



Vol. 8 Issue #7

July 2016

In This Issue

K-16 STEM in the NEWS

Ohio You Be the Chemist
Champ Places Second in
National Competition

Community STEM in the NEWS

[Labrae High School In Ohio
Takes Top Honors At 2016
Envirothon Competition](#)

STEM Opportunities

[NWO Symposium 2016:
Presentation Proposals](#)

[Join us for STEM in the Park!](#)

[NCTM is Accepting Proposals
for the Following Programs...](#)

[Google for Education Expedition](#)

[STEM Investigations Using
TI-Nspire Technology](#)

[Ohio's Learning Standards in
Science and Model Curriculum](#)

[The ASM Materials Education
Foundation](#)

K-16 STEM in the NEWS

Ohio You Be the Chemist Champ Places Second in National Competition

On Monday, June 20, 2016, 39 participants from around the country made their way to the Kimmel Center in Philadelphia to compete in the **2016 You Be the Chemist National Challenge**.

The field was comprised of middle school students from 39 states, including Washington D.C. and Puerto Rico, who won their respective state qualifiers to advance to the National Challenge.

Ohio was represented in Philadelphia by the Ohio champion, Tom Schlomi, who took first place at the state challenge held in April at Bowsher High school in Toledo.

After 11 increasingly difficult rounds, Tom, who is home-schooled, finished in 2nd place after losing by a single question in a Championship Tiebreaker Round to 13-year-old Jevin Liu of Illinois.

Along with 2nd place, Tom earned a \$5,000 educational scholarship, a TI-84 Plus Calculator, a U.S. National Park Annual Pass, and a chemistry set.



At the National Challenge competition, participants explored the ways that chemistry is helping solve global challenges and how chemistry binds the human race together as global citizens. The program highlighted chemists and companies worldwide who are using chemistry in unique ways to advance human potential.

The program also celebrated the outstanding achievements of the students as they demonstrated their knowledge of chemistry, and was followed by a

[Learn with INFOhio!](#)

Celebration Reception, Dinner, and Award Ceremony at the historic National Constitution Center in Philadelphia.

[Integrated STEM Class for Ohio Teachers](#)

Congratulations to all students who participated in this year's National Challenge!

[Imaginations Station's Design Zone](#)

Get Involved in a Challenge for the 2016-2017 School Year

Teachers who missed out on the **You Be the Chemist Challenge** this year: the next Challenge cycle starts up with the next school year. To get involved, it is as simple as filling an inquiry form here: <http://www.chemed.org/programs/challenge/get-involved/>

[E4Tech: Engaging, Exciting and Empowering Educators through the T in STEM](#)

There is no participation fee, and experienced CEF staff members offer guidance through the entire process. The Challenge is open to students in grades 5-8 and organizers hope to expand to more states next year!

NWO STEM Activity

[The Science of the Summer Olympics](#)

The Chemical Educational Foundation® Free Resources

Free chemistry education programs are offered all under the name **You Be The Chemist**. CEF offers free professional development workshops to K-8 educators (You Be The Chemist Essential Elements) and also has 50+ downloadable chemistry activities to do at home (You Be The Chemist Activity Guides).

<http://www.chemed.org/>

Community STEM in the NEWS

Labrae High School In Ohio Takes Top Honors At 2016 Envirothon Competition

A five-member team of students from LaBrae High School in Leavittsburg, Ohio outscored 19 other teams at the 2016 Ohio Envirothon competition, held June 13th and 14th at Bowling Green State University.

"The Envirothon is a great hands-on learning experience for high schools students, educating youth on the importance of protecting the future of our natural resources," said Emily Heppner, Environmental Education Coordinator at the Ohio Department of Agriculture's (ODA) Division of Soil and Water Conservation. "The Envirothon is also a great networking opportunity for students to meet other students from across the state, and it introduces them to potential career opportunities in the field of natural resource management."

The victorious LaBrae High School students, under the leadership of teacher/advisor Craig Klotzbach are Maddie Cope, Caleb Hineman, Joey Jaros, Alexis Nubani and Tessa Smith. As first place winners, each team member and their advisor received a cash award of \$500, along with a plaque.



