CONNECTICUT SCIENCE CONNECTION

November 2018

THE CONNECTICUT BUILDING A PRESENCE FOR SCIENCE NETWORK IS SUSTAINED THROUGH THE ADVOCACY OF THE CCAT, CONNECTICUT SCIENCE SUPERVISORS ASSOCIATION, THE CONNECTICUT SCIENCE TEACHERS ASSOCIATION, AND THE CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING

State Coordinator.David Lopath lopath@comcast.net , **List Moderator..Eloise Farmer** eloisef302@gmail.com

NAMES AND E-MAIL ADDRESSES OF OUR POINTS OF CONTACT AND KEY LEADERS ARE NOT SHARED WITH ANY OTHER ENTITY

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 on the link to learn more about JPSS! https://scijinks.gov/subscribe/

Green Teacher Green Teacher has recently launched a YouTube Channel. In time, we hope this will grow into a valuable resource for educators. https://greenteacher.com/check-out-these-videos/

Join the CSSA

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Connecticut Science Teachers Association Sponsored Events

more information and registration links at https://www.csta-us.org/events

Think FALL for field trips!

Looking for your next field trip? Students LOVE to come learn at NESS. Get them out on the water kayaking, sailing and tidepooling! We're filling dates now for FALL...email Pam Gibbs at pgibbs@nessf.org.....

DO YOU KNOW A GREAT TEACHER OF SCIENCE IN CONNECTICUT? SOMEONE WHO REALLY REACHES, ENCOURAGES, INSPIRES STUDENTS, AND HELPS FELLOW TEACHERS TO DO THE SAME? A COLLEAGUE OR EVEN YOURSELF?

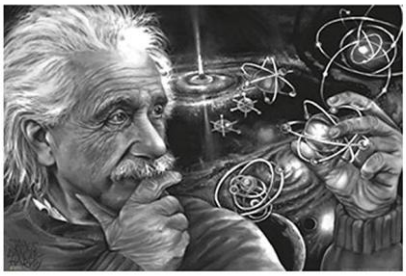
Apply for the CSTA Excellence in Science Teaching Award.

Deadline for nominations is Friday, November 23, 2018.
This award is bestowed on teachers who have not only demonstrated excellence in classroom science teaching, but who have also contributed professionally by providing workshops and/or other support for colleagues, have demonstrated dedication to personal and professional growth by participating in conferences and workshops, and have been productive participants in extra-curricular activities and community projects.
The Connecticut Science Teacher Association gives three 'Excellence In Science Teaching' awards each year: Elementary, Middle School, and Secondary.
These awards recognize and honor teachers who epitomize the highest ideals of the teaching profession by:

- **Being effective and innovative classroom teachers of science**
- **Serving as role models for colleagues and providing outreach to colleagues through workshops, publications, school-wide projects, or special events.**
- **Demonstrating a genuine commitment to personal and professional growth (life-long learning) by attendance and active participation at conferences, workshops, graduate courses, and in-service sessions.**
- **Reaching out beyond their classrooms and using their knowledge and talents in community service programs and projects.**

Teaching Experience: At least five years of successful science teaching.
Nomination: By one or more current members of CSTA or CSSA, or by self-nomination.
Approval: By a 90% vote of Award Committee members (preferably, and usually by unanimous acclamation).
Award: A commemorative plaque, a $500 monetary award, and dinner for the awardee and a guest of his/her choice at the annual award banquet held at the New Haven Lawn Club on May 1, 2019
Please check the criteria for the EST awards before nominating.

For additional information please contact Dr. Ralph Yulo Jr.
Phone: 860-974-0599 or by email: oluy@aol.com



Albert Einstein Distinguished Educator Fellowship: provides STEM teachers from K-12 public and private schools an opportunity to work on public policy. Fellows spend 11 months working in Washington DC in a federal agency or Congressional office to help bridge the gap between the legislative and executive branches of our government and the STEM community.
Applicants must be US citizens with a minimum of 5 years of full-time teaching experience in a STEM discipline. They should be currently employed by an elementary of secondary school and be able to obtain a leave of absence. Fellows receive a $7500 monthly stipend, a $5000 housing allowance and reimbursement for moving expenses.
APPLY ON LINE BY NOVEMBER 15:
https://goo.gl/d33j7B

