bias & Sensitivity Review Committee will be held on **August 4th,2016** and the Item Review Committee (IRC) will take place on **August 4th and 5th, 2016**.

Please see attached for more detailed information and an application form.  Applications can also be found on the RIDE web page at: [www.ride.ri.gov/NECAP-Test-Development](http://www.ride.ri.gov/NECAP-Test-Development%22%20%5Ct%20%22_blank)

Feel free to share this information with teachers who may be interested.

The American Society for Engineering Education Northeast 2016 Conference

Taking place at URI **April 28-30, 2016**.  The conference is entitled “Revolutionizing Engineering Education.”  Here is the link for more information: [http://egr.uri.edu/asee2016/](http://egr.uri.edu/asee2016%22%20%5Ct%20%22_blank)

Freebies!

[Engineering in the Classroom](http://www.mmsend53.com/link.cfm?r=128550100&sid=90688957&m=12186077&u=NSTA&j=32459343&s=http://www.jpl.nasa.gov/edu/teach/resources/engineering-in-the-classroom.php" \t "_blank) is an instructor guide from NASA's Jet Propulsion Laboratory, has videos and supporting text for grades K–12 illustrating how real-world engineering at the space agency can be applied to the Next Generation Science Standards (NGSS).

The National Park Service's kid-friendly video series [Everglades Mountains and Valleys](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655436&m=12186077&u=NSTA&j=32459343&s=http://www.nps.gov/ever/learn/photosmultimedia/mountainsandvalleys.htm" \t "_blank) features seven main habitats within the park; lesson plans for grades K–9 that support the NGSS are included.

[Investigating Evidence](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655437&m=12186077&u=NSTA&j=32459343&s=http://www.birdsleuth.org/investigation" \t "_blank) is a curriculum from the Cornell Lab of Ornithology's Bird Sleuth program that supports the Common Core and NGSS, helps teachers guide students in grades 4–12 in making observations, collecting and graphing data, drawing meaningful conclusions, and sharing their work.

NSTA's [Freebies for Science Teachers](http://www.mmsend53.com/link.cfm?r=128550100&sid=90655438&m=12186077&u=NSTA&j=32459343&s=http://www.nsta.org/publications/freebies.aspx" \t "_blank) web page now has at least 50 listings that mention NGSS—check them out!

NSTA Conferences

NSTA conferences offer the latest in science/STEM content, pedagogy, and research to enhance and expand your professional growth. Take advantage of this unique opportunity to collaborate with science education leaders and your peers. Each year, NSTA hosts a national conference on science education (in the spring), three area conferences (in the fall), and a STEM Forum & Expo. [Learn more](http://www.nsta.org/conferences%22%20%5Ct%20%22_blank)

**2016 Conferences:**

**Nashville (National): Mar.31–Apr. 3, 2016**

**STEM Forum & Expo: Denver, July 27–29, 2016**

**Opportunities for Students**

“Ask Astronaut Tim” Contest

Rhode Island  PK-8 students have a rare opportunity to talk with the International Space Station during schools hours the week of May 2.  This will be RI’s first-ever, school-to-space station chat.  All Saints STEAM Academy in Middletown has been chosen by [ARISS](https://www.google.com/url?q=http://www.ariss.org/&sa=D&ust=1456948700979000&usg=AFQjCNF96bbNnTLarAqUKeicDxXJohUBuw" \t "_blank),an international space consortium, to host the event and has launched a statewide “Ask Astronaut Tim”  contest to solicit questions. Three winners will be invited to pose their question directly to the orbiting astronaut. See [bitly.com/AskAstroTim](https://www.google.com/url?q=http://bitly.com/AskAstroTim&sa=D&ust=1456948700980000&usg=AFQjCNETCw2tZGwKVI-PMH2GSnFJWlOUWw" \t "_blank) for details and the entry form. Submission deadline is April 10.  Questions can go to Mike Cullen,  missioncontrol@RISpaceStation.com

