

## CONNECTICUT SCIENCE CONNECTION

October 2021

**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](mailto:lopath@comcast.net), List Moderator.. Eloise Farmer [eloisef302@gmail.com](mailto: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

some distance learning ideas? This may help you to get through the difficult times we are experiencing. Visit [CSTA.wildapricot.org](https://csta.wildapricot.org) and click on Opportunities. You will not be disappointed. Contact us if you have questions.

<https://csta.wildapricot.org/> Join the CSSA! [www.cssaonline.org](http://www.cssaonline.org)

All Teacher leaders welcome You do not have to be in a formal Supervisor Position, but should be interested in helping keep your colleagues informed on the latest in science education. At this time, we hope to provide support to teachers in a leadership situation.

### **BOOKMARK THIS SITE!**

The Connecticut State Department of Education wants to provide valuable resources to the field and is continually working to make these resources easy to find in one central location. The CTCoreStandards.org website will no longer be operational. All of these resources have been moved to the CSDE website at <https://portal.ct.gov/SDE>. They can be accessed under K-12 Education, Academics, CT Core Standards. <https://portal.ct.gov/SDE/CT-Core-Standards>.

<https://www.youtube.com/kids/>

You may have noticed that the NSTA site for Science Matters crashed in April, so the newsletter was missing for a few months. NSTA is working to restore the Connecticut database. You will notice some changes in delivery of the newsletter and you will be asked to register again for this newsletter as NSTA restores the data. More information will follow in future newsletters as I learn the new system.



**On October 19, at 7:00 PM, Prof. Kerry Emmanuel will be speaking at the University of Hartford. Prof. Emmanuel is a Professor of Atmospheric Science at MIT and will be speaking on "Climate Risk."**

Science teachers are invited to attend and are welcome to bring interested students. A brief bio on Prof. Emmanuel is attached. The room is not yet decided, but you will be able to get that information from Prof. Sandra Morgan ([morgan@hartford.edu](mailto:morgan@hartford.edu)) and you can also register to attend by sending her a message. Dr. Kerry Emanuel is the Cecil and Ida Green professor of atmospheric science at the Massachusetts Institute of Technology, where he has been on the faculty since 1981, after spending three years on the faculty of UCLA. Emanuel's initial focus was on the dynamics of rain and snow banding in winter storms, but his interests gradually migrated to the meteorology of the tropics and to climate change. His specialty is hurricane physics and he was the first to investigate how long-term climate change might affect hurricane activity, an issue that continues to occupy him today. His interests also include cumulus convection, and advanced methods of sampling the atmosphere in aid of numerical weather prediction. Emanuel is the author or co-author of over 200 peer-reviewed scientific papers, and three books, including *Divine Wind: The History and Science of Hurricanes*, published by Oxford University Press and aimed at a general audience, and *What We Know about Climate Change*, published by the MIT Press and now entering its third edition. He is a co-director of MIT's Lorenz Center, a climate think tank devoted to basic, curiosity-driven climate research. **Interested teachers must send their response and acknowledgements, with the same for attending students, to Sandy Morgan at [morgan@hartford.edu](mailto:morgan@hartford.edu).**

**Connecticut Academy of Science and Engineering** member and Dean of **Yale School of Nursing** Ann Kurth announces that the school will launch a national search for a Professor of Gerontology thanks to Linda and Larry Rodman's \$6 million gift to the Yale School of Nursing. Read more: <https://bit.ly/3AutyM4>

**Skills21** at EdAdvance is excited to announce the third year of an opportunity for high school teachers interested in the intersection between STEM subjects and Augmented Reality. With support from the National Science Foundation, Skills21 is recruiting a cohort of STEM area high school teachers this year who want to engage their class in using Augmented Reality (AR). Biology or chemistry teachers will pilot a curriculum unit that incorporates AR apps and design. Interested teachers should contact Liz Radday ([radday@edadvance.org](mailto:radday@edadvance.org)) or Matt Mervis ([mervis@edadvance.org](mailto:mervis@edadvance.org)).

Registration for October 16-30, 2021 NGSX V-OCSBD Pathway  
Please register for the upcoming Virtual Oceans, Climate Science & Big Data (V-OCSBD) Pathway via the form below.

Please note that this pathway is for middle-school and high-school teachers.

The dates for the pathway are:  
Saturday, October 16,  
Sunday, October 17,  
Saturday, October 23,  
Sunday, October 24,  
Saturday, October 30

Session times on each day will be 10:00 AM - 3:00 PM, Eastern.

