

CONNECTICUT SCIENCE CONNECTION

March 2019

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

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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 [CTA website](http://www.cta.org) and click on Opportunities. You will not be disappointed. Contact us if you have questions.



click to [Join the CSSA](#)

A GRANT PROJECT OFFERING from the Connecticut Ornithological Society: COA Mini-Grant applications is January 15, 2019. Our Mini-Grant program gives preference to projects directly benefiting Connecticut's birds. All the information and application forms are available on our website at this link:

<https://www.ctbirding.org/resources/coa-mini-grant/>

Talcott Mountain Science Center and Academy documentary premiere was broadcast on Thursday, October 25 at 8 p.m. on CPTV.

<https://cptv.org/at-wonders-peak/>The lesson emphasized that the use o technology, information and knowledge can achieve positive impact in the world around you.



CONNECTICUT STEM FOUNDATION SCHOLARSHIPS

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, ctstemfoundation.org, under the Scholarship section.

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MIT will again be hosting the week-long Science and Engineering Program for Teachers (SEPT) this year in the end of June. You can learn specific information by going to <https://sept.mit.edu/> The MIT Club of Hartford will again be sponsoring one teacher to attend the program this year. If you are interested, go to the website for the

application, fill it out and send it to Dr. Avi Ornstein at [ornstein@alum.mit.edu](mailto:ornstein@alum.mit.edu)

[Click here](#) to access the Connecticut Science Safety Network CSSN 2019 Workshop Calendar



## [Using Social Media and Technology to Encourage Students' Evidence-Based Discussions](#)

Adam Taylor, a high school teacher in Tennessee, employs technology to engage his students in science and engineering practices by involving students in meaningful evidence-based discussions with working scientists and other students around the country. Taylor's focus on evidence is critical because he knows it provides a means for scientists to talk with one another in the real world, and he wants his students to be confident and competent in having those important science conversations. [Read more.](#) >>

## CLASSROOM RESOURCES

### [NGSS@NSTA Classroom Resources](#)

These [classroom resources](#) are vetted by our teacher curators, who recommend ways they can be adapted to more closely reflect the vision of the *Next Generation Science Standards* (NGSS).

- Grades K–2: [Warmth of the Sun](#)
- Grades 3–5: [Feeding Frenzy](#)
- Grades 6–8: [Plate Tectonics](#)
- Grades 9–12: [CarbonTIME Human Energy Systems Unit](#)

Upload and share your own resources. Read this [FAQ](#) for more information.

### [Quality Examples of Science Lessons and Units](#)

Achieve's EQUiP Peer Review Panel for Science (PRP) uses the EQUiP Rubric for Science to evaluate instructional materials and identify [lessons and units that best illustrate the cognitive demands of the NGSS](#). Explore this featured resource for grade 4: [Community Waters](#).

## PROFESSIONAL LEARNING

### [NSTA National Conference](#)

Join us in St. Louis on April 11–14 for the NSTA National Conference and explore three-dimensional teaching and learning in depth.

- Visit the *NGSS@NSTA* Hub for [highlights](#) of NGSS- and 3-D–related sessions, including the *NGSS* Forum, a day-long offering of targeted sessions and an *NGSS@NSTA* share-a-thon.
- [Register for a preconference workshop](#): Designing Three-Dimensional Lessons and Units.
- [Learn more about the key strands](#), including Three-Dimensional Grand Slam; Phenomena: Gateway to Learning; Jazzing Up Science With Cross-Curricular Connections; and Confluence of Equity and Education.

### [Achieve Releases Tools and Resources to Evaluate 3-D Assessment Tasks](#)

Achieve, Inc., has released a set of [tools and resources](#) to show educators what good 3-D assessment tasks look like. They include

- annotated examples of classroom tasks that highlight the features of good science assessments;
- emerging models and guidelines about must-haves, phenomena, equity, sense-making, practices, and crosscutting concepts for educators who want to design their own three-dimensional performance tasks; and
- [tools](#) educators and developers can use to determine if tasks they are considering using will provide meaningful feedback.

[Watch this video](#) about the new tools and resources.

### [NSTA eBooks+](#)

- [Professional Learning eBooks+](#) Gain an in-depth refresher of content knowledge, or just boost your confidence before tackling a tricky topic with your students by using these interactive e-books.
- [eBooks+ Student Editions](#): Grades 6–12. Packed with interactive elements and a customizable assessment tool, these interactive e-books are highly engaging supplements to student learning.
- [eBooks+ Kids](#): for Elementary Students, Grades K–5. These phenomenon-based e-books showcase interactive elements to engage students in STEM and English language arts.

### [Science Scope](#)

The [April 2018](#) issue of *Science Scope*, NSTA's member journal for middle level educators, explores how technology allows teachers to make connections with scientists, researchers, and content experts to bring the real world into the classroom and take students out into the field.

### [Exemplary Evidence: Scientists and Their Data](#)

#### NSTA Kids

[Exemplary Evidence: Scientists and Their Data](#) touches on the world's many riddles—from how we see to what's at the bottom of the ocean. It tells how scientists have solved such puzzles by collecting measurements, taking notes, and even making sketches. The book also provides mini-bios of the nine featured scientists.