MARK YOUR CALENDARS FOR NSTA'S 2018 FALL CONFERENCES

November 15-17, 2018, National Harbor, Maryland, Gaylord National Resort & Convention Center

November 29-Dec. 1, 2018, Charlotte Convention Center, Charlotte, North Carolina

MORE PD for 2018: Check the link below:
The link is as follows:
https://ctsciencecenter.org/education/mandell/ngsx-info/

Skills21 at EdAdvance is excited to announce an opportunity for teachers interested in the intersection between Science and Computer Science. With support from a new National Science Foundation grant, Skills21 is recruiting a cohort of teachers this year who want to engage their class in a CS challenge and present student team solutions at the 2019 Expo Fest on June 1, 2019 (expofest.skills21.org).
Through the new Skills21 Science/CS challenge, student teams are compelled to develop a computer science product, service or solution leveraging a scientific discipline to meet a need, solve a problem or capture an opportunity. Student solutions might include mobile apps, wearable solutions or other innovative uses of computer science.
Participating teachers will receive:

- $1000 stipend for planning, out-of-class time engagement and curricular review
- $500 for project materials
- Onsite coaching and professional development

Participating teachers will need to:

- Pilot and/or provide feedback on Computer Science infused Science units including lesson plans and an end of unit performance assessment
- Bring a team of students to the 2019 Expo Fest to compete in the new Science/CS Challenge
- Allow Skills21 to conduct pre- and post-intervention surveys (September and June)

What's the time commitment?

- In and out of class time commitments for teachers will vary based on individual class settings. Experienced Skills21 staff will work with prospective teachers to help gauge the required time commitment and investment

Priority Eligibility:

- First priority in the early stages of this grant are for teachers that work with traditionally underserved student populations

How to Get Involved
Interested teachers should contact Liz Radday (radday@edadvance.org) or Susan Auchincloss (auchincloss@edadvance.org).

Identify phenomena that can drive student learning

PHENOMENA, Anyone? Looking for meaningful phenomena based instruction? Then check out this amazing opportunity that happens right in your own home.
http://learningcenter.nsta.org/products/online_courses/vc_180728.aspx

Session proposals for the 8th annual STEM forum and expo in San Francisco, are now being accepted. The dates are July 24-26 2019. The area conferences will be held in Salt Lake City October 24-26 2019, Cincinnati November 14-16 2019, and Seattle, December 12-13 2019. To submit a proposal, visit
https://www.nsta.org/conferences/sessions/meetingsacceptingabstracts.aspx

BIOS Six-Day Educator Training Workshop in Bermuda! 12 participants will learn how to plan and execute field study courses for their students. Explore attractions to learn how to incorporate them in education experiences. Preservice and inservice middle and high school educators my apply by May 1. For more information, go to http://www.bios.edu/education/educator-workshops-at-bios/

Elementary Science opportunities.

DEEP Climate Change Workshops and Opportunities
Webinars on the first Wednesdays of the month at 4:00 pm include the following topics: November- General Resource Review
December- Understanding Environmental Footprints
January- Water Quality and Chemistry
February- What Color is your Air- Ozone, EPA Flag Program
Workshops planned to date:
October 23- Project Food Land People, FLP- Food, Energy and Carbon
November 14- Project WET- Water Science and Impacts
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

Join EDC and the Coalition for Elementary Science for the Elementary Science Summit: Preparing K-5 tor a STEM Future on November 30, 2018 at the Education Development Center, Waltham, MA .Join educators, school and district administrators, business leaders, parents, journalists, and philanthropists from across New England for a day of: Learning about the current state of science in New England's elementary schools, Experiencing high quality elementary science teaching, Meeting principals who have elevated science in their schools and sustained their students' strong learning outcomes, creating action plans you can pursue with others in your state to make elementary science a reality for all children
To learn more,, contacet Avigail Jurist Levy, alevy@eec.org and visit hrrpP//www.edc.org/coalistion for ES

The following are resources from the October and November Issues of Nsta Reports. One of the advantages of being an Nsta member means you have access to this kind of information for your use:

