

CONNECTICUT SCIENCE CONNECTION

March 2020

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 , **List Moderator.. Eloise Farmer**

NAMES AND E-MAIL ADDRESSES OF OUR POINTS OF CONTACT AND KEY LEADERS ARE NOT SHARED WITH ANY OTHER ENTITY

eloisef302@gmail.com



Professional **Development Opportunities!** Are you interested in

high quality, low cost, Teacher **Professional Development** opportunities? Visit CSTA.wildapricot.org and click on Opportunities. You will not be disappointed. Contact us if you have questions. 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.

The Connecticut State Department

BOOKMARK THIS SITE!

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.

AWARDS Thanks to CSTA and to Maryann Zabik (CABT) for the notifications:



Please nominate outstanding teachers and educators for one of the following awards offered by CSTA, CSSA, and NABT All information AND application forms can be found on both the CSTA and CSSA web sites -CSTA-us.org, or www.CSSAonline.org . **CSTA Excellence in Science Teaching Award**

- Elementary
- Middle
- Secondary

New!; Ralph and Ruth Yulo New Teachers Award

- o For teachers of all levels (elementary, middle, or secondary) in their first three years of science teaching
- Fred J. Scimone Outstanding Science Supervisor Award (CSSA)
- Dr. Sigmund Abeles Science Advocate Award (CSTA and CSSA)
- Connecticut Science Educator Fellow (CSEF)(CSTA and CSSA)
- **Babu George STEM Award (CSSA and Sacred Heart University)**
- **Lifetime Achievement Distinguished Educator Award**
- _____



Each year the National Association of **Biology Teachers presents the Outstanding** Biology Teacher Award to a high school biology teacher from each state. Please take this time to nominate an outstanding high school biology teacher from

Connecticut for this prestigious award. Nominations must be submitted by March 15, 2020. To obtain a form for applications, please click on: https://nabt.org/Awards-NABT-Award-Nomination-Form

THE FOLLOWING PAGES ARE FLIERS FOR **GREAT PROFESSIONAL ACTIVITIES:**

Spring into STEM in Connecticut!

Saturday, April 4



WOMEN IN BIO - Metro-NY

Igniting curiosity. Inspiring success.



Young Women In Bio (YWIB), a non-profit organization with 13 chapters across the U.S. and Canada, empowers today's girls to become tomorrow's leaders, helping them affect positive change through science, technology, engineering and math (STEM). We exist to ignite the curiosity and fuel the passion in girls, supporting them as they shape and change the world.

For more information visit women-inbio.org/ywib

With additional support from:







Interested in learning more about a career in Science, Technology, Engineering or Math?

An event for middle and high school girls at:



Agenda—Saturday, April 4

- 9:30-10:00am—Check-in (*Pre-registration required*)
- ◆ 10:00am—Opening Remarks & Welcome
- ◆ **10:15am**—Morning Session & Speakers
- ◆ **11:45am**—Break/Refreshments
- ◆ **12:15pm**—Afternoon Session & Speakers
- ◆ 2:15pm—End of Event

Additional Details

FREE

FVFNT!

Ages: Open to Middle and High School girls (and a parent)

Max: 200 attendees

Location: Academic Science & Laboratory Building, Southern Connecticut State Univ., 425 Fitch Street, New Haven, CT

See what types of STEM careers await you! Participate in a variety of interactive exhibits and presentations from Connecticut's leaders in technology, pharma, biotech, university, government and more!

This event runs concurrently with SCSU's Accepted Students Day for prospective students.

This event is free. Participation in the event requires completion of a YWIB permission form, photo release/media consent and confidentiality forms available through online registration.

To register, please visit: https://www.womeninbio.org/events/ EventDetails.aspx?id=1341949&group=

TWIST Program

Teachers Working in Science and Technology

When your students ask...

When am I ever going to use this?

What do engineers do?

Why do we have to work together?



How do you answer?