2016 Ocean Science Exploration Camp

[Registration](http://innerspacecenter.org/booking%22%20%5Ct%20%22_blank) is now open!  The 2016 Inner Space Center's Ocean Science Exploration Camp will be held Monday, August 15 -Friday, August 19, 2016, and will focus on chemical oceanography. Campers will conduct field and lab-based experiments to learn about and measure important water characteristics including temperature, salinity, pH, turbidity, dissolved oxygen, and nutrient levels, as well as investigate the potential impacts of climate change and marine pollutants on the ocean ecosystem.  Camp is intended for children 11-15 years old. If you have any questions, please contact ISC Education Specialist Holly Morin by e-mail, holly\_morin@uri.edu or phone, (401) 874-6414.

Send Kids to "Minecraft" Summer Camp at Home

Summer can be a tough time for kids if there's nothing goal-oriented to focus on, and if getting them somewhere for a camp experience (whether day or stay) isn't possible, what can you do to keep them stimulated,learning, and having fun? If your kids are into Minecraft, we have a greatidea. Connected Camps run safe and dedicated Minecraft servers for kids to playand learn on in a secure, monitored environment. And over the summer, they run virtual summer camps for kids to play and take their Minecraft fun to the next level. [Learn more](http://www.mmsend53.com/link.cfm?r=2061533959&sid=91008366&m=12229284&u=NSTA&j=32525846&s=http://geekdad.com/2016/02/minecraft-summer-camp-at-home" \t "_blank)

TulaneScience Scholars Program (TSSP)

Tulane University is pleased to invite bright current10th and 11th (in addition to exceptional 9th) grade students to take3-credit college courses during the summer with professors in the School of Science and Engineering. The Tulane Science Scholars Program (TSSP) is selective program for high school students who have exceptional talent in the sciences and mathematics. TSSP is a residential program and students will have the option to live on campus in a dormitory for an additional fee. This year's summer program includes eight courses: Animal Behavior, Chemical Engineering,Computer Science, Computers and Musical Creativity, Electronics, Materials Science and Engineering, Neuroscience, and Psychology.

More detailed information about these courses and how to apply is available at [tssp.tulane.edu](http://www.mmsend53.com/link.cfm?r=2061533959&sid=91008367&m=12229284&u=NSTA&j=32525846&s=http://tssp.tulane.edu" \t "_blank) Each of the courses is offered for three hours of Tulane credit (may be transferable to another university) and has a $1250 fee.

The deadline to apply is April 1, 2016, at noon, and students will be notified of acceptance by May 2,2016.

National Parks Student Contest

National Park Trust's annual Kids to Parks Day National School Contest empowers students to plan their own educational park experience. Open to all Title 1 schools for grades PreK through 12, this contest provides grants of up to $1,000 to cover transportation, park-related fees, stewardship supplies, or anything else students believe would enhance their experience. Our 2016 contest will be awarding 100 park grants to 100 schools nationwide. Deadline is March 4,2016. Details can be found at [www.kidstoparks.org](http://www.kidstoparks.org/%22%20%5Ct%20%22_blank)

OMEGA Scholarships

Through the generous sponsorship of the Massachusetts Institute of Technology (MIT) AgeLab, the New England University Transportation Center, and AARP, OMEGA is proud to offer**three new $1000** college scholarships to recognize and reward the efforts that young adults are making to create multigenerational connections in their communities. **High school juniors and seniors** living in one of the six New England states (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) are eligible to apply for scholarships. Each OMEGA scholarship will award a $1000 college scholarship to the winning student and$1000 to the winning student’s high school organization to support its activities to build relationships between teens and older adults. Three separate scholarships are available; one OMEGA scholarship will be awarded in each of the following categories: Transportation and Community; Technology; and Social Connectivity. The presentation of awards will take place at a ceremony at MIT in spring 2016. **Completed applications are due March 20,2016**. Applications and more information available at: [http://agelab.mit.edu/college-scholarships](http://agelab.mit.edu/college-scholarships%22%20%5Ct%20%22_blank).

 Questions? E-mailomegamit@mit.edu or call 617-253-3506.

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