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. Therefore, beginning January 1, 2020, 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. The direct link is https://portal.ct.gov/SDE/CT-Core-Standards. Please bookmark this for future reference.

HARTFORD AUDUBON MINI-GRANTS: The Hartford Audubon Society (HAS) 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 preservation and protection of avian wildlife and their habitat.

Projects seeking up to $2,000 are welcome, with preference given to smaller amounts. All projects must demonstrate some benefit to birds and/or birding in Connecticut. Past awards have included gardens for birds, raptor enclosures, and bird habitat development. Applications are due by 5 pm on February 7th, 2020. The brief application form and guidelines are provided on the HAS website at www.hartfordaudubon.org. Winners will be notified in March and receive checks shortly thereafter. Applications should be emailed to: hartfordaudubon@yahoo.com with “Mini-grant Application” in the subject line.

Questions? Email HAS President (and science teacher) Sarah Faulkner, sffaulkner@comcast.net

2020 Hartford County Big January of Birding: Teachers - please participate yourselves, and encourage your students to participate! The Hartford Audubon Society (HAS) is pleased to announce our fourth annual Hartford County Big January of Birding birdwatching challenge. The purpose of the activity is to encourage folks to get outside during the month of January and see as many species of wild birds in Hartford County as possible! The competition is free to people of all ages.

Birdwatching is a delightful, free activity that can be enjoyed by people of all ages, in any setting. Birds can be seen anywhere – you can watch pigeons, peregrine falcons and snowy owls in Hartford; count the birds on your feeders from your windows; identify ducks and geese on a local river; or seek rare woodland birds on land trust reserves. Anywhere you go, birding is just plain fun. Thus far, in early December, we still have some summer migrants lingering, and some rare visitors – a Pacific loon on the shore, catbirds in Canton, a Western tanager in Torrington, a pink-footed goose in Preston... January, 2020 may be a very interesting month.
To participate, birders should enter their daily or periodic observations onto [https://ebird.org/home](https://ebird.org/home), the free birdwatching site maintained by the Cornell University of Ornithology. At the end of the month, please create a month-long record of your observations in ebird and share this list with HAS President, Sarah Faulkner. To enter, there are four categories: Youth (ages 4-10) who must see at least 25 species to enter; Teen (ages 11-17) who must see at least 35 species to enter; Weekend Warrior (adults ages 18- who can’t get outdoors during the week) who must see at least 50 species to enter; and Adults (ages 18- who can get outdoors during the week) who must see at least 60 species to enter. All entries that meet the minimum number of species for each challenge group will receive a certificate of achievement. A special prize will be awarded for the highest species count for each challenge group. Please see the HAS website at [www.hartfordaudubon.org](http://www.hartfordaudubon.org) for contest details.

**RE: Grant and Scholarship $ for Amazon Rainforest PD Workshop**

As a Science Matters State Coordinator, I am hoping you can help us spread the word about the scholarships and grants that we have available for K-12 science educators to join the 2020 Educator Academy in the Amazon (July 1-11).

Last year we had very few applications and would like to make sure that the funding is utilized this year!

- **NEW!!** $3195 Vernier Software & Technology STEM Fellowship for a K-12 educator
- **NEW!!** One $3195 Courtney Wilson GLOBAL EDUCATION Fellowship for a K-12 educator

**The deadline for the applications is Feb. 1, 2020.** THANK YOU in advance for sharing this opportunity with your network of science educators in your year-end communications!

**Below my signature is a summary for easy posting and sharing.**

If you have any questions, please contact me. I will be happy to put you touch with previous scholarship recipients from your state or region if you would like their perspective on the program.

Many thanks,

*Christa*

Christa Dillabaugh, Morpho Institute Director
Email: director@morphoinstitute.org
Phone: (913) 214-6126

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Subject: Grants and Scholarships $ for Amazon Rainforest PD Workshop

**The Morpho Institute’s Educator Academy in the Amazon Rainforest**

**Dates: July 1-11, 2020**

The Educator Academy in the Amazon Rainforest provides powerful professional development designed to transform student learning. Immersed in the Peruvian Amazon, teachers learn about this key global ecosystem while building their ability to engage students in scientific research, engineering design, cross-cultural connections, and stewardship projects. Field workshops support NGSS 3D learning, STEM, 5E and more.

