



## CONNECTICUT SCIENCE CONNECTION

March 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](http://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! Attend our virtual membership meeting**

on April 7 at 7PM. Go to

[www.cssaonline.org](http://www.cssaonline.org) for more info.

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.

**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>. Happy New Year!! This one has to be better than the last one! Upon re-reading these entries, it seems many are still current. They are repeated.

### PREVIEW OF COMING ATTRACTIONS: CONNECTICUT STEM FOUNDATION STEM ESSAY CONTEST



CONNECTICUT STEM FOUNDATION, INC.

The Connecticut STEM Foundation is pleased to announce that it will launch a STEM Essay Competition that will be held in October, 2021.

In keeping with its mission to engage pre-college Connecticut students in multiple STEM activities, the foundation is in the process of establishing a STEM Essay Competition for Middle School Connecticut students.

There will be three essay topics that relate to current STEM issues for the students to select from.

Monetary prizes will be awarded for First, Second and Third places and Honorary Mention.

Winners will be invited to attend the 2022 CT STEM Fair and will be honored at the concluding Awards Ceremony.

Look for more information about the Essay Competition in coming months, both in this publication and on the CT STEM Foundation's website, [ctstemfoundation.org](http://ctstemfoundation.org)

### Connecticut STEM Foundation, Inc. Sponsors Outreach Program for Science Teachers

The Connecticut STEM Foundation has created an outreach program for Connecticut science teachers who want to help their students perform original STEM research and present their findings at local, state and national STEM Fairs. The science teacher will be paired with a STEM educator who has experience



CONNECTICUT STEM FOUNDATION, INC.

helping students to perform original STEM research and participate in STEM fairs. This STEM educator will mentor the science teacher as the teacher learns how to guide/support a student through a science research project. The science teacher will

receive a stipend of \$200 for guiding the student through the research process and successful presentation of the project at a local science or STEM fair. CT STEM Foundation will waive the registration fee for the science teacher's student to participate in its CT STEM Fair, and will provide up to \$100 in needed science supplies for the student's project. Applications for Sept. 2021 mentorship must be received by April 2, 2021.

For more information and how to apply, please go to the Connecticut STEM Foundation's website, <https://ctstemfoundation.org/> .

**Happy 2021 from NESS! Art Contest, Online Courses, America's Cup, & More; [Long Island Sound Calendar Contest](#)**

**Calling all art teachers!** We are looking for entries for our annual drawing contest entitled "Long Island Sound and Its Watershed: What It Means to Me." The contest is designed to engage youth in environmental stewardship and watershed conservation and is open to all Connecticut students currently in grades K-6.

**Deadline is Friday, April 2, 2021.**

**[Click here for full contest details!](#)**

**[America's Cup & NESS](#)**

The **America's Cup** competition is one of the oldest competitions in sport and represents the pinnacle of sailboat racing technology.

NESS has partnered with the **New York Yacht Club American Magic Team** and **Quantum Racing**—the American team that will challenge for the America's Cup at Auckland, New Zealand in March—to create new online courses that talk about the incredible technology of these foiling monohull sailboats.

**[Click here for a video preview of the courses!](#)**

Please contact Pam Gibbs at [pgibbs@nessf.org](mailto:pgibbs@nessf.org) or 860.535.9362 for more information on this exciting program.



**CATALYST**  
NEXT GENERATION  
SCIENCE CURRICULUM

**Over the last year, Capitol Region Education Council (CREC), Connecticut's largest education service agency, has worked with science educators from around the state of Connecticut to build the "Catalyst Next Generation Science**