TWIST teachers: Spend 6 weeks doing R&D with a 3M scientist or engineer and their team

- Tour labs and pilot manufacturing facilities
- Receive a stipend of \$4500
- Can earn graduate credit through St. Mary's University of MN (MN and WI only)

Program Dates: June 15-July 24, 2020 Minnesota Applications Due: January 17, 2020 Outstate Applications Due: February 21, 2020

Applications accepted from Science, Math, and Tech Ed teachers of students in grades 7-12.

Any Questions? e-mail twist@mmm.com or check out our website at http://www.3m.com/3M/en_US/gives-us/education/
Once on the website scroll down

Direct link to the Teacher Application: http://go.3M.com/twist_application

TWIST is a partnership with the Minnesota High Tech Association



"This experience will help shape learning experiences in my classroom going forward." Class of 2019



QUeST UnConference/SciCamp NSTA CT Share-Out

Saturday, May 2nd, 2020, 8 a.m. to 1 p.m.

Quinnipiac University | School of Education, EDU187 370 Bassett Road, North Haven, Connecticut

We invite you to...



- Bring the practices and resources you've experienced at NSTA's National Conference in Boston this year and share them with other CT science teachers.
- If you are unable to attend the NSTA conference, come to learn from others! Attend sessions and take the practices and resources back to your classroom.

A light breakfast and coffee will be served.

Register through this link: https://bit.ly/38amWnA

Sponsored by:









2020 Updates for MIT Alumni Clubs

November 2019

SEPT SUMMER 2019 RECAP

"I am beyond thankful for this opportunity. I have gained so much from this experience. I hope to be able to attend again in the future, as I feel the SEPT program is always reinventing itself based upon trends. I would really like to see where many of the concepts and lectures progress too. Rik, Mary and Kristina, and the many others that made this a memorable experience, I can't thank you all enough!! This has been an eye opening week!! I wish you all the best and thank you again!!" -SEPT 2019 Participant

"Thank you for everything. This was one of the best experiences I have had during my entire teaching career. I feel so fortunate to have had this opportunity." -SEPT 2019 Participant

Mv SEPT 2019 Experience- Blog Post by Ana Paula Mauro (SEPT 2019 Attendee)











2020 Tracks- July 6th- 11th

Every summer since 1989, MIT has worked with MIT Alumni Clubs to bring outstanding middle and high school teachers to the MIT Science and Engineering Program for Teachers (SEPT). This year we have three simultaneous tracks of afternoon workshops:

Track 1: "Broadening Participation in STEM"

Lead by: Jennifer Gardony (Program Manager at Scheller Teacher Education Program, MIT)

This track will support teachers in their acquisition of skills needed to coach and encourage student populations that have been traditionally underrepresented in STEM fields. Afternoon programming will consist of workshops, reflections and discussions focused on increasing and maintaining participation in STEM for women, students with disabilities, ethnic and racial minorities, and other underserved communities.

Track 2: "Bringing Project-Based Learning & Inquiry into STEM Classrooms"

Lead by: Alex Hargroder and Alice Liau (Project-based Learning Coach's and Designer's, MT)

This track will provide small and large moves that teachers can make to help make their class more student-centered by increasing inquiry and giving students voice and choice.

Afternoon sessions will include introductions and use of existing and in-development tools, simulations, games, technology and curriculum that can be brought into various contents and classrooms.

Track 3: "Use and Design of Games and Simulations"

Lead by: Rik Eberhart (Studio Manager at the MIT Game Lab)

This track will inform teachers in the use and design of games and simulations, of use in classrooms to support both systems learning and computational literacy.

Afternoon sessions will include introductions and use of existing and in-development tools, simulations, and games, as well as workshops in game design and game programming. (Prior knowledge of programming and computer science is NOT required).

