NEW ENGLAND AIR MUSEUM

Adventure, Discovery, and the Dream of Flight

Ever wanted to sit and have your picture taken in the cockpit of a fighter jet? Wear shoes you can climb in and live out your fantasy with the CSSA at the easily accessible New England Air Museum, 36 Perimeter Rd, Windsor Locks, CT. The Museum houses vintage planes & helicopters, plus simulators & hands-on educational exhibits. The CSSA meeting will be held in the exhibit area where attendees will have dinner with the planes. Educators attending will hear what offerings are available at the museum for their students and enjoy a wonderful catered dinner. Admission is a special $35.00 to all. You can sign up and pay for the meeting on the CSSA website or mail a check to CSSA and send to Sandra Justin, CSSA Arrangements, 11 Patricia Drive, Vernon CT 06066. The Museum will be open for Registrants to tour at 4PM and the event will begin at 5PM. Directions and other information about the Museum can be found at https://www.neam.org/. Sign up and get more details at www.cssaonline.org

STUDENT LOAN NOTICE!!

Have a student loan that needs forgiveness? Go to http://bap.nsta.org/Attachments/PblCfrgvnss-TeacherTitle.pdf

DEEP CLIMATE CHANGE WORKSHOPS AND OPPORTUNITIES

Webinars on the first Wednesdays of the month at 4:00 pm include the following topics:

February- What Color is your Air-Ozone, EPA Flag Program

Workshops planned to date: February 27- Environmental Literacy K-12 For more information go to the DEEP webpage at the following URL: https://www.ct.gov/deep/cwp/view.asp?a=2691&q=322502&depNav_GID=1627

Nominate a Teacher

The PAEMST is the highest honor bestowed by the United States government specifically for K–12 mathematics and science teaching. Principals, teachers, parents, students, or members of the general public may nominate exceptional mathematics, computer science or science teachers currently teaching Grades 7–12. Nominations for the 2018–19 year are now open at https://www.paemst.org/.

Please consider nominating a deserving teacher today as there is an applicant information session scheduled in late February. This information session will provide applicants with a variety of valuable information about the application. Information about qualifications may be found on the web site at https://www.paemst.org/ Information about the Connecticut recipient can be found at https://www.paemst.org/finalist_profile/4754

Professional Development Opportunities! Are you interested in high quality, low cost, Teacher Professional Development opportunities? Visit the CSTA website and click on Opportunities. You will not be disappointed. Contact us if you have questions.

click to Join the CSSA
Did you know that The CT STEM Foundation offers up to $1,000 in scholarships to encourage both middle school and high students to participate in STEM studies? But wait, there's more! The Foundation also offers two $1,000 scholarships to graduating seniors who participate in the CT STEM Fair.

In keeping with its mission to engage pre-college Connecticut students in multiple STEM activities, the foundation offers two summer scholarships to undergraduate science students planning to attend a college/university summer STEM course, a summer internship, an informal science education program or a tuition high school summer education program. Depending upon tuition and expenses, up to $500 is granted for each scholarship. One is awarded to a rising sophomore, junior or senior high school student. The other is awarded to a middle school student.

Another aspect of the foundation's mission is to provide support to graduating seniors planning to major in a STEM related field in college. Two $1,000 scholarships are awarded to applicants who participated in the current year's CT STEM Fair.

Additional information, including scholarship application forms and the deadlines for submission, are available on the CT STEM Foundation's website, under the Scholarship section. https://ctstemfoundation.org/

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Science & Engineering Colloquium for Teachers
MIT Club of Hartford
March 16, 2019

John Marshall
Cecil and Ida Green Professor of Oceanography, MIT

- Stimulate your intellectual curiosity
- Learn how effort and preparation affect one’s future
- Continue education opportunities

“The Oceans in a Warming World”

The MIT Club of Hartford will be hosting this colloquium at Classical Magnet School in Hartford. This colloquium is open to science, mathematics and technology teachers from Southern New England and is free of charge. Each teacher is encouraged to bring motivated, interested students. Space is limited to an audience of 100 teachers and students, so register today. In addition, all attendees must have registered prior to the event.