Thanks to Rebecca Newburn of Oakland, CA, Interactive science notebook resources: adaptable for use with middle and high school students, wih pages that highlight crosscutting concepts and science and engineering practices. There are rubrics, graphic organizers, and other worksheets to help students learn to collaborage and communicate their ideas using scientific evience and reasoning. To get this resource, got to https://goo.gl/Qq1WFT

Based on the Ruff Ruffman Show, this app helps students in grades pre-k-2 to discover the "stuff" their world is made of. Students use the app to investigate their surroundings by taking pictures of different materials, textures, and patterns, as they learn science vocabulary. They are sent to hunt for items with specific properties. Find the app at: https://goo.gl/ckaqGy

NJCTL Phenomena-based courses for Middle Level: the New Jersey center for teaching and Learning has posted complete materials for its Physical Environment, Living environment and Mathematical Physics courses. Designed for grades 6-8 supporting the NGSS, each unit is structure around a different set of phenomena and features several chapters and accompanying resources. Https://goo.gl/b7Ho1v

A game about energy choices from the US environmental Protection agency: Generate is an interactive board game for middle and high school levels, intended to teach students about the complex relationship between energy choices and environmental quality. Costs and benefits of choices we make are illustrated with their effects on climate, air , water, and overall environmental quality. Teachers can download a printable version including an introductory presentation, game board and pieces score sheet, and instructors guide. Teachers can access a seminar presentation on the game that discusses energy issues. Https://goo.gl/an7QJM

Glenn Engineering Design Challenges: Sponsored by NASA, students in grades 5-12 are challenged to design the next generation of aeronautics and space vehicles, habitats, and technology. Each unit presents a challenge based on current research and provides opportunities for students to work in science teams. Each unit includes an introductory video a facilitation guide and presentation, information about how the unit content supports NGSS, and links to related NASA resources. Click on https://goo.gl/YHhGgS

RECOGNIZING POISONOUS PLANTS: Photographs and information about the location and identification of poisonous plants help students protect themselves before and after exposure. https://goo.gl/xqJRrT

KNOWLES TEACHER INITIATIVE TEACHING FELLOWSHIP K12: Five-year fellowships for early career science teachers. Funds for grants, professional development, and stipends are provided. Applicants must be entering their first or second year of teaching during the 2019-2020 school year, and need a degree related to the discipline they will teach, and have valid teaching credentials in their state by September 2019. Applications due by November 25, 2018. Click on: https://knowlesteachers.org/teaching-fellowship

The FunScienceNetwork…What is it?

1. **FunScienceDemos** - A YouTube channel with over 150 science demonstrations by master teachers. Every important science ideas kids should know before high school. Over 50,000 subscribers so far! https://www.youtube.com/user/funsciencedemos
2. **FunScienceSupport** - A website filled with free teacher resources for K-8 science education. Readings, writing prompts, math activities, poems and more! https://sites.google.com/temple.edu/funscience/home
3. **FunScienceToons** - UNDER CONSTRUCTION - Science animation in which siblings help each other learn about science and the natural world. Watch our first animation. *Earth Spins and the Day Begins*
4. **LearningScience.org** - A dynamic and curated list of free, high quality, online resources from around the world for science education. http://new.learningscience.org/wp/

Grades 6–12

Generate: The Game of Energy Choices

This interactive board game teaches students about the costs and benefits of the energy choices we make; what happens if the mix of energy sources changes in the future; and what energy choices mean for our climate, air, water, and overall environmental quality. Teachers can download a printable version of the game and accompanying materials.

The MIT Club of Hartford Presents A Lecture: Exploring New Worlds: An Odyssey to Humanity 2.0 with Professor Julien de Wit, Department of Earth, Atmospheric, and Planetary Studies

All students are welcome to attend this event for free, including any students of MIT alumni attending the event or not! Julien is a creative, strategic, collaborative, analytical, fast-learning problem solver. His primary interest and expertise lie in the field of data science, where Math, Science, and Engineering are brought together to problem solve and/or make sense of fragments of Reality. Over the past five years, he worked primarily in astronomy and planetary sciences, developing and applying new analysis techniques to study planets around other stars ("exoplanets") using Bayesian algorithms. These techniques allow notably to map exoplanet atmospheres, study the radiative and tidal planet-star interactions in eccentric planetary systems, and constrain the atmospheric properties and mass of exoplanets solely from transmission spectroscopy.