With specialized tracks for elementary, middle school, and HS/AP educators, participants will:

- Work side-by-side with scientists and researchers on citizen science projects and field studies on the ACTS Rainforest Canopy Walkway in one of the world’s most biologically diverse environments.
- Explore conservation and sustainability via hands-on workshops with indigenous communities.
- Spend a day in an Amazon village and explore the role of education in creating a sustainable future for Amazon children.
- Work in grade-level cohorts to develop strategies for using the Amazon as a vehicle for incorporating standards-based inquiry, STEM, and sustainability education into the classroom.

**2020 Grant and Scholarship Opportunities:**

- **NEW!!** $3195 Vernier Software & Technology STEM Fellowship for a HS/AP Science Educator
- **NEW!!** One $3195 Courtney Wilson GLOBAL EDUCATION Fellowship for a K-12 educator
Three $1250 Morpho Institute EXPLORER scholarships for K-12 educators

Academy Fee of $2695 includes pre-departure prep, resource kit, & in-country land costs (air is not included). Space is limited to 30 educators. Get the details and download a syllabus and scholarship application at: www.morphoinstitute.org/educator-academy

Questions? Contact: Christa Dillabaugh, Morpho Institute Director
Email: info@morphoinstitute.org
Phone: (913) 214-6126

The authors of the Next Generation Science Standards explicitly name Universal Design for Learning as a necessary tool for the creation of units that are meaningful, accessible, and challenging for all students. Universal Design for Learning is a lens through which teachers can analyze curriculum goals, methods, and materials to ensure that there are multiple pathways to success for all learners. This workshop will review the structure of the NGSS and how to integrate Universal Design for Learning.

Date: 2/28/20
Time: 8:30 – 3:30
Location: 55 Van Dyke Ave Hartford, CT 06106
Price: $125

For workshop information, email Meg Hanly mhanly@crec.org or Lisa Fiano, 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.

Issue 12, Part 3
December 18, 2019

To the Journal

Dear Connected Science Learning Reader,

This month, CSL (Issue 12, Part 3) continues its focus on STEM Mindset. Discover how the University of Montana spectrUM Discovery Area and community partners in Montana’s rural Bitterroot Valley created a K–12 STEM learning ecosystem to serve rural youth. Foster underserved youths’ development of a STEM mindset using research–based tips from a study conducted at STARBASE Minnesota. Finally, read about the updated SciGirls Strategies—research-based, gender equitable, and culturally responsive teaching strategies proven to engage girls in STEM.

Look for the first part of issue 13 next month when we revisit the theme of CSL’s first issue on Effective Collaboration. As always, if you have an idea for a Connected Science Learning article, visit our call for contributions to find out how to submit. We’re also seeking reviewers to evaluate submissions. If you would like to become a reviewer, please send an e-mail indicating your interest, along with your CV, to Beth Murphy at connectedscience@nsta.org.

Best,
The CSL Team
ConnectedScience@nsta.org
The National Youth Science Camp is a residential science education program for your STEM enthusiasts the summer after they graduate from high school. Students from around the country (two are chosen from each state) are challenged academically in exciting lectures and hands-on studies, and have voluntary opportunities to participate in an outdoor adventure program, gain a new and deep appreciation for the great outdoors, and establish friendships that last a lifetime. Students who are selected will attend the NYS Camp FREE of charge.

The camp will run June 22 to July 15 2020. The deadline to apply is February 28, 2020. Two students from Connecticut will be chosen to attend. Please contact us at ctsciteachers@gmail.com if you have questions.

The CS4CT Conference is looking for your help!

The Computer Science for Connecticut (CS4CT) Summit brings together K-12 educators from across the state to promote and advance Computer Science education. March 27, 2020 at Sacred Heart University in Fairfield, CT. Deadline for proposals = December 20th. Earlybird registration = $50 until January 5th

Visit the CS4CT for more information.