Important Dates and Numbers:

November 1- Application Live- How to apply

February 28 – Deadline for Clubs to send top 3 applications to SEPT

March 14 - SEPT notifies Clubs of accepted teachers

July 6th- July 11th - SEPT DATES

Number of teachers admitted for 2020: 60

Teacher selection and MIT Alumni Club sponsorship

Each year, teachers from around the world apply to attend SEPT. Typically, an MIT Alumni Club is involved by:

1st, recruiting teachers to apply;

2nd, selecting, ranking, and submitting 3 top candidates; and

3rd, covering the tuition and/or travel costs of the teacher(s). 2020 Tuition \$1,600

We look for educators who meet the following criteria:

- Teach science, technology, engineering, and/or math to students in 6th-12th grades.
- Integrate technology in their classrooms, particularly technology that enables students to create.
- Demonstrate innovation in their teaching practice and advancement through past professional development or other extracurricular experiences.
- Are able to commit to attend all sessions of the time intensive program, including evening programs and sleeping in dorms.
- May have an affiliation with MIT, or express interest in longer-term involvement with SEPT or Alumni Club K-12 outreach.

Information from Connecticut Center for Advanced Technology (CCAT)

"What's So Cool About Manufacturing?" (WSCAM) Video Competition: Open to high school teams across the state. Teams are matched with local manufacturing partners to collaborate on the creation of a short video that explains what is so cool about manufacturing. Students have the opportunity to learn about STEM/manufacturing careers, and build meaningful connections with future employers. You can learn more about the program through the

website: https://ctdidi.com/progra ms/wscam/

Applications are now being accepted for the 2020 cohort of Real World Science!

The Real World Science Summer **Teacher Seminar brings 28 teachers** who will be teaching science to 5th-8th graders in the following school year to our museum for a weeklong training experience. Two of the spots are reserved for Louisiana teachers, and teachers from public and public charter schools are accepted. The teachers learn best practices in science teaching and 3D instruction while being introduced to the Real World Science curriculum. It includes a trip to the **Laser Interferometer Gravitational** Observatory in Livingston, LA, and a field day doing water quality studies at City Park and Lake Pontchartrain. Teachers are reimbursed for flight expenses, and the museum provides hotel accommodations and most meals.

This year's cohort will join us in New Orleans from July 12th-18th 2020.

Applications are accepted from January 6th 2020 through March 13th 2020.

Apply here (https://nationalww2museum.submittable.com/submit/155881/real-world-science-summer-teacher-seminar-2020)

For more information, email realworld-science@nationalww2museum.org



March 18 Workshop for Educators on Manufacturing Careers sponsored by the Connecticut Center for Advanced Technology

- Introduction to Manufacturing Careers for Educators
- Introduction to Additive Technologies for Educators The world of manufacturing has exploded with advancements in 3D printing. Go beyond the basics of desktop 3D printing and learn the latest additive technologies used in aerospace, medical, sustainable energy and modern manufacturing industries to share with your students.



The Natural Resources Conservation Academy (NRCA) at UConn offers environmental programs for teens and adults. The Conservation Ambassador Program (CAP) teaches teens the skills used by professionals to address current environmental issues. Students learn real field-based science during an exciting weeklong summer field experience at UConn. Then, students design their own environmental project to provide real solutions for their communities, and present their work at the Connecticut Conference on Natural Resources. For more details check out the CAP program video here. The Conservation Training Partnerships (CTP) program pairs teens and adult volunteers. The team participates in a two-day field workshop (find a workshop near you!), and learns to use conservation and mapping tools in field activities. Then, the team designs and carries out a local environmental project. For more details check out the CTP program video here. Online applications are now open! We are happy to visit schools & organizations to give brief presentations about our NRCA programs. Please contact nrca@uconn.edu to find out more.

NESS ANNOUNCES LONG ISLAND SOUND DRAWING CONTEST

STONINGTON, CT. New England Science & Sailing Foundation (NESS) is looking for young artists to participate in a drawing contest for a calendar 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. A panel of judges will choose two first place and two honorable mention winners from each grade as this year's award recipients. Their artwork will be featured in a calendar in 2021.

Participating classes, schools, and individuals are asked to select one drawing per eligible grade to submit for judging and mail them to NESS no later than April 3, 2020. Children may submit a drawing even if the class or school is not participating. The contest is a great opportunity for parents and teachers to provide their students with a hands-on experience and to educate them about Long Island Sound and its watershed.

In the <u>2019 competition</u>, over 2,500 talented young artists from across the state participated in the contest.

(For full contest rules, please visit <u>nessf.org/long-island-sound-calendar-contest</u>.)

