

April 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.



Why pay hard-earned money to belong to professional organizations? Professionals with time and money commitments to family and personal needs carefully weigh the value of spending money for dues to organizations when they are not aware of the rewards of belonging to such groups.

As a member of CSTA for more than 30 years and CSSA for 20 years, and former President of both organizations, I would like to share what I found to be the great rewards of involvement with our professional science organizations. You will:

- Meet involved professionals from everywhere. When I say everywhere, I mean all over the earth, the US, New England, and especially Connecticut. With social distancing still the new norm, it provides a community of learning that is even more important to nurture.
- Be asked for your input by Science leaders at the State Department of Education ..perhaps even to serve on a committee. You thus help influence educational decisions, and at such a critical time for educators, your input is desperately needed.
- Realize that we are in the same educational boat and are all seeking ways to help each other to find ways to better serve our students,
- Make life-long friends with colleagues, even with Zoom!
- Find opportunities to sharpen teaching skills with the best mentors, especially those who are your distance colleagues,
- Have professional development opportunities open up with ideas on how to cope with a unique situation,
- Receive respect from colleagues and scientists in the field,
- Gain the opportunity to meet prominent scientists and to learn from them,
- And finally, the best part...the sharing, the sharing, the sharing!

To meet your dedicated leaders and colleagues, make it a priority to attend the Distance Learning sites and 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 site at:

<https://www.cssaonline.org/join-cssa.html> and : <https://csta.wildapricot.org>



Don't forget the eeSmarts annual student contest. The due date is April 30, 2021!
<https://www.energizect.com/eesmarts-home/eesmarts-annual-student-contest>



CONNECTICUT STEM FOUNDATION SCHOLARSHIPS FOR 2021

The Connecticut STEM Foundation is excited to announce a change in its scholarship program in 2021 for Connecticut students aspiring to STEM careers.

To help defray first year college expenses for graduating seniors who plan to major in STEM programs at college, the CT STEM Foundation is increasing its scholarships from \$1,000 to \$2,500:

Two \$2,500 scholarships will be offered in 2021. These scholarships will be awarded to applicants who participated in the 2021 CT STEM Fair. Deadline for receipt of applications is Friday, June 4, 2021.

As in the past, CT STEM Foundation will offer two summer scholarships to undergraduate students planning to attend a college/university summer STEM course, a summer internship program, 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. Deadline for receipt of applications is Friday, June 11, 2021.

Application forms are available on the CT STEM Foundation's website, ctstemfoundation.org, under the Scholarship section.

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. 2021 mentorship must be received by **June 1, 2021**. For more information and how to apply, please go to the Connecticut STEM Foundation's website, ctstemfoundation.org.



[Wade Institute for Science Education](#), Quincy, Mass

2021 Spring and Summer Professional Development Programs

Announcing our 2021 Summer Institutes! Join us and our partners

for unique professional development courses that connect you with hands-on, minds-on, inquiry-based investigations and increase your STEM content knowledge! Our institutes will connect you with scientists, engineers, and STEM professionals through live discussions and virtual site visits. Work with educators at our partner institutions to explore real-world phenomena through hands-on, minds-on investigations. Explore how to use these investigations with your students both remotely and in the classroom. Earn PDPs and optional graduate credits. Receive a toolkit containing materials to enable you to complete the inquiry-based, minds-on, hands-on investigations introduced during the course. As an added bonus, you will be invited to participate in optional field sessions with our partners when their facilities reopen to the public (free of charge). All courses include 5 virtual sessions plus 15 hours of online learning.