Connecticut STEM Fair needs your help:

Judges are needed for the CT STEM Fair that will be held Saturday, February 8, 2020, at Joel Barlow High School in Redding CT. Upwards of two hundred Connecticut science students participate in this fair. They enter research projects or research proposals in the following areas: Behavioral Science, Environmental Science, Health&Medical Sciences, and Physical Science. Each student has a face-to-face interview by two separate judging teams. As you can imagine, a lot of judges are needed. If you are interested in participating as a judge in this very worthwhile endeavor, please contact Fran Lichtenberg. Her e-mail is: judges@snet.net. More information about the CT STEM Fair can be found at the website of its parent organization, Connecticut STEM Foundation, www.ctstemfoundation.org

National Marine Sanctuaries Webinar Series

Catch and Release: Large whale entanglements and response efforts to mitigate the threat

Entanglement or by-catch is a global issue that affects many marine animals, including large whales like the charismatic humpback whale. Hundreds of thousands of whales die worldwide each year, but the impacts go beyond mortality. When conditions and resources allow, trained responders under NOAA’s Marine Mammal Health and Stranding Response Program attempt the dangerous task of freeing whales from life-threatening entanglements. However, the ultimate goal is to gain information to reduce the threat for whales and humans alike. The Hawaiian Islands Humpback Whale National Marine Sanctuary working closely with its partners and the community, coordinates response efforts for Hawaii, the principle breeding and calving ground of humpback whales in the North Pacific. The effort represents a unique and valuable opportunity to gain a broader understanding of large whale entanglement threat. Learn more about whale entanglements and response efforts from expert Ed Lyman.

This webinar series provides formal and informal educators with educational and scientific expertise, resources, and training to support ocean and climate literacy in the classroom. Visit our archives to watch past webinar recordings.

More information on the series and upcoming webinars can be found here. After registering you will receive a confirmation email containing information about joining the webinar. The Webinar ID is 462-571-163.
NEW! Our Changing Earth
Permanent Exhibition - Opening October 18
Explore Connecticut's changing landscape throughout the past, present and into the future inside this stunning exhibit gallery featuring the latest scientific findings. Students will make curriculum connections as they investigate the impacts of our changing climate and how decisions we make will affect the future of our planet. The immersive experience features hands-on activities that bring textbooks to life.

- Explore historical flood heights on a scale version of the Bulkeley Bridge and a flood height interactive.
- Record your own weather forecast learn how advancing technology is helping us better forecast the weather in the all-new WFSB Early Warning Pinpoint Doppler Radar Exhibit.
- Experience hurricane-force winds in the Hurricane Simulator.
- Learn about magma flow and plate tectonics as you journey to the center of the earth inside the giant geodesic dome, complete with vibrating core.
- Step into the shoes of a first-responder in the life-size, climb-in rescue raft.
- See the story of trash and how humans are impacting our Earth.
- Stand next to a towering ledge of ice to see the correlation between global temperatures and glacial ice flow.

LEG0 Build the Change
Special FREE Program for Grades 1-7
ONLY $8 PER STUDENT!

LEGO® Build the Change is all about creativity, imagination, collaboration, and communication. It enables children to use LEGO® bricks as a tool to communicate and express themselves and create enduring memories. LEGO® Build the Change event participants will have access to hundreds of LEGO® bricks and their imaginations to build what they think will be a great change to the communities they live in. This 45-minute hands-on program is included with a paid Science Center field trip admission.

Book now specifically for the LEGO Build the Change program and get your field trip for only $8/per student. First-come, first-served, limited availability.

NEW! Mazes & Brain Games
Traveling Exhibit - Now Open
Put your brain to the test in our newest hands-on exhibit, Mazes & Brain Games. Maneuver your way through this mind-boggling collection of 3D puzzles and full-body games. You will need to use your smarts, logic, balance, memory, and dexterity to solve our mazes and puzzles. Visitors of all ages will find a challenge in Mazes & Brain Games. You'll tease your brain at the brain teaser tables, build a 3D marble maze and watch it work, bust out a beat in the music maze, multiply yourself in the infinity mirror, and much more.