**Curriculum," a Kindergarten through Grade 12 curriculum aligned to the NGSS. Each unit in the curriculum contains learning sequences that follow the 5E instructional model, are anchored in phenomena, follow a storyline, and shift science instruction to be student-centered. Each unit has also been evaluated using modified criteria from the NGSS lesson screener tool and Educators Evaluating the Quality of Instructional Products (EQuIP) rubric to ensure it is well-aligned to all three dimensions (Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts) of the NGSS. Districts around the country are struggling to adapt their science curriculum to the NGSS standards, but with the Catalyst Curriculum and Community, you don't have to worry. Don't believe us? You can request a preview set of resources below. *"My colleagues and I are very grateful for the Catalyst Curriculum. The amount of work and time it would take to develop units of this quality on our own would be unreasonable. Having the Catalyst units is allowing us to make huge strides towards implementing NGSS. The Catalyst team is very knowledgeable and always open to addressing any of our concerns as they arise. The students really like the phenomena too, as they are relevant to them and our area."***

**-- Paula Gaudet, Science Teacher Lyme-Old Lyme Middle School Old Lyme, CT**

**Virtual safety workshop presented by Dr. Ken Roy and sponsored by the Connecticut Science Center and Connecticut Science Safety Network. DATES: March 29 & 31, 2021, time: 1:00PM-2:30PM. Register online**

**at <https://ctsciencecenter.org/eshopchemstry/> Updated health & safety information for Science/STEM hands-on instruction during the COVID-19 Pandemic on-site or virtually!"** 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.

## **GREEN TEACHER MAGAZINE AND OFFERINGS!**

### **1. Magazine (Spring and Summer issues)**

Heightened interest in innovative outdoor learning approaches and activities continues both inside and outside the EE community, so we're still very much open to articles on that broad theme. Moving forward, we're increasing our focus on the following areas:

2. \*barriers and opportunities to/for equity, diversity, and inclusivity in EE
3. \*finding connections between faith and conservation (*Recently, we've featured pieces about conservation messaging in Judaism and Christianity, but there are many more Eastern, Western, and Indigenous spiritual traditions that we'd love to explore!*)
4. \*solutions-oriented thinking (especially with regards to climate change, biodiversity, and plastic pollution)

Please let potential writers know that I will need a draft of any articles for the Spring issue for the Summer issue by **April 23rd**. As always, our Writers' Guidelines can be found [here](#).

### **5. Podcast – Talking with Green Teachers – expansion**

The [podcast](#) series that we launched in the summer has "graduated" to all

standard podcasting platforms: Apple, Google, Spotify, Podbean, etc. We're also releasing episodes more than monthly to keep up with demand! Watch for the next episode about children's outdoor play with Monica Wiedel-Lubinski!

To further expand the reach of the series, here are some simple actions you can take:

6. \*Subscribe on Apple Podcasts/iTunes (the most influential of all the platforms).
7. \*Leave a star-rating and a review on Apple Podcasts/iTunes... if you like the show. :)
8. If you know of any potential guests, please have them contact me at [ian@greenteacher.com](mailto:ian@greenteacher.com).
9. ***Teaching Kids and Teens About Climate Change (Virtual) Book Tour***  
Our two [climate change books](#) have been so well received that we've decided to conduct a book tour to further spread the word about them. To be as COVID- (and climate-) friendly as possible, we're doing it virtually throughout 2021. We've already presented in Ontario, and we are scheduled to do so at the PAEE (Pennsylvania) virtual conference in March. Let EE orgs, school boards, and faculties of ed. in your network know that we are pleased to offer this 75–90-minute, interactive workshop free of charge. All proceeds from any ensuing book sales go back into the non-profit to help us achieve our updated [mission and vision](#).

Description of the presentation:

10. Teaching climate change to young learners is a balancing act. How can we lead explorations of difficult truths without overwhelming young minds and further exacerbating eco-anxiety? While there's no magic, catch-all solution, we offer a collection of tried and tested hands-on activities from Green Teacher's popular books *Teaching Kids About Climate Change* and *Teaching Teens About Climate Change*. Join this interactive workshop where we touch on systems thinking, kinaesthetic learning, youth empowerment, solutions-oriented collaboration, and facilitating measurable local change. Opportunities to discuss challenges and insights are included in this collective virtual experience.

