

**Advancing science, technology, engineering, and mathematics education for people of all ages.**



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## K-16 STEM in the NEWS

### Chase STEM Students Compete in 2018 Ohio Design Challenge

At the start of the 2017-18 school year, the Ohio STEM Learning Network (OSLN) joined with the American Heart Association to ask students statewide to put their knowledge and creativity toward ending heart disease by working in teams to find solutions to meet this daunting challenge. In May, more than 100 students from across Ohio traveled to Columbus to present their ideas of ways to improve heart health in their community in the Student Solutions Showcase.

According to OSLN, this year's event reached more students than ever and was the first statewide design challenge in Ohio that was open to elementary students. A group of first graders created exercise videos for their class. Another team generated plans for the creation of a local park devoted to heart health. Older students created scientific presentations, including a statistical analysis of the benefits of calorie counting against exercise.

Each participating school used a design challenge model. In this method, school leaders were able to help students create new ideas while tying the project to lesson plans in the classroom.

At Toledo Public Schools' Chase STEM Academy, students were placed into groups to brainstorm ways to improve heart health in their community. Each group was partnered with a mentor from the Chase mentoring program (with

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employees from area businesses) to problem solve, devise a strategy to obtain heart health, and ultimately use a form of media to convey their message to the public. A group of students who stood out from the rest decided that the obesity issue and helping children feel better about themselves would be a catalyst for their design of an app. They dubbed themselves the "Heart Divas" and created an app which illustrated how maintaining a healthy weight lowers the risk of heart disease. They gamified the app with an avatar that changed in size as the user reached a healthy weight, and also set goals with exercise options for the user. The project was meaningful for many of the students, several of which stated it was "life changing".

2,800 students from 19 schools across the state participated in the Student Solutions Showcase. The students from Chase STEM were the only participants from northwest Ohio and were featured in a news segment on the local ABC channel: <http://www.13abc.com/content/news/Chase-STEM--Academy-students-create-an-app-to-track-a-silent-killer-483379401.html>. These students also presented their design to the Toledo Board of Education.

At the showcase held in Columbus, the students were joined by representative of the American Heart Association, Battelle, the Ohio Department of Health, and the Ohio Secretary of State. Battelle, the science and technology organization that manages OSLN, hosted the event.

Speakers at the event included:

- Ohio Secretary of State Jon Husted
- Dr. Clint Koenig, Ohio Medical Director
- Dr. B.J. Hicks, President of the Columbus American Heart Association/American Stroke Association and a neurologist at Riverside Hospital
- Brenda Houston, Executive Director at the American Heart Association, Central Ohio
- Lou Von Thaer, Battelle President and CEO and
- Aimee Kennedy, Battelle Senior Vice President of Education, Philanthropy and STEM Learning.

For more information about OSLN, please visit: <https://www.osln.org/>

For more information about Chase STEM Academy, please visit:

<http://www.tps.org/find-your-school/elementary-schools/chase-stem-academy.html>

## **Community STEM in the NEWS**

### **Amy Boros Named Eco-Educator of the Year**

Mrs. Amy Boros, Science Teacher and Environmental Club Advisor at Perrysburg's Hull Prairie Intermediate School (HPI), has been awarded the Eco-Educator of the Year Award by the Science Alliance for Valuing the



Environment (S.A.V.E) at Lourdes University. She was recognized for her work with the HPI Environmental Club, Project PRAIRIE, monarch butterfly conservation and HPI Solar Eclipse Day.

Amy, who has been an educator for 23 years with 9 of those at Perrysburg schools, created and implemented an after school Environmental Club at HPI with thirty 5th and 6th graders who have been active in their school and community with environmental education, recycling and conservation efforts.



She was also instrumental in the installation of an urban prairie on the grounds of HPI. All 800 5th and 6th grade students have been learning about native plants and pollinators such as bees and butterflies found in prairies. The students have been introduced to Citizen Science Research and the conservation of native lands and pollinator species through a partnership with the Toledo Zoo.

Amy teaches 6th grade Science at HPI and has experience in classroom teaching at the elementary, middle school and collegiate levels; educational classroom technology, grant researching, authoring and evaluation, as well as educational consulting and conference presentations in both mathematics and science. She has taught for 23 years with 9 at Perrysburg.