NEW! Themed Weeks
Mark Your Calendars
Make your field trip memorable and unique by visiting during one of our special themed weeks. We're amping up your field trip experience with extra opportunities for content-rich, hands-on science in our exhibit galleries.

National Engineers Week - February 18-21
Brain Awareness Week - March 17-20
DNA Days - April 21-24

Win Classroom Prizes in This K-12 STEM PBL Competition
The Toshiba/NSTA ExploraVision science competition challenges students to envision and communicate new technology 20 years in the future through collaborative brainstorming and research of current science and technology. It's not too late to register your teams for this project-based learning competition! Deadline for submissions is February 10.
Two Professional Book Study Opportunities
Choose the online learning experience that works best for you!


NSTA has developed an online book study around the Enhanced E-book: *Discover the NGSS: Primer and Unit Planner*. This enhanced e-book offers a comprehensive introduction to the NGSS, including background information, each of the three dimensions in depth, and steps to move teachers toward classroom implementation.

Register to participate in the Shifting to the NGSS: Professional Book Study for Elementary Teachers, taking place in April–May, 2020.

Book Study Dates
The series of four live web seminars will take place from 7:15–8:45 PM EST on four Tuesdays:
- January 28
- February 4
- February 11
- February 18

This book study will be led by Ted Willard and Tricia Shelton. This opportunity offers 6 hours of live exchange with experts and other educators, in addition to time spent participating in a discussion forum.

Book Study Dates
The series of four live web seminars will take place from 7:15–8:45 PM EST on four Tuesdays:
- April 21
- April 28
- May 5
- May 12

This book study will be led by Tricia Shelton and Jessica Holman. This opportunity offers 6 hours of live exchange with experts and other educators, in addition to time spent participating in a discussion forum.

Please contact Flavio Mendez with any questions and to enroll your district: fmendez@nsta.org; 703-312-9250

During the book studies, participants will have access to:

- A moderated private forum for group discussions with other book study participants
- All archive versions of the web seminars to watch on-demand.
- NSTA Learning Center online community tools (My Library, My Learning Plan, My Profile, Community Forums)

Cost to Districts: $1,250 flat fee per district cohort of up to 25 participants per cohort. Individuals are invited as well. $63 for NSTA members and $79 for nonmembers. Cost of the *Helping Students Make Sense of the World Using Next Generation Science and Engineering Practices*
FOLLOWING IS A LONG LIST OF AVAILABLE GRANTS FOR TEACHERS AS LISTED BY THE NEW YORK STATE SCIENCE MATTERS COORDINATOR, NANCY RIDENOUR. WE HAVE HER PERMISSION TO SHARE THIS EXCELLENT INFORMATION...THANKS, NANCY!

• Teaching and Learning Strategies for Higher Education online short course is delivered by Harvard’s Bok Center for Teaching and Learning, in association with HarvardX. Students in this course will engage deeply with the most relevant research on effective teaching methods in the higher education context, while refining their own practices, portfolio, and teaching philosophy. Sponsored Program Professional Development Grants For Teachers NEA Foundation Learning and Leadership Grants External link Amount: $2,000 to $5,000 Description: The NEA Foundation for the Improvement of Education awards grants that support the professional development of public school teachers and faculty in public institutions of higher education. Grants may fund professional development experiences, such as summer institutes or action research, mentoring experiences or lesson study. Professional development must improve practice, curriculum and student achievement, and recipients must put professional leadership into practice by sharing what they learn with their colleagues. Grants cannot be used to fund a degree. For specific information, visit the NEA Foundation’s application instructions External link page.

• Beacon Technology Teacher Grant External link Amount: Up to $1,000 Description: This grant is for teachers who need an extra bit of funding for classroom supplies, educational subscriptions, apps for students, and more. Beacon offers this grant 1-2 times a year. To be considered, submit a tech-focused lesson plan following their guidelines and instructions External link. Winners will also have their lesson plans featured on the Beacon blog!