The pathway fee is \$190. No materials are needed.

Please complete the form on this site by October 9, 2021.  
<https://www.ngsx.org/programs>  
<https://docs.google.com/forms/d/e/1FAIpQLScuGHc3pu1u7D60qrIQNdqDoZwxiK8FvSTWmIWRLHaXMCwLJQ/viewform>

Please don't hesitate to email [nextgenexemplar@gmail.com](mailto:nextgenexemplar@gmail.com) with any questions.  
Thank you!

[Connecticut Academy of Science and Engineering](#) has a new website! We invite you to see our updated web presence, and explore members, news, and a Call for Applications for a new fellowship focused on Building Decarbonization. See the website: <https://ctcase.org/> and Sign up for e-news: [https://bit.ly/CASE\\_e\\_news](https://bit.ly/CASE_e_news)  
[#CASE](#) [#ScienceandEngineering](#) [#yale](#) [#UConn](#) [#BioCT](#) [#StateofCT](#) [#Connecticut](#)

The following is a message from CSSA Vice-President and Membership Chair John Duffy: Remember, CSSA is the organization for Science Leaders! Classroom teachers are very welcome and enrich the organization.



Please join us for our October 6th virtual meeting focused on Social Justice, Equity and Student Engagement.

All are invited to our first membership meeting of the year, October 6<sup>th</sup> from 7:00 – 8:00 pm. We will be meeting virtually and will be revisiting the work presented this past Spring by [Todd Campbell](#) and Jonathan Simmons as well as hearing from [Meg Hanly of CREC](#) about current and future efforts in the areas of Social Justice, Equity and student engagement.

We will also be looking to celebrate successes and hear your struggles so that we can better support you this school year. Please join us.

You can use the following link to join the meeting:  
[CSSA 10/6 Meeting Link](#)

Thanks to all who have already joined or renewed their membership. Your support is much appreciated. [Join/renew online using this link.](#)  
If you need an invoice for your membership fee please email us at [cssa@cssaonline.org](mailto:cssa@cssaonline.org)

Please let us know if you have any questions or suggestions for how we can best support you during this challenging school year.  
[cssa@cssaonline.org](mailto:cssa@cssaonline.org)

## Free K-12 Science Competition for Students and Teachers

The Toshiba/NSTA ExploraVision competition challenges K-12 students to envision a future technology while engaging in Next Generation Science Standards. Inspire a lifelong love of STEM and discovery in an engaging, hands-on way! It's not too late to register your teams. Deadline for submissions is January 31.

Download our [free lesson plans](#) for teachers and [register online](#) today!

The Toshiba/NSTA ExploraVision Team

Keep up with the latest Toshiba/NSTA ExploraVision news through [Facebook](#) and [Twitter](#).



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This Exhibitor Information message is brought to you by the National Science Teaching Association

Messages from Ron Michaels, CT  
State Science Coordinator:

The Connecticut State Department of Education is gathering information about the curricula/materials currently being utilized in Connecticut schools to teach Grades Sixth through Eighth (6-8) personal finance. This survey is designed to gather feedback to better understand your priorities. Thank you for sharing your thoughts and ideas on how we can all work together to ensure equity and excellence for all Connecticut students. All responses will remain anonymous. The survey is scheduled to close on October 27, 2021. Please distribute to anyone within your district/school who might have an interest. Thank you. **Here is a link to the survey:**

[https://sdept.co1.qualtrics.com/jfe/form/SV\\_3PM0sl3WgqAdUUE](https://sdept.co1.qualtrics.com/jfe/form/SV_3PM0sl3WgqAdUUE)

#### **Future Workforce Opportunities Fair**

- Wed. Nov. 10, 2021
- 8:15 – 11:30 am
- Connecticut Convention Center
- 100 Columbus Ave, Hartford, CT

The ACM's Aerospace Alley® was created to make students and their teachers, counselors, parents and communities aware of the broad opportunities and well-paying careers available in the local aerospace industry. There is no cost for schools to participate. ACM will also provide free parking for school buses.