Read about Julien's recent award from NASA, or check out his **bio**.

Synopsis

Our species is facing an ever-growing series of large scale challenges from global malnutrition to climate change, endangered species, political upheavals, topped by godlike technologies. These challenges are calling for a whole new mindset for humans. Owing to decades of technological development, space exploration is not enabling us to study worlds around stars other than our sun, disrupting our understanding of planets and soon of central concepts such as habitats and life. Let's embark on a journey to other worlds, a journey from which we shall not come back unchanged!

6:30 - 7:45 PM MIT Science Lecture (Location: Wilde Auditorium)

7:45 - 9:00 PM RECEPTION (Location: 1877 Club) Enjoy some tasty hors d'oeuvres and fine beverages in a casual reception with Julien, MIT Alumni, and the University of Hartford community.

Attending the lecture is free, however we do request you **register**. To enjoy the reception, please also **register** and pay for your attendance. Reception prices vary from $19, $29, and $35 depending on membership status and year of graduation.

Note: We have set up categories for MIT Club members who are patrons and partners and able to attend events for free as part of their dues. You may also email Leon Kaatz at the following email address: **lk31soak@alum.mit.edu**.

Anyone who wishes to register via email, may send your registration checks to Leon Kaatz, VP and Treasurer of the MIT Club, at 111 Oak Street, Hartford, CT 06106. You may also pay at the door.

Location: University of Hartford Wilde Auditorium
200 Bloomfield Ave. West Hartford, CT 06117 860-768-4100

Link to campus map. **MIT LECTURE**

Join us on Tuesday, November 13
at 7:30 pm Eastern Time
for:

The Teacher-Friendly Guide to Climate Change: A Free Resource to Help You Teach Climate Change AND Stay Sane. **Space is limited!**

Click Here to Reserve Your Seat!

After registering, you will receive a confirmation email.

The NOAA Planet Stewards Education Project is pleased to welcome Don Duggan-Haas, Director of Teacher Programs at The Paleontological Research Institution (PRI), and Dr. Ingrid Zabel, Climate Change Education Manager at PRI as our featured speakers this month.

The Teacher-Friendly Guide to Climate Change is a free resource that offers a clear overview of the physical science of climate change while also addressing the social science that makes teaching about it a different kind of challenge than teaching photosynthesis (for example). The book and this presentation also dig into the science and its scary implications without losing hope. The session will include an overview of the book, discussion of how and why to keep hope in approaching the teaching of climate change, and time for open discussion.

Important Information for participating in this Webinar

Seriously, read the following and save it for your reference:

1. **Log into the webinar AT LEAST 5 minutes before the scheduled start time. GoToWebinar continually upgrades their software. We want to be sure you can access the broadcast when it begins**
2. **Plan to use the VOIP (Voice Over Internet Protocol) option to listen to this presentation. All participants will be muted for the duration of the broadcast.**
3. **If you have difficulty listening to the webinar using VOIP, you may dial 1- 415-930-5321 for audio. The access code is: 562-150-414. You will be charged for this call. No Audio Pin is needed to listen to the webinar**
4. **If you have difficulty logging in to the webinar go to: https://support.logmeininc.com/gotowebinar/contactus?p=0 The ID Number for this Webinar is: 534-961-491**

Sign up to our email list to receive information on upcoming webinars, book/discussion club meetings, professional development workshops and opportunities.

Sign up to the NOAA Planet Stewards email list to receive information on upcoming webinars, book club meetings, professional development workshops, opportunities, educational resources and more!

Student Essay Contest Now Open!

"I was offering time and laughs—the men and women fighting the war were offering up their lives," said Bob Hope of his experiences entertaining troops during World War II. "They taught me what sacrifice was all about."