11. **Winter webinars**

12. Our ongoing series of free [webinars](#) continues this winter. Please spread the word!

13. **Connect with us on social media**

14. I'll admit, I have a hot-and-cold relationship with social media (often more of the latter than the former), but I can (begrudgingly) admit that it has its uses for outreach and network-building.

15. If you've not yet done so, "follow" us on [Facebook](#), [Instagram](#), [Twitter](#), and (new) [LinkedIn](#), and watch for our regular postings.

16. The hashtags we most commonly use are #EnviroEd #EnvironmentalEducation #OutdoorEd #OutdoorEducation and (for the podcast) #TWGT.

17. Whoosh! That's a lot. Thank you in advance for your help, and feel free to email or call any time.

Warm wishes,

Ian Shanahan, General Editor Green Teacher

[ian@greenteacher.com](mailto:ian@greenteacher.com), (613) 475-4925 (888) 804-1486

## **"Updated health & safety information for Science/STEM hands-on instruction during the COVID-19 Pandemic on-site or virtually!"**

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**From Ron Hill at CDE Science: Peruse the following Science opportunities:**

1. Annual COEEA Conference
2. NGSX Back in CT
3. DEEP Trillium Newsletter
4. National Youth Science Camp
5. Science Safety Workshops
6. SoundWaters Virtual Workshops

1) Join us and register today (<https://uconnuecs.cventevents.com/CCNRCOEEA21>) for an engaging and dynamic Joint Conference of the Connecticut Conference on Natural Resources and Connecticut Outdoor & Environmental Education Association (<https://ctcnr.weebly.com/>). The overarching theme of the conference is **Creating a More Equitable & Inclusive Environmental Sector**.

We will gather online on Monday, March 15 from 9:00AM - 3:30PM and Tuesday, March 16 from 10:00AM – 12:00PM with a variety of engaging presentations (see highlights below and at <https://ctcnr.weebly.com/>) REGISTER TODAY for this exciting event. Visit

<https://uconnuecs.cventevents.com/CCNRCOEEA21> to register. Prices have been significantly reduced:

- General: \$30
- COEEA Member: \$25 (become a member here: <https://www.coeea.org/membership>)
- Student: \$15
- Free for CT Green LEAF School members!

Main Program on March 15:

- Plenary Panel: BIPOC Young Environmental Professionals: Stories & Reflections to Guide Ways Forward
- Keynote: Parker McMullen Bushman: Making the Outdoors Welcoming Spaces for All People
- Conference platform facilitating 24 concurrent talks and an interactive poster & exhibitor session (see Day of Program here: <https://ctcnr.weebly.com/day-of-program.html>)

Bonus Workshop on March 16:

- Parker McMullen Bushman: Inclusion in Outdoor Recreation - Examining Culture & Bias

Interested in being a CCNR-COEEA Sponsor? Learn more here:

<https://ctcnr.weebly.com/host--sponsors.html>

We look forward to seeing you on March 15-16 2021!

Sincerely, Laura Cisneros CCNR-COEEA Conference Chair (see attached)

## 2) NGSX Back in CT

NGSX has announce plans for our virtual pathway, Virtual Becoming a Next-Gen Science Teacher (V-BNGST), which you can use to spread the word about this pathway. (We have several other virtual pathways on the way too, including PLANS for principals and other administrators). See attached

## 3) DEEP Trillium newsletter

Sign-up for exciting virtual opportunities

<https://portal.ct.gov/DEEP/Education/Publications>



[NSTA Engage: Spring21](#) Virtual Conference April 12 - May 8. Different weeks for Elementary, Middle, High school and Post-Secondary/Preservice. Get up to **15 FREE NSTA Interactive eBooks+** when you [register](#) for [NSTA Engage: Spring21](#). Designed to strengthen

teacher content knowledge and pedagogy, each interactive ebook provides an in-depth, self-directed learning experience, complete with its own high-resolution images, animations, videos, simulations, and embedded assessment.