#### **To Register:**

<https://ctcreates.org/acm-fair-registration/> For more information contact: Jessica Taylor, Executive Director, Aerospace Components Manufacturers [JTaylor@acm-ct.org](mailto:JTaylor@acm-ct.org) | 860.282.4239

#### **You're invited to attend quarterly, virtual Science Council meetings**

CREC's Science council meetings are **FREE events** for science educators, coaches and administrators, in which members will:

- Share **best practices** in science education
- Engage in **new thinking** around science in **blended learning environments**
- Respond to the demands of the **Next Generation Science Standards**

Meeting **topics** will be determined based on member **interests**.

All meetings will be hosted from 1:00pm - 3:00pm. Please click on dates below to **register to attend**.

- [Tuesday, October 12, 2021](#)
- [Tuesday, January, 4 2022](#)
- [Wednesday, March, 9, 2022](#)
- [Tuesday, May, 17, 2022](#)

Participants will receive a confirmation email after registering for a workshop. For workshop information, email Meg Hanly at [mhanly@crec.org](mailto:mhanly@crec.org). For assistance with registration, please contact the CREC Resource Group at 860-524-4040, or [services@crec.org](mailto:services@crec.org). For special accommodations, please contact PD Support at 860-509-3787 or [pdsupport@crec.org](mailto:pdsupport@crec.org).

#### **CSSN VIRTUAL WORKSHOP INFORMATION**

- **Hands-on Laboratory SOPs for a Safer School Year!**  
*Presented by Dr. Kenneth Roy* Under the OSHA Lab Standard, all school employees working in science or STEM labs are required to receive appropriate safety training. This continues to be especially challenging during the current pandemic. The focus of this workshop is to address components of the OSHA lab standard including PPE use, social distancing, sanitizing/disinfecting procedures, engineering controls, management and legal/disclaimer issues. This is a must safety training update for any science/STEM teacher, chemical hygiene officer or supervisor working with or overseeing hands-on activities in science and/or STEM labs – on site or virtually.

This virtual safety workshop will focus on critical SOPs that need to be addressed for teachers of (STEM/STEAM) science, technology education & engineering, art, math, Career & Technical Education.

**Date: October 14, 2021 from 1:00 - 3:00pm**

**Workshop Location: Virtual Workshop - Zoom format**

**Cost: \$150/person**



Be the first to see our brand new traveling exhibition, *Mummies of the World*, opening on November 5, 2021.

## Traveling Classroom Programs

### In-Person Programs for K-8

We bring fun, hands-on science activities to your classroom with these programs that accommodate up to 25 students and last 40 minutes. Lots of programs and topics are available.

#### PROGRAM HIGHLIGHTS

##### Choose Your Chompers

Whose mouth is this? Design and engineer different mouth structures, evaluate what kinds of foods those structures are best suited for, and consider other structures that help organisms survive.

##### A Chem-Mystery

Someone altered the water for our experiment! Put your sleuthing skills to the test as you investigate what occurs when different substances are combined. Then look for evidence of chemical reactions and identify the unique properties of newly formed products to help solve the chem-mystery. Grant funding available (call for details).\*

\*These are in-person programs where we come to you. All proper COVID safety protocols are strictly followed including the use of face-masks by all of our STEM Educators.

## Engaging Programs

### Virtual Labs for K-8

Our Discovery Center Virtual Classroom Programs are a great way to bring an NGSS aligned lab experience to your class in a safe and convenient format. Modeled after our popular Discovery Center Lab field trip programs, our STEM Educators lead students through an exciting in-person, real-time experience.

Teachers will be provided with a supportive digital package that includes student handouts. No additional materials are needed. Length: 40 minutes & up to 25 students per class.

\*Grant funding available (call for details).

*Virtual programming at the Connecticut Science Center was made possible in part by the Institute of Museum and Library Services.*



## Shocking Science Shows

Virtual SHOWS INCLUDE:

MISSION: SPACE (NEW)

EXTREME AIR

GLOBAL SOUNDSCAPES

CREATIVE CREATURES

SHOCKING SCIENCE (NEW)

PICNIC CAPER: A FUR-ENSIC MYSTERY (NEW)

Length: 40 minutes & up to 25 students per class.

\*Grant funding available (call for details).

Please note: Face masks are currently required for all individuals inside the Science Center. All trips booked under this promotion must be completed by December 31, 2021.

The National Academies of Sciences, Engineering, and Medicine, in partnership with the Council of State Science Supervisors, is planning to host a public summit on October 14-15, 2021 on the implementation of standards based on [The Framework for K-12 Science Education](#) and determine the next steps to continue and even accelerate standards implementation. The meeting will be held in Washington, DC and virtually.