In celebration of the special exhibit *So Ready for Laughter: The Legacy of Bob Hope*, The National WWII Museum is focusing its 2018 Student Essay Contest on the duty of art and artists during times of war and conflict. The contest, which asks entrants to consider the above quote by Hope in the context of the overall theme of the wartime role of entertainers and artists, is open to middle school (grades 5–8) and high school (grades 9–12) students. **For more information on the essay contest, please visit The National WWII Museum 2018 Student Essay Contest website.**

The Billy Michal Student Leadership Award

The National WWII Museum is currently taking nominations for The Billy Michal Student Leadership Award, given annually to one student from each state and the District of Columbia who demonstrates the values of leadership, teamwork, tolerance, creativity, and perseverance in their community. **For more information and to nominate a student, see The Billy Michal Student Leadership Award website.**

CSSS] NSTA Position Statement on Teaching Climate Science.
Want to make sure that you've all seen NSTA's latest position paper!
Below is the press release issues last Friday and a link to the Statement.

NSTA Position Statement Confronts Challenges of Teaching Climate Change in Nation's Science Classrooms

New Statement Calls for Greater Support for Science Educators to Teach Evidence-based Science

ARLINGTON, Va.—September 13, 2018— In the midst of increasing efforts to undermine science education and misinform the public about climate change, the National Science Teachers Association has issued a position statement calling for greater support for science educators in teaching evidence-based science, including climate science and climate change. The statement promotes the teaching of climate change as any other established field of science and calls on teachers to reject pressures to eliminate or de-emphasize climate-based science concepts in science instruction.

"Now more than ever, we need to give educators the support they need to stand up against pressures from special interests, parents, or their state leaders to teach ideas not based on scientific evidence," said David Evans, NSTA Executive Director. "Teachers need ongoing professional learning opportunities to strengthen their content knowledge, enhance their teaching practices, and help build their confidence to address socially controversial topics in the classroom."

The statement acknowledges the decades of research and overwhelming scientific consensus indicating with increasing certainty that Earth's climate is changing, largely due to human impacts. It also establishes that any controversies regarding climate change and its causes that are based on social, economic, or political arguments—and not scientific evidence—should not be part of a science curriculum.

The statement provides specific recommendations for the various stakeholders—school and district administrators, policy makers, parents, and others—to help educators succeed in teaching quality science in the classroom. A few of the recommendations include providing full support to teachers in the event of community-based conflict, ensuring that instructional materials considered for adoption are based on both recognized practices and contemporary, scientifically accurate data; ensuring the use of evidence-based scientific information when addressing climate science and climate change in all parts of the school curriculum, such as social studies, mathematics, and reading; and supporting student learning of science at home.

"Across the political spectrum we are seeing a significant anti science atmosphere and we need to change it," said Evans. "It's imperative that we equip the next generation of citizens to demand and use evidence and scientific reasoning about the physical world to enable them to make important social and political decisions about how they live in the world."

The imperative for teaching climate change science can be seen in state science education standards based on the *Framework for K–12 Science Education* (NRC 2011), which recommends foundational climate change science concepts be included as part of a high-quality K–12 science education. Many states have adopted the standards based on the *Framework* and are implementing them in classrooms around the country.

The statement was developed by a team of science educators, scientists, and other education experts, and adopted by the NSTA Board of Directors. According to Eric Pyle, a professor in the Department of Geology & Environmental Science at James Madison University and chair of the NSTA position statement panel, "teaching the science of climate and climate change in school lays a foundation for future citizens who will need to become resilient in the face of challenges posed by human impacts on environment in general and the climate in particular. It is our professional and moral obligation as educators to prepare them for these challenges." The position statement and other climate science resources can be found at http://www.nsta.org/climate/.

TEACH **CLIMATE SCIENCE IS AN INITIATIVE OF THE PALEONTOLOGICAL RESEARCH INSTITUTION (PRI, ITHACA NY, www.priweb.org).**

In response to cuts in federal funding for climate science research and education, removal of scientists from federal environmental panels and agencies, and widespread dissemination of climate science denial propaganda, PRI has embarked on a campaign to distribute *The Teacher-Friendly Guide™ to Climate Change* to every public high school science teacher in the country.

***The Teacher-Friendly Guide™ to Climate Change* is the tenth book in PRI's *Teacher-Friendly Guide* series (www.teacherfriendlyguide.org). Following the Heartland Institute's national mailing of "*Why Scientists Disagree about Global Warming,*" PRI decided to step up and counter the dissemination of disinformation by providing teachers with access to peer-reviewed climate science and vetted strategies on teaching a potentially controversial topic. While**

all of the *Teacher-Friendly Guides* are available as free pdf downloads, PRI has embarked on a crowdfunding campaign in order to reach out to teachers and send each one their own copy of the climate change guide.