Once you register these ebooks will automatically be added to your NSTA library for immediate use in your virtual or in-person classroom.

## From Ithaca College: Seeking Truth in the Science Classroom

Project Look Sharp has [160 free science lessons](#) and [PD resources](#) for integrating question-based media analysis into the teaching of core science and environmental studies content. Each lesson includes media materials (e.g. video clips, journal articles, tweets, posters) and a lesson plan with objectives, standards and key questions for decoding the documents.

Project Look Sharp also has short [video demonstrations](#) of classroom [Constructivist Media Decoding](#) of science-related media documents. And we have new resources for [teaching media decoding online](#).

Below are just a few examples of free media decoding lessons and resources for integrating habits of critical thinking about media messages into the science classroom.

[Lemmings: Documentary Film Clip Decoding](#) - Middle School through College

Students reflect on the influence of the media on people's beliefs about science and ways to check the validity of questionable claims.

[Trusting Videos on COVID 19 \(Or Not\)](#) – Middle and High School

Students analyze the credibility of four video clips posted in March of 2020 of people giving Covid-19 prevention advice: President Donald Trump, Dr. Anthony Fauci, a primary care doctor in New York City, and a naturopathic doctor during a televangelist TV program.



## Teaching About Climate Change:

### Why Does the Source Matter? –

#### **Middle and High School**

**Students analyze letters from the National Science Teachers Association and the Heartland Institute for conflicting perspectives about how to teach about global climate change.**

#### Hydrofracking, Media and

Credibility – a demonstration of classroom media decoding

This 9 minute annotated video demonstrates constructivist media decoding using the lesson, [Exploring the Impact of Hydrofracking on Aquifers](#), where college students analyze pro and anti-fracking diagrams.

For more lessons and PD resources on media literacy integration into science go to:

[www.projectlooksharp.org](http://www.projectlooksharp.org)

#### **Thanks to Nancy Ridenour, NYS Science Matters Coordinator**

The following are thanks to Jean-May Brett, Louisiana Coordinator: CYBER.ORG's technology grant program is designed to support teachers and qualified extracurricular programs to provide cyber education to K-12 students in the United States. Grants are awarded based on the availability of funds, geographic representation, and demonstrated need, with preference for applicants who intend to use CYBER.ORG curriculum materials. Applications will be received continuously, and awards will be made during the first two weeks of September, December, March, and June. Technology offerings include: Science+ Classroom Kits, Boe-Bots, Shield-Bots with Arduino, cyber:bots, micro:bits, US Cyber Range Licenses, Raspberry Pis Technology Grant Program | [Cyber.org](http://Cyber.org)

EPA Award Nominations 2021  
President's Environmental Teacher,  
February 19 Up to two teachers from

each of EPA's 10 regions, will be selected to receive the PIAEE award. Teachers will receive a presidential plaque and an award of up to \$2,500 to be used to further professional development in environmental education. Winning teachers' local education agencies will also receive awards of up to \$2,500 to fund environmental educational activities and programs.. The application and eligibility information are available on EPA's PIAEE page. <https://www.epa.gov/education/presidential-innovation-award-environmental-educators>

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

*COVID-19 looms 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**

**Paleontological Research Institution Announces New Exhibit on Climate Change**  
Ithaca, NY- The Paleontological Research Institution (PRI) is excited to announce the launch of a new online exhibit based on the *Warren D. Allmon Changing Climate: Our Future, Our Choice* exhibit, which will be open to the public at the Museum of the Earth in November 2020.

The online exhibit launched on September 25, 2020 and can be viewed at [www.museumoftheearth.org/climate-exhibit](http://www.museumoftheearth.org/climate-exhibit). The physical exhibit at the Museum of the Earth will be available for the public to visit next month. Due to COVID-19, the Museum is currently limiting the number of visitors at a time and encourages guests to make reservations online.



