



CONNECTICUT SCIENCE CONNECTION

January 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

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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

some distance learning ideas? This may help you to get through the difficult times we are experiencing. Visit 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

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>. 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.



CONNECTICUT STEM
FOUNDATION, INC.

CONNECTICUT STEM FAIR NEEDS JUDGES

The CT STEM Fair needs your help:

The CT STEM Fair needs judges for this year's STEM Fair.

Because of COVID, this year's fair will be virtual, instead of in person. Students will submit an abstract of their project, plus a picture of their poster and a three minute video presentation in which they describe their project, its results and their conclusions. Judging will commence on February 6, 2021 and will continue until February 19, 2021. Judges will not need to travel to a location; instead they will perform the judging at their homes. The areas of research are: Behavioral Science, Environmental Science, Health&Medical Sciences and Physical Science. Over two hundredeighty submissions are anticipated; therefore many judges are needed. If you are interested in participating as a judge in this very worthwhile endeavor, please contact Fran Lichtenberg. Her e-mail address is: judges@snet.net. More information can be found at the website of its parent organization, Connecticut STEM Foundation, <https://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 helping students

to perform original STEM research and participate 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. 2020 mentorship must be received by April 2, 2020.

For more information and how to apply, please go to the Connecticut STEM Foundation's website, ctstemfoundation.org. -----

The Hartford Audubon Society is pleased to announce our annual **Mini-Grant** opportunity. The purpose of the mini-grants is to help fund and support initiatives within the State of Connecticut and especially within the Hartford County area, which directly benefit the bird life in our state. It is part of the Hartford Audubon Society's mission to awaken a wider public interest in the enjoyment, preservation, and protection of birds and their habitat. Projects may request a grant of up to \$1,000. All projects must demonstrate some benefit to birds and/or birding in Connecticut. Past awards have included raptor enclosures, window strike material

demonstrations, educational publications, and bird habitat plantings. Applications are due by **5 pm on February 15th, 2021**. The brief application form and guidelines are provided on the HAS website at <https://www.hartfordaudubon.org>. Winners will be notified in March and receive checks shortly thereafter. Applications should be emailed to: info@hartfordaudubon.org with "Mini-grant Application" in the subject line. Questions? email Sarah Faulkner sffaulkner@comcast.net



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

[Request a Preview Unit](#)



STEMtastic

STEMTastic Events-Wednesday, December 2nd, 7pm ...Jill Wertheim (Stanford University) and

Eric Lewis (San Francisco Unified School District) present: 3 Dimensional Performance Assessments: A Balanced System of Assessment Designed to Support NGSS: Zoom Link - <https://sacredheart-edu.zoom.us/my/bjm0909>

Thanks to all that attended the STEMTastic Event on November 16. Okie Lee and Todd Campbell let the group through informative COVID-19 data sites. The presentation and recording can be found on our [website](#). Sponsored by the The Isabelle Farrington College of Education at Sacred Heart and The Connecticut Science Teachers Association Follow @CTScience, csta-us.org or the Isabelle Farrington College of Education Facebook page.



To register, click on <https://my.nsta.org/event/rising-to-the-challenge-creating-equitable-opportunities>

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

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

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. Louisiana is in EPA Region 6. The application and eligibility information are available on EPA's PIAEE page. <https://www.epa.gov/education/presidential-innovation-award-environmental-educators>

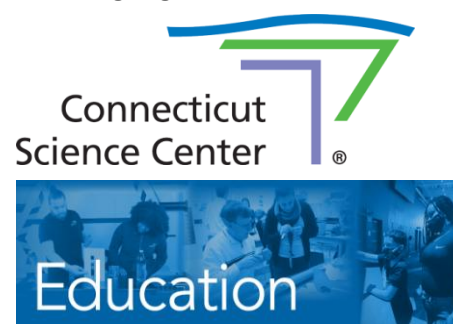
COV-Ed Website: A Partnership between Yale School of Medicine and CT State Department of Education

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. 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.

Professional Learning

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 othersubjects. 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](#)

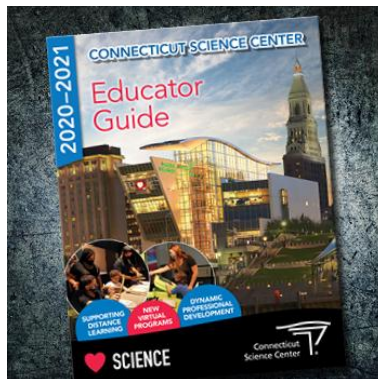
[Digging Deeper: Unpacking the Disciplinary Core Ideas](#)

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.



materials are not needed.

Digital Educator Guide

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

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 or Lisa Fiano at lfiano@crec.org. For assistance with registration, please contact the CREC Resource Group at 860-524-4040, or services@crec.org. For special accommodations, please contact PD Support at 860-509-3787 or 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=MTkwMjA3Mjc2NQS2&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

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.