The Science Alliance for Valuing the Environment (S.A.V.E) is an educational consortium for environmental sustainability. S.A.V.E. fosters a personal awareness and respect for the interrelatedness of ecology, spirituality, and sustainability. S.A.V.E. creates formal and informal life-long learning opportunities in collaboration with organizations at all levels-local, national, and global. S.A.V.E.'s activities are designed to empower individuals to values-based action for a just and sustainable world.

S.A.V.E. was established in August, 1990 by a group of concerned citizens who wanted to make a difference and promote a love and appreciation for our natural world. It is a non-profit 501(c) (3) organization. S.A.V.E. was recognized for its work by the National Environmental Awards Council, the Ohio House of Representatives, and the United Nations Conference on Sustainable Development.

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## STEM Opportunities

### Discovery! A Student Centered Conference

Discovery! A Student Centered Conference is an exclusive local conference drawing educators from Northwest Ohio together to talk about the student-centered changes they've made in their classrooms. In a student-centered classroom, the students and their needs are at the forefront, therefore students are also featured at Discovery! A Student Centered Conference. Several breakout sessions will feature students as co-presenters, and students will be active participants in the conference. This is a must-attend event for teachers looking for inspiration, to grow their professional learning network or to learn new ways to put learning into the hands of your students! For more information:



<https://www.eventbrite.com/e/discovery-a-student-centered-conference-tickets-45194989430>



## Science Education Council of Ohio

The Ohio chapter of the National Science Teachers Association

Science Education Council of Ohio (SECO) is looking for members to get involved in the 4 main SECO Committees: Membership, Professional Development, Communication and Conference Planning.

Interested in learning more? Contact SECO President **Angie McMurry** at: [mcmurry.angela@gmail.com](mailto:mcmurry.angela@gmail.com) or at (937) 760-1771.

Also, SECO needs volunteers at the Ohio State Fair and other events.  
Ohio State Fair: Wednesday, July 25th 8:00 am - 4:30 pm

For details, please see: <https://scienceeducationofohio1.wildapricot.org/>

### FirstEnergy STEM Classroom Grants

FirstEnergy supports classroom projects and teacher professional-development initiatives focused on STEM. To that end, the power company is accepting applications for its STEM grants program. Through the program, grants of up to \$1,000 will be awarded in support of creative classroom projects related to one or more of the STEM disciplines. Since the program was launched during the 1986-87 school year, more than a thousand educators and leaders of youth groups have received classroom grants.



Educators (pre-Kindergarten through 12) and youth group leaders in a community served by FirstEnergy's electric operating companies or in a community where the company has facilities are encouraged to apply.

See the FirstEnergy website for complete program guidelines and application instructions.  
[https://www.firstenergycorp.com/community/education/educational\\_grants.html](https://www.firstenergycorp.com/community/education/educational_grants.html)

### The Greatest Show (& Tell) on Earth!

Imagination Station and The Arts Commission are hosting a Mini Maker Faire in conjunction with Momentum, a three-day arts and music festival.

Toledo Mini Maker Faire is a celebration of the Maker Movement, a DIY community of tech enthusiasts, scientists, garage tinkerers, artists and inventors - anyone who uses their own wits and hands to innovate, hack, tweak and create!





Join the science center for this family-friendly day of fun, hands-on activities, creativity, arts and technology. Imagination Station will be open that day, and Mini Maker Faire events and activities will take place outside.

**When:** Saturday, September 15

**Where:** Downtown Toledo, Festival Park

<https://www.imaginationstationtoledo.org/toledo-mini-maker-faire>

## Ohio Department of Education/Fight the "summer slide"

Parents and summer caregivers can combat summer learning loss by encouraging students to access free online tools that promote reading and maintain math skills during the summer break.



<http://education.ohio.gov/Media/Ed-Connection/May-29-2018/Fight-the-summer-slide>



The 7th Annual STEM Forum & Expo, hosted by NSTA, is a unique, focused event that brings together (informal and formal) educators and representatives from exhibiting companies who are interested in, and who have tools and resources to share that will ensure successful implementation of STEM education into our schools and communities. It is intended to provide resources for educators and organizations seeking to learn more about STEM education, associated outreach programs, partnerships, schools, and curricula.