• Albert Einstein Distinguished Educator Fellowship Program External link Amount: $6,000 monthly stipend, $1,000 monthly living expenses Description: This grant is an excellent and unique professional development opportunity for K-12 teachers who have at least five years of experience teaching in STEM subjects. STEM educators participate in 10- or 11-month positions in federal agencies or U.S. congressional offices across the country, during which time they are given the chance to have a direct impact on education programming, policy and reform efforts. After the program, teachers return to the classroom with a deeper understanding of STEM education and experience that will enrich instruction and benefit students. You can learn more about the fellowship application on the Albert Einstein Distinguished Education Fellowship Program website External link.

• Elmer’s Teacher Tool Kit Grant External link Amount: $100 to $500 Description: The Kids in Need Foundation, a leading organization aiming to provide free school supplies to students in need, has partnered with the educational product company Elmer’s External link to create grants specifically for classroom supplies. The Teacher’s Tool Kit Grant lets K-12 teachers in high-needs schools fund classroom projects that aim to foster creativity and critical thinking in students. Grants are awarded based on financial need, a description of how the project meets the students’ needs and the number of students who will be involved. The application is available on the Kids in Need Foundation’s website External link.

• ING Unsung Heroes Program External link Amount: multiple awards Description: ING Commercial Banking established the Unsung Heroes in 1995 in an effort to recognize teachers implementing new teaching methods and techniques for improving student learning. The award application is centered on a description of previous projects teachers have worked on or plans they would like to enact in the future to benefit their classroom. Applications are judged on innovation, creativity and the potential to positively influence students. Each year, 100 finalists receive 8 $2,000 grants, with at least one grant awarded in each of the 50 states. Of those 100 finalists, three winners are selected to receive awards of $25,000, $10,000 and $5,000.

• AIAA Foundation Classroom Grant Program External link Amount: $200 Description: The American Institute of Aeronautics and Astronauts is dedicated to the importance of STEM education and awards $200 in grants to K-12 teachers who want to incorporate new ways of teaching science, technology, education and mathematics into their classroom. Funds can be used to purchase laboratory equipment, math and science software, robotics supplies, and other items that will add depth and dimension to your lessons.
• NWA Sol Hirsch Education Fund Grants External link Amount: $750 Description: The National Weather Association aims to support the importance of meteorology in elementary, middle and high school by awarding grants to teachers who demonstrate a commitment to improving the quality of meteorology education, a science subject that is frequently overlooked. Funds may be used for the purchasing of materials or equipment, the establishment of community outreach science programs or professional development. You can apply for the grant by visiting the NWA Sol Hirsch Education Fund Grants website External link.

• ACS-Hach High School Chemistry Grant External link Amount: $1,500 Description: The American Chemical Society External link gives innovative chemistry teachers the opportunity to put their ideas into action. The ACS-Hach High School Chemistry Grant was established to promote dynamic and engaging scientific exploration in students. It is awarded to high school teachers who wish to enhance classroom learning and raise students’ interest in chemistry. Funds can be used to purchase laboratory equipment, supplies and instructional materials, but also the cost of professional development opportunities, field studies and science outreach events.

• Delta Education/Frey-Neo/CPO Science Education Awards for Excellence in Inquiry-Based Science Teaching Amount: $3,000 Description: This is a grant offered by the National Science Teachers Association External link (NSTA) to recognize the outstanding efforts of teachers to implement an inquiry-based approach to science education that stimulates interest and exploration in students. The grant covers up to $1,500 in travel expenses to attend the NSTA national conference, as well as $1,500 for use in the classroom. You can explore any of the other numerous awards offered by NSTA External link.

• Lemelson-MIT InvenTeams External link Amount: up to $10,000 Description: The Lemelson-MIT Program External link at the Massachusetts Institute of Technology recognizes the important achievements of inventors and has created the InvenTeams External link initiative, a grant program that focuses exclusively on STEM education. The InvenTeams program encourages hands-on engagement and the application of science, technology, education and mathematics concepts to the solving of real world problems. Teams of students and teachers apply for InvenTeams grant External link by finding a timely and relevant societal issue, and conceptualizing an technological invention that can help solve that problem. Up to 15 teams are chosen to receive grants that help fund the actual invention of their idea.