Program:
10:00 AM – Welcome by Avi Ornstein, MIT Club of Hartford.
10:15 AM – Prof. Marshall will speak on his work as an oceanographer who studies the circulation of the ocean, its coupling to the atmosphere and the role of the oceans in climate.
11:00 AM – Prof. Marshall will participate in a group discussion, answering questions from the audience.
11:30 AM – Everyone will participate in a group discussion of what is going on in STEM education.
12:30 PM – Prof. Marshall will have an informal discussion with students over pizza regarding these issues that will affect their future.
12:30 PM – Teachers will also be able to have pizza and will be able to have a discussion with peers and MIT alumni regarding STEM education and the impact the changes will have on their careers and their teaching environment.

The MIT Club of Hartford is counting on YOUR participation. Please set aside this date. Please contact Avi Ornstein (ornstein@alum.mit.edu) if you are interested in attending or if you desire more information.


Note:
Classical Magnet School is located at 85 Woodland Street in Hartford. The entrance to the parking lot is on Asylum Avenue.

The colloquium will take place in the Trinity Room, which is on the second floor. Take the elevator up and turn left. It is a short distance down the hall, on the right side.

The UConn Chapter of the National Academy of Inventors is offering a special presentation by Eric S. Hintz, PhD, titled Ingenious Yankees: Three Centuries of Innovation in Hartford. Hintz, a historian with the Lemelson Center for the Study of Invention and Innovation at the Smithsonian Institution, will discuss the research underlying Places of Invention, an exhibition at the Smithsonian’s National Museum of American History that showcases the spirit of innovation in Hartford, CT and several other communities. This event is taking place on
Real Bodies The Exhibition

NEW Traveling Exhibit | Opens March 1
This powerful exhibition explores life by displaying real, perfectly preserved human bodies and more than 200 anatomical specimens. More than a simple display of human specimens, REAL BODIES will connect audiences to a deeper sense of what it means to be alive. REAL BODIES digs deeper into the beauty of the body, mind, and soul than any other exhibition of its kind, and invites you to explore the entire human experience from the first breath to the last.

For more information or to book your school group please contact Brit Montmeat by phone at 860-520-2112 or email bmontmeat@ctsciencecenter.org.

NEW! Discovery Labs
Enhance Your Field Trip
We’re adding two new lab programs to go along with our blockbuster new traveling exhibit, Real Bodies. These new programs are the perfect accompaniment to any field trip for grades 6-8 and 9-12

Sense You Asked
Explore various sensory phenomenon to uncover how your brain processes the information it receives. Discover how keen your senses really are through a series of experiments and challenges, and “see” if you can figure out what’s going on!

NGSS MS-LS1.D

Gene-ius of Taste
Discover DNA, the molecule that makes every living thing unique! Use the techniques of molecular biologists to extract your own DNA and bring it back to the classroom in a necklace. Then, explore one of the main genes influencing our ability to taste bitter substances as you use bioinformatics to analyze actual DNA sequences! Use your own sense of taste to infer what your tasting genotype might be! NGSS MS-LS3.A, HS-LS1.A

Science Themed Weeks
Mark Your Calendars
Make your field trip memorable and unique by visiting during one of our special themed weeks. We’re amping up your field trip experience with extra opportunities for content-rich, hands-on science in our exhibit galleries.

National Engineers Week - February 18-22
Brain Awareness Week - March 11-17
DNA Days - April 23-26
3D Movies & Stage Shows

NEW! Movies & Shows Available

Experience science in an engaging environment with a visit to our Hoffman Foundation Science Theater. 3D Movies offer a unique three-dimensional experience enabling students to learn about the science that affects our lives or join us for an interactive LIVE stage show hosted by our STEM Educators. Each movie and show is carefully selected for science content and offers relevant connections to the Connecticut Science Framework.