We are reaching out for help with both dissemination and fundraising. Buying the book supports both of these efforts. You can order the book and download the free pdf at http://priweb.org/tfgcc. While the book was written with teachers in mind, it's friendly to any reader.

As of summer 2018 50,000 teachers in 36 states will receive copies of *The Teacher-Friendly Guide™ to Climate Change.* You can help PRI achieve the goal of reaching 200,000 teachers. We are striving to identify a point person in each school who will be the addressee for the package, and help to insure that the books actually reach teachers. Sign up to be a point person here: http://bit.ly/TFGCCcontact.

Reach out to friends and social media networks to support the crowdfunding campaign (http://bit.ly/TeachClimateScience) and to get the word out about the Teach Climate Science Project.

Subject: $1250 Scholarships for Amazon Rainforest PD Workshop

Educator Academy in the Amazon Rainforest

The July 1-11, 2019 Educator Academy in the Amazon Rainforest of Peru is a cross-curricular professional development workshop for K-12 formal and informal educators to learn and use:

- 21st Century Instruction: Inquiry-Based Exploration ~ NGSS ~ STEM ~ 5E
- Inquiry Protocols & Resources: Project Learning Tree ~ Cornell Lab of Ornithology ~ & More!
- Global and Cultural Perspectives: ~ Sustainability ~ Global Education ~ Indigenous Cultures

Join Al Stenstrup, Project Learning Tree; Dr. Nancy Trautmann, Cornell Lab of Ornithology; Kristie Reddick, The Bug Chicks; along with scientists Dr. Steve Madigosky, Widener University; and Randy Morgan, Curator/Entomologist, Cincinnati Zoo as you:

- Work side-by-side with scientists and researchers on citizen science projects and field studies on the ACTSPeru Rainforest Canopy Walkway in one of the world's most biologically diverse environments.
- Explore conservation and sustainability via hands-on workshops with indigenous communities.
- Spend a day in an Amazon village and explore the role of education in creating a sustainable future for Amazon children.
- Work in grade-level cohorts to develop strategies for using the Amazon as a vehicle for incorporating standards-based inquiry, STEM, and sustainability education into your classroom.

PLT Certification, BirdSleuth, and other resources included. Academic Credit and Machu Picchu Extension optional. $1250 scholarship deadline February 1, 2019. With a scholarship, Academy Program fees are $1345 (airfare not included). Space is limited to 30 educators - Register early to secure your spot!

Get the details and download a syllabus and scholarship application at: www.amazonworkshops.com/educator-academy. Contact Educator Academy Director, Christa Dillabaugh, for more information:
Email: christa@amazonworkshops.com // phone: 1-800-431-2624.

LOVE THE SEA TURTLES? Want to help in their conservation? Join the SEE Turtles Costa Rica Leatherback Turtle Volunteer trip. You will help collect eggs and move them to hatcheries, and work with the baby turtles once they hatch. The trip is June 9-15 2019. Individuals and groups up to 12 can apply. Visit https://www.seeturtles.org/costa-rica-leatherback-turtle-volunteer-trip for more info.

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The Cornell Lab of Ornithology's free webinar series launches soon! These engaging monthly webinars provide background information and K-12 activities related to scientific observations, inquiry, NGSS, citizen science, and outdoor learning. Educators can also opt to receive one Continuing Education Unit (CEU) from Cornell University. Learn more and register at: http://www.birdsleuth.org/free-webinars/. Feel free to reach out if you have any questions

IN case you missed this, a great depiction of the Talcott Mountain Science Center that appeared on CPTV! https://cptv.org/at-wonders-peak/

A Holistic Way of Looking at Education

In contrast to the way students traditionally learned, where teachers were the "custodians of knowledge," now technology enables students to get knowledge and information gleaned from literally millions of people working on scientific challenges worldwide. "We don't want to be the sage on the stage, we want to be the guide on the side. Kids can go anywhere they want in the world, get the information from other experts who are researching the same thing. It's really multiplied the power of their thinking caps," marvels teacher John Pellino.