The **STEM Forum & Expo** will begin on **Wednesday, July 11**, and end on **Friday, July 13**.

<http://s6.goeshow.com/nsta/stem/2018/overview.cfm>

## 2018-2019 eCYBERMISSION Mini-Grant

On behalf of the U.S. Army Educational Outreach Program (AEOP), the eCYBERMISSION program is seeking Mini-Grant Applications for the 2018-19 academic year. The National Science Teachers Association (NSTA) administers the eCYBERMISSION competition for AEOP as part of the Battelle Consortium formed by the AEOP cooperative agreement awarded to the Battelle Memorial Institute.



eCYBERMISSION is a web-based science, technology, engineering, and mathematics (STEM) competition for students in grades six through nine. Students are challenged to compete virtually in state and regional competition and in-person through the National Judging & Educational Event (NJ&EE) while working as a team to solve problems in their community. Student prizes are awarded at the state, regional, and national levels by grade level.

**To apply for the mini-grant, please complete the 2018-19 Mini-Grant application in CVENT by October 17, 2018**

Teams may be formed and work can begin in April 2018. Team registrations will open in August 2018. Final Mission Folders projects are submitted online in February 2019.

Individual grantees are eligible to apply for up to three years of funding but must submit a new application each year.

For more information about eCYBERMISSION, please visit us at [www.ecybermission.com](http://www.ecybermission.com).

<https://goo.gl/5UuCtm>

## Lourdes Summer Science Camp 2018

The Lourdes University Center for Science Education and the Environment (CSEE), Department of Education, the Department of Biology and Health Sciences, and the Department of Chemistry & Physical Sciences are pleased to announce this year's Summer Science Camp - "WOW: Wonders of Water." The summer camp meets each day at the CSEE in St. Agnes Hall (SAH) located on campus grounds at 6832 Convent Blvd. in Sylvania. Lourdes University Education majors are designing and assisting with the delivery of the science camp curriculum.



### **WOW: WONDERS OF WATER**

Monday, June 25 - Friday, June 29

12:45 to 3:45 p.m. daily - \$110 per camper

Designed for students who will enter grades five through eight in Fall 2018

Young campers will Explore and Experiment the Wonders of Water using chemistry, physics and biology in Exciting new ways!

[Click here](#) to download a brochure (pdf)

## Google Science Fair is Back

Teachers play a huge role in encouraging students to share their ideas, big or small. Google Science Fair is back, and Google has created a full library of teaching materials and exercises focused on the problem-solving process to get ideas flowing. These materials have received an ISTE Seal of Alignment for Readiness, and are flexible enough to apply to virtually any subject or teaching style. Submissions will open in September, but classroom materials are available now:



<https://goo.gl/e29aUE>

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## NWO STEM Activity

### Ouch! Sunburn Science

**Grade Level: 2-8**

**What You Need:**

- UV beads (purchase through [stevespanglerscience.com](http://stevespanglerscience.com))
- Hand lenses
- Pencil/paper to record data
- Small plastic containers of sunscreen samples (3 different SPF sunscreens for each group labeled A, B, & C)
- Plastic bags, paper plates, trays (e.g., containers to hold beads)
- Markers
- A sunny day



**What To Do:**

1. Divide the students into groups of three or four. Each group receives 12-20 UV beads and hand lenses.
2. Ask each group to use their powers of observation to determine what these objects might be. Have each group record their observations.
3. Have each group share their observations. Write down their collective thoughts on a white board.
4. Now, give each group about 5 minutes to take the beads outside in the sun and observe what happens.
5. Return to the classroom and record the groups' observations alongside their first thoughts on the board (use a T-chart format).
6. Tell the class that these are special photosensitive beads. Ultraviolet rays from the sun turn the beads color.

Download a pdf of the complete hands-on activity by [clicking here!](#)

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### Share Your Story!

Thank you for your support of NWO, our programs, our activities, and our partners. Please send us updates, press releases, and news of STEM happenings at your school, district, or organization. Please submit to [nwo@bgsu.edu](mailto:nwo@bgsu.edu). We are always looking for great STEM education stories to feature in upcoming newsletters.

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