Seasons and Cycles: How Weather Affects Us and How We Affect the Weather

[Virtual Professional Development Institute for Grades 3-8 Educators](#) Dates: Virtual Sessions June 21st – 25th [My Soda Bottle Ended Up Where? Exploring Plastic Problems and Solutions](#)

[Virtual Professional Development Institute for Grades 6-12 Educators](#) Dates: Virtual Sessions July 19th – 23rd [How Does Your Dinner Grow? Exploring Connections Between Food Production and Sustainability](#)

[Virtual Professional Development Institute for Grades 6-12 Educators](#) Dates: Virtual Sessions July 7th, 9th, 12th, 14th & 16th , [Landscapes on the Move: Investigating Geologic Formations and Processes](#)



Contest Digital
Rube Goldberg
Machine Minecraft
[Get Started](#)

1. [Home](#)
2. [Learning](#)
3. [Digital Rube Goldberg Machine Minecraft Contest](#)

2021 Digital Rube Goldberg Machine Minecraft Contest Build a digital Rube Goldberg Machine in Minecraft Education that completes a simple task in the most fun and overly complicated way possible. In the creative environment of Minecraft, first learn how to create working simple machines in bi-weekly tutorials, then string those simple machines together to create a wacky chain-reaction contraption to compete in the first ever digital Rube Goldberg Machine Contest. Rube Goldberg Machine Contests inspire communication, problem-solving and teamwork while honing skills like math, physics and chemistry. What separates a Rube Goldberg Machine Contest from other chain reaction competitions is artistry, storytelling, and a sense of humor. **What is the NASEF 2021 Digital Rube Goldberg Machine Minecraft Contest?** The 2021 Digital Rube Goldberg Machine Minecraft Contest is a STEAM competition where students from grades 3-12 compete with machines that they have imagined, designed in Minecraft Education Edition, and created in a fun and competitive forum. The competitions encourage teamwork and out-of-the-box problem solving, in a fresh learning environment and level playing field. Best of all, this year's Digital Rube

Goldberg Machine Contest with Minecraft Education Edition is FREE for all teams! [Register Your Team](#) [RGMC Participation Team Guide](#) [Big Build Challenge Finals Team Guide](#) [Education Standards](#) [Big Build Challenge Key Details](#) [Eligibility and Requirements](#) [How to Videos, Powered by Participate.com](#) IT'S NOT TO LATE TO JOIN + REGISTER! THE BIG BUILD CHALLENGE IS LIVE! [Our official 2021 RGMC Big Build Challenge Announcement Stream VOD is live on our YouTube channel.](#) A huge thank you again to [our partner InsideParticipate](#) for bringing us the live experience! Be sure to subscribe to our YouTube channel and [tune into our playlist to view all of our past RGMC streams!](#)

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.



CATALYST
NEXT GENERATION
SCIENCE CURRICULUM

*Virtual Professional Development Institute
for Grades 3-8 Educators Dates: Virtual
Sessions July 7th, 8th, 13th, 14th & 15th,*

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



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>

Thanks to Nancy Ridenour, NYS Science Matters Coordinator

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

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](#)

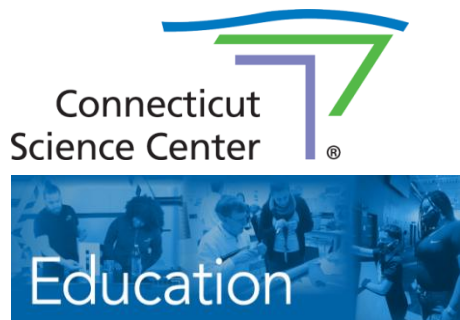
COVID-19 looms over us like a menacing force, and here you will find the tools to make a difference for yourselves, for your families, and for your communities. In this on-line learning tool, follow the story of 3 high school students as they encounter the pandemic. Learn how COVID-19 works, why it spreads, 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.

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](#)

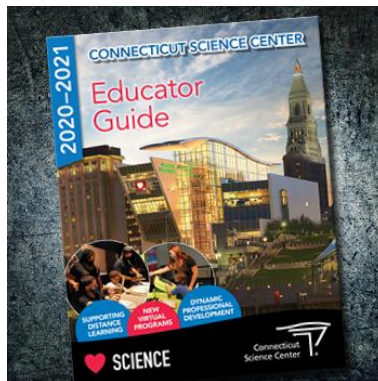
[Digging Deeper: Unpacking the Disciplinary Core Ideas](#)

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=MTkwMjA3Mjc2NzQ2&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/>



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.