At Talcott Mountain Science Center and Academy, the important lesson is always to use that technology, information and knowledge to achieve positive impact in the world around you. This documentary premiere was broadcast on Thursday, October 25 at 8 p.m. on CPTV. https://cptv.org/at-wonders-peak/

Training for Chemical Hygiene Officers + Chemical Management Safety 101 for 7-12 Science Teachers & Supervisors
Learn the responsibilities and liabilities of being the appointed OSHA chemical hygiene officer overseeing science laboratories and employees in your school or district. In addition, all aspects of chemical management encompassing identification, management, and reduction of risk through all stages of chemical purchasing, storage, distribution, use, and disposal will be addressed.
A must for any science teacher, supervisor or chemical hygiene officer working with or overseeing hazardous chemical use in science labs. Location: Connecticut Science Center – Genomics Lab
Date: November 6, 2018
Facilitator: Dr. Ken Roy
Cost: $200 per person
https://ctsciencecenter.org/education/mandell/sciencesafetyworkshops/

Realism Virtual Chemistry Labs: Virtual 3-D Chem simulations for Middle and High School levels that support the NGSS. Gas-forming reactions, thermochemistry, exothermic reactions, acid-base information, and chemical reactions. Can be found at: https://realism.io

JASON PROJECT
Professional Development Opportunities Connecticut 2018-19

NGSS Series for 2018-19! More Topics, Dates, and Locations Coming! Check Back Often.

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 1: Wednesday, November 28, 2018

Part 2: Friday, March 1, 2019

EASTCONN – Hampton, CT 9:00am – 3:30pm

Dates TBD!

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

April 5, 2019

JASON Basics – One Hour Live Webinars for Connecticut 3:30 – 4:30p.m. Choose one:

Wednesday, October 3, 2018
Register: https://register.gotowebinar.com/register/7584758156615435523

Monday, November 5, 2018
Register: https://register.gotowebinar.com/register/6181042447759422467

Are you unsure of how to take full advantage of the free resources provided by JASON Learning? We understand the challenges of learning and implementing new lessons, especially when time is a limiting factor. Come join us for a one hour ***live*** webinar, customized for educators and administrators in Connecticut to walk-through the "basics" of the JASON site navigation, key teacher tools, and tips on how to find what you're looking for to support instruction. This includes a 10-15 Q & A so educators can get the help they need to get started or continue using these resources.

Past workshops:
Redesigning Towards an NGSS Classroom
All grade levels
Monday, December 5, 2016 **8:30am – 3:00pm** at LEARN, Old Lyme, CT [Register]
Thursday, December 15, 2016 **9:00am – 3:30pm** at EastConn, Windham, CT [Register]
Thursday, February 22, 2017 **8:30am – 3:00pm** at Southington Public Schools [Register]

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.

JASON's Earth Science through an NGSS Lens
Recommended for grades 5-9
Tuesday, November 8, 2016 8:30am – 3:00pm [Register]
East Hartford Middle School

Experience Tectonic Fury, JASON's earth science curriculum, as we explore the slow and fast processes that have shaped the earth. We will examine both the CT Science Frameworks and NGSS and share newly developed tools and strategies for identifying central phenomena and incorporating 3-dimensional elements. This session is especially helpful for teachers already using Tectonic Fury or other JASON modules in their classrooms who need support as to how to use these resources and lessons to support the transition to NGSS.

Dear Fellow Science and STEM Educators:

NSTA's #Science60 is almost over. Visit the #Science60 and add your professional learning hours to the community before it's too late!

The #Science60 initiative started as a way to celebrate teachers' efforts over the summer "vacation." For the last seven weeks, teachers from around the country (and even globally) have logged their professional learning experiences and time into our community space. Entries have included everything from:

- Participating in the NSTA STEM Forum & Expo in Philadelphia, PA
- Sharing and collaborating at district workshops and sessions
- Reading up on the latest in best practices and pedagogy
- Completing course work toward an advanced degree

NSTA is proud to report that more than 450 science educators have submitted more than 6,400 hours of professional learning so far! This time and effort directly supports NSTA's mission to promote excellence and innovation in science teaching and learning for all.

Make sure you join us and add your time before the 60 days end. Visit the #Science60 and share your story with our community. And know that throughout the year, NSTA is here to support and celebrate the work in put in each and every day for the advancement of science teaching and learning for all.

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.