Start Planning Now to Attend! 8th Annual STEM Forum & Expo, Hosted by NSTA
July 24–26, 2019
San Francisco, CA

Now is the time to start making your plans to attend the premier professional development event in STEM education. The 8th Annual STEM Forum & Expo, hosted by NSTA, offers attendees the most innovative and inventive practices to keep students globally competitive in the STEM disciplines.

Don't miss out on:

• Hands-on sessions that enhance ongoing development of teachers and school leaders to improve their STEM knowledge.
• Specialized featured panels that promote the implementation of teacher and administrator skill and competency development, including data-informed teaching and leading, and the integration of research-based methods into the STEM curriculum.
• Project- and research-based activities that tackle issues of real-world relevance.
• Expert talks on ways to help diverse learners and special needs students navigate and be successful in STEM classrooms.

We look forward to seeing you in San Francisco this July!

Emerging Female Scientist (EFS) is the first electronic, peer-reviewed, open access scientific journal promoting and publishing articles by female middle and high school students. The goal is to inspire, recognize, train, and equip students to pursue and share their scientific ideas and research. All research submissions must have a female as the primary author. Every submission is received and reviewed by an all-female, renowned editorial board, which is guided by a Scientific Advisory Board of nationally-recognized scientists, researchers, and educators.

The editorial and advisory boards are committed to fostering a fun and meaningful research and publication experience. Submissions will receive constructive feedback on the content, research methods, results, and conclusions. This experience teaches students about the publication process from peers and experts who ultimately help them refine and improve their work into a polished and worthy final research product. In addition to original research, students can also submit interviews with female STEM leaders, historical vignettes of noted female scientists, and/or current science and technology review articles.

NSTA is well known for its commitment to furthering science education and fostering STEM activities nationwide, as well as working with Key Leaders in each

Please keep on going to the next page. Word is giving me grief on inserting a PDF page, but it is worth your while to keep on reading! Thanks for your understanding.
Established in 1963 in West Virginia, the National Youth Science Camp is a honors program for two accomplished high school graduates from each state in the United States of America and others from around the world. The 2019 NYSCamp begins on June 27 and ends on July 20, 2019.

Overview: The NYSCamp is a broad science, technology, engineering, and mathematics program that incorporates both creative and performing arts as well as an outdoor adventure series including opportunities for rock climbing, mountain biking, spelunking, whitewater kayaking, and overnight backpacking. The delegation travels to Washington, D.C. where they are able to tour museums and other attractions near the National Mall and attend a panel discussion held at the American Association for the Advancement of Science. See http://www.nyscamp.org for more information or to apply.

Highlights:
- Lectures and Seminars with leading scientists from across the United States
- Directed Studies alongside visiting and resident STEM professionals
- Dedicated natural science, physical science, computer science, creative arts, performing arts, and outdoor recreation program areas.
- Delegates attend free of charge – transportation included!

Application Requirements:
- Graduate from high school between July 1, 2018 and June 30, 2019.
- Documented superior academic proficiency.
- Recognition for notable achievement in mathematics or science.
- Skills and achievements outside of STEM and outside academics.
- Intent to pursue higher education and career in STEM.
- Availability to participate in entire NYSCamp program.
- Submit your application online at http://apply.nyscamp.org.

Post Office Box 3387 – Charleston – West Virginia 25333-3387 USA
(304) 205-9724 – FAX (866) 833-0875 – www.nysf.com
Back by popular demand!

How to Use Phenomena to Drive Instruction: An NGSS Transition Workshop

March 7th & 8th
8:30 - 3:30

The NRC Science Framework and NGSS call for fundamental shifts in the way we teach and engage students, from learning about science to figuring out science and sense-making.

During our session, we will engage as learners and educators to explore phenomena and build sense-making experiences for the students in our classrooms.

This workshop is intended for K-12 teachers and administrators with no previous NGSS professional development. Schools are encouraged to send grade-level teams.

Registration fee: $100

To register, please call our Reservations Department at 203-852-0700, ext. 2206 or https://www.maritimeaquarium.org/educator-workshops

This workshop will take place in the Hinnant Room at The Maritime Aquarium at Norwalk. Limited to 24 participants. Lunch is not included - please bring a bagged lunch or plan to purchase lunch in our café.