## CALENDAR

- Mar. 7: [Webinar--Science and Engineering for Grades 6-12: Instruction with Investigation and Design at the Center](#)
- Mar. 7 & 21: [Twitter #ngsschat @ 9 pm ET](#)
- Apr. 10–11: [Workshop: Designing Three-Dimensional Lessons and Units, St. Louis, MO](#)
- Apr. 11–14: [NSTA National Conference on Science Education, St. Louis, MO](#)

I'm reaching out from UConn School of Engineering Professional Education,. The PE program offers graduate level engineering programs that are convenient and flexible, many distance learning, with several concentrations for people who are already employed as practicing engineers from mechanical engineering (as you know, Dr. Cetegen is the department head) to an MBA/Meng dual degree as well as graduate-level advanced certificate programs and custom educational training based on a corporation's needs, <https://soeprofed.uconn.edu/>. I'd welcome the opportunity to connect about submitting editorial content or highlighting the work that we are doing with engineers across the state. We've forged strong relationships with organizations like UTC, Sikorsky and Electric Boat and their employees. At the very least, we'd be honored if you'd consider including content about our program's offerings under your Education & Cognition category.

Please let me know if you are available to connect or need anything else from our team to assess this opportunity. Thank you in advance for your time!

Best Regards,  
Liz Fongemie  
*Business Development & Marketing Associate*  
UConn School of Engineering Professional Education  
371 Fairfield Way, U-4031  
Storrs, CT 06269-4031

Upcoming Webinars from the American Association of Chemistry Teachers (AACT): MARCH 7, The Mole of Reaction: Why is it Important and Useful. This presentation will examine the rationale behind the mole of reaction, its history on the AP exam, and discuss strategies on how to incorporate this critical concept into your classroom throughout your AP course. REGISTER. MARCH 28, Going Organic in High School. Learn how you can start incorporating more organic chemistry into regular chemistry classes. REGISTER. APRIL 9, Advancing Science Literacy with Lesson Plans that Are Aligned with CCSS and NGSS.

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The National Association of Biology Teachers (NABT) aims to provide educators with the resources necessary to provide exceptional biology and life science education for all students. The Ecology/Environmental Science Teaching Award recognizes a secondary school teacher who has successfully developed and demonstrated an innovative approach in the teaching of ecology/environmental science while carrying his or her commitment to the environment into the community. Sponsored by Vernier Software and Technology, the award includes \$500 toward travel to the NABT Professional Development Conference, a recognition plaque, one-year membership to the NABT and Vernier equipment. Nominations are due March 15. <https://www.nabt.org/Awards-About-More-Information#Ecology>



Dear *Connected Science Learning* Reader,

This month, *CSL* (Issue 9, Part 2) continues its focus on Introducing Youth to STEM Careers. Read about the innovative program Imagine Your STEM Future, in which girls work on STEM activities

while receiving support from working female scientists and engineers. Find out how a capstone experience for high school seniors was designed to create STEM career pathways. Plus, learn about the National Girls Collaborative Project's efforts to provide an inclusive space for those dedicated to moving the needle on gender equity in STEM.

Look for the third part of issue 9 of *CSL* next month as we continue our focus on Introducing Youth to STEM Careers. And if you have an idea for a *Connected Science Learning* article, visit our [call for contributions](#) to find out how to submit.

Best,  
The *CSL* Team  
[ConnectedScience@nsta.org](mailto:ConnectedScience@nsta.org)



The Connecticut Academy of Science and Engineering is passing along for your information the following **CALL for NOMINATIONS** for the **NATIONAL MEDAL OF TECHNOLOGY AND INNOVATION**. Please note that Linda Hosler (*see contact information below*) encourages anyone interested in submitting a nomination to contact her.



### **National Medal of Technology and Innovation**

If you know an extraordinarily innovator, please take the opportunity to nominate them for the [National Medal of Technology and Innovation](#) (NMTI). The NMTI is America's highest honor for technological achievement, bestowed by the president of the United States upon the nation's leading innovators. It recognizes individuals, teams, companies or nonprofits that have made lasting contributions and improvements to America's competitiveness, standard of living, and technological workforce.

[You can submit your nomination online](#). The deadline is April 5. Nominations of candidates from traditionally underrepresented groups are encouraged. If you need help submitting an application, or if you have further questions, please feel free to contact me at 517-272-8514 or [Linda.Hosler@USPTO.GOV](mailto:Linda.Hosler@USPTO.GOV).



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](http://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@edadvice.org](mailto:radday@edadvice.org)) or Susan Auchincloss ([auchincloss@edadvice.org](mailto:auchincloss@edadvice.org)).



Funding has been provided by the Long Island Sound Study to compile a catalogue of Educational Resources relevant to Long Island Sound and applicable to grades K-12. Please participate and complete this survey form (link below) for each LIS educational resource that you may use or meets our criteria and is available for use. You may access the survey form multiple times if you have information on more than one resource to enter. This survey should only take 5-10 minutes to complete.

Your email address is requested, however, it will only be used if we need to contact you for more information.

Long Island Sound Based Educational Resources Survey:  
<https://goo.gl/forms/yECH0OU7QLcCAzFa2>



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**



***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.***