The proposed summit will serve as a setting to consider the implementation of science standards across all of the states and territories, identify successes and challenges, and identify areas where additional resources or work is needed.



Dear *Connected Science Learning* Reader,



This month, *CSL* (Volume 3, Issue 5, Part 1) focuses on climate justice learning. This special issue draws on research and practice of social justice science ([\(w\)holistic science pedagogies](#)) and socio-ecological investigations.

Thinking about writing for Connected Science Learning? We are particularly interested in receiving [Briefs](#) (500–750 words) for our [upcoming issues](#). Briefs are peer reviewed, just like our full-length articles. Check out our Submission Guidelines to learn more. If you'd like to contribute to the journal by serving as a reviewer, please send a note plus your CV to [connectedscience@nsta.org](mailto:connectedscience@nsta.org).

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

#### NSTA BLOG

## STEM Teaching Tools: Guidance for Justice-Centered Climate Change Teaching and Learning



#### NSTA BLOG

## Introducing OutSCldeR Classroom

Join host Chris Anderson as he explores our incredible National Parks and meets awesome scientists, all while learning how the world around us works!

To meet your dedicated leaders and colleagues, make it a priority to attend the Distance Learning sites and organization web sites to find out how rewarding sharing with compatriots can be! Please consider joining us in our search for ways toward better science education! To join our Connecticut Science Educators organizations You can go to the web sites at: <https://www.cssaonline.org/join-cssa.html> and : <https://csta.wildapricot.org>



The [Summer 2021 CSTA Journal of Science Education](#) is now available to CSTA members. A good reason to join Current articles include:

- Teaching - Sparking Science Curiosity, Exploring Water Flow, Science notebooks, Physics Lessons
- Articles - Celebrating Apollo 15, Magic School Bus, Inspiring Conservation Books and more

CSTA has wonderful learning resources for teachers. [Join today!](#)

From the office of Congresswoman Jahanna Hayes: Greetings CT-05 Educators, School is back in session and my hope is that you have had some opportunity to refresh and renew as you meet your new students and prepare for the year ahead. On behalf of Congresswoman Hayes, I invite you and your students to participate in the 2021 Congressional App Challenge (CAC) as one way to get students engaged in all of the skills necessary to build an app for a variety of purposes.

The CAC is a nationwide event intended to engage students' creativity and encourage their participation in STEM fields. This is an invitation for students to compete with their peers by creating and exhibiting an original software application (also known as an "app"). Students may compete as individuals or in teams of up to four, as long as at least two of the teammates reside or attend school in the Fifth Congressional District.

Middle and high school students are encouraged to [register and submit](#) online by the deadline November 1, 2021. The apps will be evaluated by a panel of local judges who work within the academic, software, and entrepreneurial fields. The winning app from each congressional district which hosted a Challenge will be featured on the U.S. House of Representatives' website and displayed in a U.S. Capitol exhibit. Please see [for additional details](#). Students and families can also visit the official website at [for more information](#).

Please see [Rules and Guidelines](#) for additional details. Students and families can also visit the official website at [www.CongressionalAppChallenge.us](http://www.CongressionalAppChallenge.us) for more information.

Throughout the fall, the CAC team will be hosting a series of webinars to inspire students to take up the App Challenge. Currently, there are two more seminars planned, with more on the way.

These sessions are open to students, parents, educators, and administrators. Please send these links to prospective App Challengers and feel free to register yourself!

#### BACK TO SCHOOL WEBINAR SERIES

##### September 8th: **Starting Your App Challenge Project! (5:00 pm EDT)**

This workshop covers the first step of the Product Development process:

Product Ideation, known as the brainstorming stage. [Register: Building Great Apps with Apple](#)

#### Keep track of Connecticut's Environmental Activities!

Subscribe to 'Trillium' (You will be prompted to enter your e-mail address and then be directed to a web page where you can sign up for Trillium and/or other DEEP Newsletters.) Each time the newsletter is sent out, you will receive instructions for making modifications to your subscription including how to unsubscribe.