What Is Science Matters? Science Matters is an initiative by the National Science Teachers Association (NSTA) to bring content, news, and information that supports quality science education to parents and teachers nationwide. Science Matters builds on the success of the Building a Presence for Science program, first launched in 1997 as an e-networking initiative to assist teachers of science with professional development opportunities. Building a Presence for Science—now Science Matters—reaches readers in 34 states and the District of Columbia. Why does Science Matter? Science is critical to understanding the world around us. Most Americans feel that they received a good education and that their children will as well. Unfortunately, not many are aware that international tests show that American students are simply not performing well in science when compared to students in other countries. Many students (and their parents!) believe that science is irrelevant to their lives. Innovation leads to new products and processes that sustain our economy, and this innovation depends on a solid knowledge base in science, math, and engineering. All jobs of the future will require a basic understanding of math and science. The most recent ten year employment projections by the U.S. Labor Department show that of the 20 fastest growing occupations projected for 2014, 15 of them require significant mathematics or science preparation to successfully compete for a job. This is why Science Matters. Quality learning experiences in the sciences—starting at an early age—are critical to science literacy and our future workforce. Feel free to publish this information in school newsletters and bulletins, and share it with other parents, teachers, and administrators.

LEARN ABOUT GOING TO THE BAHAMAS! SEE THE FOLLOWING PAGES:
Terra Science and Education, in partnership with the Gerace Research Center (GRC) is offering a week long in-service workshop for teachers. The workshop is designed to equip teachers with the knowledge and resources they need to lead field studies for their students in the Bahamas.

WHO CAN APPLY?
Applicants may include teachers or administrators at a K-12 school.

TRAINING INCLUDES:
1- Guide to booking and setting up future trips with Terra
2- Training and materials to recruit students
3- Guidance and materials to teach an academic program
4- Twice daily snorkeling trips to select sites on island
5- Cultural experiences

COST
$1,000 per teacher which includes:

1- Round Trip Airfare from your home airport to San Salvador
2- Room and Board while on the island
3- Insurance
4- Suggested materials to use in recruitment, pre-trip orientation for families and students
5- Academic materials to use while on the island
6- Certificate of Completion for in-service credit
Dear Educator,

Terra is happy to announce a unique partnership with the Gerace Research Center (GRC) in San Salvador, Bahamas.

The GRC is a center of studies for Marine Biology, Geology, and Archaeology located on the island of San Salvador, approximately a one-and-a-half-hour flight from Miami. Typically, the center caters to undergraduate programs and research, but in cooperation with Terra will now be actively working with high school groups.

This field experience will be your first step in setting up a regular experience for your students on San Salvador. It will involve a one-week in-service workshop at the field station. During your training you can expect the following:

- A guide to booking and setting up the trip with Terra.
- Training and materials to recruit students
- Guidance and materials to teach an academic program
- Twice daily snorkeling trips to select sites on the island
- Cultural experiences

Participating teachers will leave this experience fully equipped to set up and run a trip confidently and professionally.

The training will be carried out by George Wolfe who has taken yearly trips to San Salvador since 1975 with as many as 62 students. George will walk you through every step of the process, from booking to dive site selection. Days will be spent in the field, evenings will be spent in the classroom, mirroring the trip as it will be run for students.

Thanks to partial funding by the GRC, Terra is able to offer this experience for the cost of $1000.00. This will cover all of the following:

- Round Trip airfare from your home airport to San Salvador
- Room and Board while on the island
- Insurance
- Suggested materials to use in recruitment, pre-trip orientation for families and students
- Academic materials to use while on the island
- Certificate of Completion for in-service credit and possible reimbursement from the school district

If you are interested in learning more about our Ecology in the Bahamas workshop please contact rbeal@terraed.org or visit TerraEd.org.
Island Ecology in the Bahamas 2020

Application

(Send to rbeal@terraed.org)

Name:

Address:

Phone (home): Phone (Cell): email:

School: Subjects/levels taught:

Please Circle Cohort for Bahamas Trip (April 4th; July 6th; Either one)

Closest Airport:

What do you hope to achieve after taking advantage of this opportunity?