* The NGSS logo is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards were involved in the production of this product, and do not endorse it.
REGISTRATION IS STILL OPEN FOR THE FOLLOWING EVENTS:

Elements of the NGSS
Leveraging modules from the California Academy of the Sciences, this offering provides teachers with an initial introduction to the components of the Next Generation Science Standards.
Date: February 6, 2019
Time: 8:30 am - 3:00 pm
Register: https://formstack.io/92820
Location: Connecticut Science Center
Cost: $150/participant

Why NGSS?
This two-day workshop is designed to provide educators possessing little or no knowledge of the NGSS with a basic understanding of three-dimensional learning and the vision of these new standards.
Dates: March 12, 13
Times: 8:30 am - 3:30 pm
Register: https://formstack.io/A5D08
Location: Connecticut Science Center
Cost: $300/participant

NGSX PLANS
This pathway supports instructional leaders in figuring out constructive strategies for supporting teachers as they implement the Next Generation Science Standards (NGSS). Participants experience three-dimensional learning, observe footage of teachers implementing 3-D learning, and gain strategies for supporting excellent science teaching.
Dates: March 28, 20
Times: March 28 - 8:00 am - 4:00 pm; March 29 - 8:00 am - 12:00 pm
Register: https://formstack.io/B0D4C
Location: Connecticut Science Center
Cost: $400/participant

NGSX: Introduction to Three-Dimensional Learning (Part 1)
In this program, participants engage in modeling and constructing explanations of complex phenomena, hallmarks of Next Generation Science. They also learn to use questioning strategies and other "talk moves" to create a classroom culture in which students explain their thinking, listen to and build on the ideas of others and function as a community of critical thinkers.
Dates: March 5, 6, 14, 26, 27
Time: 8:00 am - 4:30 pm
Register: https://formstack.io/D61EF
Location: Connecticut Science Center
Cost: $1,500/participant

NGSX: Introduction to Three-Dimensional Learning (Part 2)
(Prerequisite Applies) This workshop familiarizes participants with the characteristics of supporting 3D learning sequences with instructional materials. Participants will learn how to analyze lesson sequences to identify or adapt "storylines" by working with a variety of tools, instructional materials, and teaching examples in various tasks.
Dates: February 28, March 7, March 14
Times: 8:00 am - 4:00 pm
Register: https://formstack.io/2AB86
Location: Southington Municipal Center (200 N. Main Street
Southington, CT 06489)
Cost: $900/participant

NGSX PLANS
This pathway supports instructional leaders in figuring out constructive strategies for supporting teachers as they implement the Next Generation Science Standards (NGSS). Participants experience three-dimensional learning, observe footage of teachers implementing 3-D learning, and gain strategies for supporting excellent science teaching.
Dates: March 28, 20
Times: March 28 - 8:00 am - 4:00 pm; March 29 - 8:00 am - 12:00 pm
Register: https://formstack.io/B0D4C
Location: Connecticut Science Center
Cost: $400/participant

CIC young inventors need your help! Once again we invite our friends to come out and judge at the 36th Annual 2019 Connecticut Invention Convention. In order to make this a successful year for our young inventors, we need judges from every background and career path! We need judges to speak with our students, offer feedback, score their inventions, and recommend inventors to advance to other events. No experience necessary, since everyone receives training on the day of the events.

Not familiar with our program: The Connecticut Invention Convention (CIC) is an award winning, non-profit educational organization open to students in all schools across Connecticut. The program is designed to develop, encourage, and enhance critical thinking and creative problem solving skills through invention, innovation, and entrepreneurship. Students come up with an invention and present their work at our Final events. Check us out at http://www.ctinventionconvention.org.

We need your help to encourage young students to consider careers in science, technology, math, and engineering. Could you invest a few hours at some of our events to support a child’s interest in becoming an inventor? Our Event Schedule

<table>
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<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>May 4, 2019</td>
<td>7:30 - 3 PM</td>
<td>CIC Final</td>
<td>Gampel Pavilion, UCONN, Storrs</td>
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Note: We are not hosting Regionals this year, so please consider joining us at UCONN and registering friends, family, and colleagues. With our largest Finals EVER, we will need more judges than EVER!