## **NEW Virtual Shows & Labs**

### **Grades 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. A Zoom account is not needed to participate.

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

## Workshops for Teachers

We remain committed to safely giving educators the tools they need to transform instruction and increase student interest and performance in science and other subjects. We have numerous new Virtual Offerings to check out - here are some upcoming ones:

[Engineering Equity in the NGSS - \(FREE\)](#)

[Supporting Student Sense-Making During Virtual Learning](#)

[The Power of Wondering: Leveraging Student Questioning to Drive Your Unit Through a Phenomenon](#)

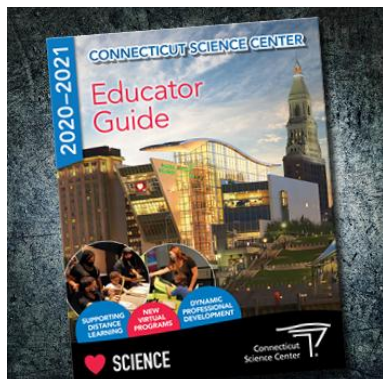
[Digging Deeper: Unpacking the Disciplinary Core Ideas](#)

## STEM Career Showcases

### Grades 7-12

We invite middle and high school students to connect informally with professionals from corporate partners across the state through a series of virtual panels and discussion rooms, to engage in meaningful conversations and learn more about exciting STEM opportunities.

These programs are currently being conducted virtually.



### 2020-2021

Our 2020-2021 Educator Guide is packed with new programs and learning opportunities for you and your students. We've adapted many of our programs to be accessible whether you are in the classroom, running a hybrid model, or fully teaching from a distance. Students can access the content from our safe website, and materials are not needed.

### NGSS and Universal Design for Learning

*Making Instruction in the New Science Standards Meaningful and Achievable for Diverse Learners*



The Next Generation Science Standards (NGSS) allow students to actively engage with practices and apply crosscutting concepts to deepen their understanding of science and engineering through phenomena and design problems. The authors of NGSS explicitly name Universal Design for Learning (UDL) as a necessary tool for creating meaningful, accessible, and challenging units for all students. UDL is a lens through which teachers can analyze curriculum goals, methods, and materials to ensure multiple pathways to success for all learners. This asynchronous workshop will run over 4-6 weeks and provide participants with opportunities to become familiar with shifts in NGSS instruction, become familiar with UDL guidelines, and identify potential barriers in NGSS lessons and units and use strategies to make them more aligned with UDL.

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) or Lisa Fiano at [lfiano@crec.org](mailto:lfiano@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).

Biofilms on the HHMI site. <https://www.hhmi.org/news/preventing-biofilms-could-help-fight-tb>

<https://www.hhmi.org/news/bacterial-biofilms-no-match-engineered-virus>

Smithsonian:

<http://links.si.mkt6346.com/servlet/MailView?ms=NDQxNjI1NzUS1&r=OTExMzI0NzQ3NTI0S0&j=MTkwMjA3Mjc2NzQ3&mt=1&rt=0>

**Go to Science in the Classroom.** These are annotated AAAS science articles. They are open access and correlated to NGSS and other standards. <https://www.scienceintheclassroom.org/>



**Presidential Award  
for Excellence for  
Math and Science**

We are excited to announce that nominations for the Presidential Award for Excellence in Mathematics and Science Teaching are being accepted for 7 - 12 teachers during the 2020-2021 school year. The nomination deadline is March 1, 2021, and the application deadline is April 1, 2021, for secondary teachers (grades 7–12). Elementary teachers (grades K–6) will be eligible to apply starting with nominations on November 1, 2021, for the 2021-2022 school year. If you have any questions please contact the state coordinators:  
Sean Serafino –

[connecticutsciencepaemst@gmail.com](mailto:connecticutsciencepaemst@gmail.com)

Harry Rosvally –

[hrosvally@pnwboces.org](mailto:hrosvally@pnwboces.org)

Thank you so much for supporting the PAEMST program.

As always, please forward this communication to any/all in your district/school who might be interested.



*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.*