#### COV-Ed Website: A Partnership between Yale School of Medicine and CT State Department of Education

*Variants of the virus called COVID-19 loom over us like a menacing force, and here you will find the tools to make a difference for yourselves, for your families, and for your communities. In this on-line learning tool, follow the story of 3 high school students as they encounter the pandemic. Learn how COVID-19 works, why it spreads, and what you can do to help contain it. Run the same simulation tools that experts in the field are using, learn to draw conclusions from data, and explore potential solutions even as you build the skills to help prevent pandemics in the future. [COV-Ed Website description](#)*

#### Information Age Education - Free eBooks by Bob Albrecht

Information Age Education (IAE) is a non-profit organization with a goal of helping to improve the education of people of all ages throughout the world. Scroll down to page 50 'A Capricious Collection of Our Turns and Your Turns' and read about

sidereal days  
tropical days, also known as solar days  
sidereal years  
tropical years, also known as solar years  
calendar normal years  
calendar leap years  
Julian years  
Gregorian years

We embedded information about sidereal years, tropical years, Julian years and Gregorian years in our eBook *Mathemagical Black Holes 1, 153, 370, 371, 407 and Cyclical*. Download the eBook at [http://i-a-e.org/downloads/cat\\_view/86-free-ebooks-by-bob-albrecht.html](http://i-a-e.org/downloads/cat_view/86-free-ebooks-by-bob-albrecht.html)

#####

Are you a retired K-8 teacher? Are you interested in spending a few hours mentoring preservice elementary school teachers to design and microteach a science lesson? It would be completely online and would take about six hours spread out over the Fall 2021 semester. Your feedback and expertise would be valued. If you are interested, please send me an email at [DNAgould@unm.edu](mailto:DNAgould@unm.edu). Deena L. Gould, PhD, Assistant Professor, Science Education, [University of New Mexico](#) | Teacher Education, Educational Leadership & Policy

#### WINNERS ANNOUNCED

##### 2022 "Long Island Sound and Its Watershed: What It Means to Me" Calendar Contest

NESS announced this year's winning artists for the 2022 "Long Island Sound and Its Watershed: What It Means to Me" Calendar Contest! The annual drawing contest is open to all Connecticut students currently in Grades K-6. Adam Coleman, a 6th Grader from Farmington, was named the overall winner. The student's artwork will be featured on the cover of the 2022 calendar. NESS's Founder and CEO Spike Lobdell commented, "Even though many Connecticut schools were still in hybrid learning mode due to the pandemic, many teachers sent in drawings. The students' inspiring artwork depicts the importance of preserving Long Island Sound. Many thanks to these students as well as their teachers and parents who provided support in this environmental stewardship project during another difficult year."

A panel of judges chose two winners and two honorable mentions from each grade as this year's award recipients. The students will be honored in a virtual ceremony this fall. The artwork will also be part of a calendar in 2022.



Click [here](#) for the list of winning students!



## The 2021-2022 PAEMST Application Cycle is Now Open!

The 2021–2022 nomination and application cycle for the [Presidential Awards for Excellence in Mathematics and Science Teaching \(PAEMST\)](#) program has opened. We need your help to identify great teachers for the current application cycle. Teachers have had a couple of really tough school years. They have innovated their lessons, developed new ways of delivering their teaching, and adapted their processes multiple times. They deserve recognition for the amazing work that they bring to your community.

As you know, PAEMST are [the nation's highest honors for teachers](#) of STEM. Presidential Awardees receive a certificate signed by the President; a trip to Washington, D.C., to attend a series of recognition events and professional development opportunities; a \$10,000 award from the National Science Foundation; and join a cadre of over 5,100 award-winning teachers. You can learn about our most recent awardees [here](#).

We hope you will consider nominating a talented teacher using the [PAEMST website](#) today. The 2021–2022 nomination deadline is **January 7, 2022**, and the application deadline is **February 6, 2022**.

In addition, you can help spread the word about PAEMST and the cycle opening by sharing it on social media. Feel free to use

[attached sample language](#).

Should you have any questions about the program or the nomination process, please contact [info@paemst.org](mailto:info@paemst.org) or 855-723-6780.

Sincerely,  
The PAEMST Team, [info@paemst.org](mailto:info@paemst.org) [www.paemst.org](http://www.paemst.org)

855-723-6780 (PAEMST-0)



## Teachers, Do You Have a Topic That You Would like to Explore with Your Colleagues?

NSTA isn't just a conference, it's a community of educators with ideas and experiences to share. Have an innovative practice or teaching strategy that works? Consider submitting a [session proposal](#) and sharing your expertise and inspiration with others.

**The deadline to submit a proposal for the Houston National Conference on Science Education is October 26 by 11:59 PM EDT.**

[Submit Proposal](#)



***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 administrator.***