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To register as a judge click here:
https://www.cicregistration.org/judges/
Please register with us, so that we can send you critical information closer to the event. As the event day approaches, a more definitive schedule will be emailed.

IF YOU HAVE ALREADY REGISTERED as a judge, simply forward this email to others who also may want to foster creativity in our youth.

NOTE: If your company tracks your volunteer hours via their internal tracking system, please do not forget to register your total volunteer hours associated with participation at these events.

I am happy to help with questions. Thank you for your support,
Christine Lawlor-King
Christine@ctinventionconvention.org

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Exciting News from NESS!

We have EXCITING news! The New England Association of Schools and Colleges (NEASC) voted to accredit New England Science & Sailing Foundation (NESS) as a school partner program. This decision makes NESS the first school partner program to be accredited by the oldest accreditation agency in the country. This accreditation demonstrates our commitment and passion to provide the highest quality educational experience for all students, complementing and enhancing students' traditional school experiences.

Of NESS, NEASC remarked: "NESS makes a difference in the lives of the young people it nurtures-sometimes a life-changing difference and sometimes a simple moment of self-confidence gained. We had a distinct sense the people who make NESS what it is regard this opportunity as a genuine and rare privilege. Their commitment will continue to strengthen this exceptional program."

Please feel free to contact me for programs details at our office 860-535-9362 or email pgibbs@nessf.org. Visit us at www.nessf.org.

UConn’s Natural Resources Conservation Academy (NRCA), which offers environmental programs for teens, adults and teachers. The Conservation Ambassador Program (http://nrca.uconn.edu/students/index.htm) teaches teens
the skills used by professionals to address current environmental issues. Students learn real field-based science during an exciting weeklong summer field experience at UConn. Then, students design their own environmental project to provide real solutions for their communities, and present their work at the Connecticut Conference on Natural Resources. For more details check out the CAP program video here. The Conservation Training Partnerships (http://nrca.uconn.edu/students-adults/index.htm) program pairs teens and adult volunteers. The team participates in a 2-day field workshop (find a workshop near you!), and learns to use conservation and mapping tools in field activities. Then, the team designs and carries out a local environmental project. For more details check out the CTP program video here. The Teacher Professional Learning program (http://nrca.uconn.edu/teachers/index.htm) extends the NRCA experience to high school science teachers. This 3-day professional development workshop immerses teachers in regional water resource issues, and provides them with online mapping tools to use in their classrooms. Each teacher leaves with 10-15 Water and Sustainability Science lessons aligned with Next Generation Science Standards. Online applications are now open! If you are interested in learning more, we are happy to visit classrooms & organizations to give brief presentations about our NRCA programs. Please contact me to find out more. Laura Cisneros

Resources and Tools for an NGSS Classroom

Getting ready to or already designing your NGSS units of instruction? Or just need a little more support in understanding and practicing the NGSS shifts? We Can Help.

Our 2018-19 Workshop Series provides one and two-day PD to help: educators build their capacity to understand and implement NGSS pedagogy; be introduced to resources, tools, and strategies that can be included in NGSS units of instruction; and offer an opportunity to share challenges, successes, and teaching tips with a network of peers. JASON’s award-winning educational resources are routed in real-world application & phenomena, and address three dimensional teaching and learning (www.jason.org/ngss).

Audience:

- Administrators, curriculum directors, curriculum developers, science coaches, team leaders, and science teachers.
- World of Waves Best Suited for Grades 4-12
- Living Well Best Suited for Grades 6-12

Prerequisites: Although not required, we highly recommend that educators participate in the Next-Gen Science CT Short Course (visit ngss.ccat.us for details) prior to attending a JASON workshop. Other prior PD focused on NGSS, and familiarity with the EQuIP rubric is also helpful. Participants are also encouraged to attend as a team of 2 or more from the same school or district.