About NESS: The New England Science & Sailing Foundation, Inc. (NESS), is a nonprofit 501(c)(3) ocean education organization that engages students in experiential learning to build confidence, teamwork, and leadership skills. Marine sciences, adventure sports, powerboating, and sailing are platforms for inquiry-based learning, personal discovery, teaching respect and responsibility for the sea, and creating connections with the community. NESS operates yearround with families, schools, and organizations to provide highquality programs that blend an innovative curriculum with exciting ocean adventure activities. For more information, visit www.nessf.org.

The JASON PROJECT

JASON Learning is FREE for public school educators and students in Connecticut! JASON Resources can help supplement or build your three-dimensional Units of Instruction. Register or reactivate your account on www.jason.org/ct.

JASON Learning Upcoming Professional Development Offerings Resources & Tools for an NGSS Classroom Series:

Registration for all workshops at: www.jason.org/ct

Hampton 9:00am-3:30pm March 17, 2020 - LEARN, Old Lyme 8:30am-3:30pm Scientific literacy is important too! For the first time, we are now offering a professional learning experience strictly for elementary educators. This workshop will specifically address strategies and resources for integrating Next Generation Science Standards (NGSS) into the school-day while connecting to reading, writing, and math literacy. We will discuss and address the challenges that face elementary teachers when it comes to including time for science instruction, and offer concrete resources and methods that can be easily incorporated into already existing routines. Participants will further their understanding of what it means to teach and learn in three dimensions. Read full description at www.jason.org/ct.

Climate (Grades 6-8)

March 18, 2020 - Eastconn, Hampton

Come join us as we develop a systems model of climate and explore the interactions between humans and earth systems. Meet STEM role models ranging from NOAA climatologists to ocean explorers that are working to understand, monitor, and predict Earth's climate. Read full description at www.jason.org/ct.

Connecticut

Science Center

Wisit the web site of the Connecticut Science Center for a complete description of the exciting upcoming events at https://ctsciencecenter.org/visit/events/

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

REAL WORLD SCIENCE!

Applications are now being accepted for the 2020 cohort of Real World Science!

The Real World Science Summer **Teacher Seminar brings 28 teachers** who will be teaching science to 5th-8th graders in the following school year to our museum for a weeklong training experience. Two of the spots are reserved for Louisiana teachers, and teachers from public and public charter schools are accepted. The teachers learn best practices in science teaching and 3D instruction while being introduced to the Real World Science curriculum. It includes a trip to the **Laser Interferometer Gravitational** Observatory in Livingston, LA, and a field day doing water quality studies at City Park and Lake Pontchartrain. Teachers are reimbursed for flight expenses, and the museum provides hotel accommodations and most meals.

This year's cohort will join us in New Orleans from July 12th-18th 2020.

Applications are accepted from January 6th 2020 through March 13th 2020.

Apply here

(https://nationalww2museum.subm ittable.com/submit/155881/realworld-science-summer-teacherseminar-2020)

For more information, email realworldscience@nationalw w2museum.org



Information from Connecticut Center for Advanced Technology (CCAT) "What's So Cool About Manufacturing?" (WSCAM) Video **Competition: Open to high school** teams across the state. Teams are matched with local manufacturing partners to collaborate on the creation of a short video that explains what is so cool about manufacturing. Students have the opportunity to learn about STEM/manufacturing careers, and build meaningful connections with future employers. You can learn more about the program through the

website: https://ctdidi.com/programs/wscam/

Workshops for Educators on Manufacturing Careers sponsored by the **Connecticut Center for Advanced Technology**

- **Introduction to Manufacturing Careers for Educators**
- Introduction to Additive Technologies for Educators The world of manufacturing has exploded with advancements in 3D printing. Go beyond the basics of desktop 3D printing and learn the latest additive technologies used in aerospace, medical, sustainable energy and modern manufacturing industries to share with your students.



The Next Generation Science Standards and **Universal Design for Learning**





Visit the web site of the Connecticut Science

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

NATIONAL MARINE SANCTUARIES WEBINAR SERIES

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



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.