Workshop Listings

Two-Day Workshops

World of Waves – NEW Curriculum built in partnership with ONR!

Program Cost: FREE! Sponsored Through Office of Naval Research

Build a deep, working understanding of the physics of waves and their importance in our world. Meet STEM role models ranging from Navy officers to robotics engineers & rock musicians that apply the physics of waves in their work. Visit https://jason.org/world-of-waves for more information.

Participants are eligible to receive a BOSEBuild Speaker Cube Kit of their own to pilot selected activities to explore

- How sound works
- How speakers work
- Frequency and Waveforms

LEARN – Old Lyme, CT 8:30am-3:00pm
Part 2: Friday, March 1, 2019
EASTCONN – Hampton, CT 9:00am – 3:30pm

One-Day Workshops –-- MORE TOPICS, DATES AND LOCATIONS COMING!

NEW Biology Curriculum! Living Well

Program Cost: $40.00

Explore the wonders of human biology from the molecular building blocks of life, to cells, organs and organ systems, to the human body as an interconnected whole, and even the behavior of populations—through the prism of human health and disease. Visit https://jason.org/living-well for more information.

LEARN – Old Lyme, CT 8:30am-3:00pm
Don’t throw those lessons out with the bathwater! “Tried and true” lessons that have created meaningful experiences for your students for years do not need to be discarded with the advent of new standards. Join us as we share how JASON Learning is redesigning labs to support the transition to an NGSS classroom. Educators will experience two versions of a JASON lab, one created pre-NGSS, and the other a newly designed NGSS version. We will examine specific modifications and the strategies and tools used to make the adaptations through hands-on experience, discussion, and the use of the EQuIP rubric. Toward the end of the session, educators are invited to examine a “tried and true” lesson of their own and apply these new strategies and tools to make future modifications. Come prepared to share ideas and engage in this deconstruct and redesign discourse.

Deconstructing Performance Expectations for an NGSS Classroom
All grade levels
Thursday, March 2, 2017 8:30am – 3:00pm at LEARN, Old Lyme, CT [Register]
Tuesday, March 21, 2017 9:00am – 3:30pm at EastConn, Windham, CT [Register]

Participants will explore the Next Generation Science Standards in more depth and participate in discussions and analyses of how educators can begin to implement 3-dimensional learning. Participants will be introduced to new lesson planning tools and strategies to begin embracing NGSS pedagogy whether it’s with existing lessons or with new materials and resources. Using activities from JASON’s Climate: Seas of Change, participants will unpack a performance expectation (MS- ESS2-6), specifically looking at how climate is created, climate modifiers, and the relationship between wind patterns and ocean circulation. While using JASON resources to explore what 3-dimensional learning looks like, this experience is intended to empower educators to apply and adapt these tools and strategies to meet the needs of their school’s curricula and classroom settings.

What Is Science Matters? Science Matters is an initiative by the National Science Teachers Association (NSTA) to bring content, news, and information that supports quality science education to parents and teachers nationwide. Science Matters builds on the success of the Building a Presence for Science program, first launched in 1997 as an e-networking initiative to assist teachers of science with professional development opportunities. Building a Presence for Science—now Science Matters—reaches readers in 34 states and the District of Columbia. Why does Science Matter? Science is critical to understanding the world around us. Most Americans feel that they received a good education and that their children will as well. Unfortunately, not many are aware that international tests show that American students are simply not performing well in science when compared to students in other countries. Many students (and their parents!) believe that science is irrelevant to their lives. Innovation leads to new products and processes that sustain our economy, and this innovation depends on a solid knowledge base in science, math, and engineering. All jobs of the future will require a basic understanding of math and science. The most recent ten year employment projections by the U.S. Labor Department show that of the 20 fastest growing occupations projected for 2014, 15 of them require significant mathematics or science preparation to successfully compete for a job. This is why Science Matters. Quality learning experiences in the sciences—starting at an early age—are critical to science literacy and our future workforce. Feel free to publish this information in school newsletters and bulletins, and share it with other parents, teachers, and administrators.