The Chardon High School team from Geauga County took second place, and the Sylvania Southview High School team from Lucas County placed third. Over 300 teams of students from across the state participated in local and regional competitions to earn the opportunity to be one of the 20 teams competing at the state event. On Monday, June 13th, teams were tested on natural resource categories such as forestry, wildlife, aquatic ecology and soils and land use. On Tuesday, June 14th they gave oral presentations before a panel of judges based upon this year's current environmental issue: Invasive species.



This year's competitors included Wynford, two teams from Fort Jennings, and Sylvania Southview from northwest Ohio; LaBrae, Boardman, Chardon, and United from northeast Ohio; Fort Frye, two teams from Granville, and Fredericktown from east-central Ohio; Russia, two teams from Centerville, and Upper Valley Career Center from southeast Ohio; and Amanda Clearcreek, Big Walnut, and two teams from Lynchburg Clay from southwest Ohio.

LaBrae will have the opportunity to compete at the North American Envirothon the last week of July. The contest will be held at Trent University in Peterborough, Ontario, Canada. To learn more, visit <http://www.envirothon.org/> or <http://ofswcd.org/>.

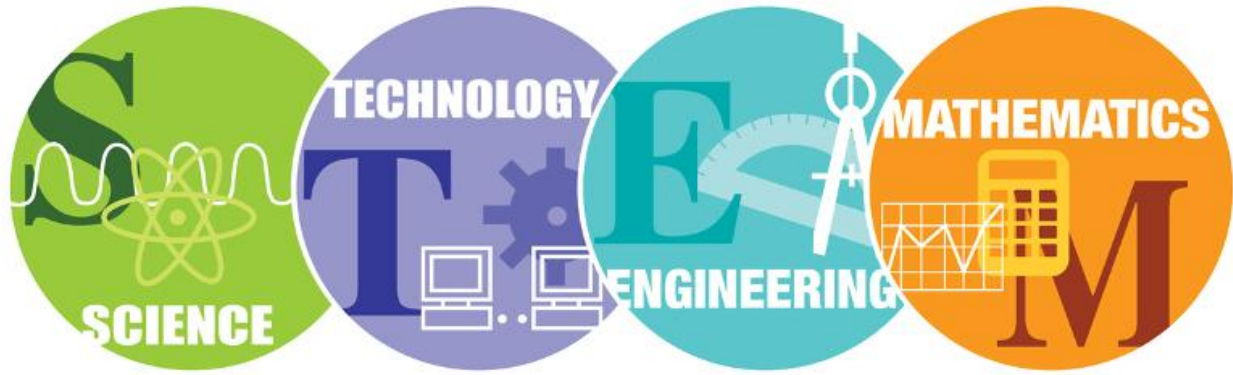
The Ohio Envirothon program is sponsored by the Ohio Federation of Soil and Water Conservation Districts and Ohio Department of Agriculture's Division of Soil and Water Conservation. Other major sponsors include Ohio Department of Natural Resource's Divisions of Wildlife and Forestry, Ohio EPA's Environmental Education Fund, USDA's Natural Resources Conservation Service, Farm Credit Mid-America, AgCredit of Ohio, Pheasants Forever, Glatfelter, Hiram College, Kokosing, Ohio Corn Marketing Program, Ohio Farm Bureau, and The Ohio State University School of Environment and Natural Resources.

This article is shared with permission from the Ohio Department of Agriculture

[\[back to top\]](#)

STEM Opportunities

NWO Symposium 2016: Presentation Proposals Due Sept. 26



Northwest Ohio Symposium on Science, Technology, Engineering, and Mathematics Teaching

Saturday, November 19, 2016

8:30 AM - 4:00 PM

Olscamp Hall, Bowling Green State University
Bowling Green, OH 43403

Featuring the 2016 keynote speaker:

Dr. Jodi Haney

BGSU, Professor Emeritus

NEW Strand for 2016! Extended Day STEM: Supporting After School Programs

Sessions in this strand will focus on developing and implementing STEM learning environments in after school programming.

Presentation Proposal Information

We invite submission of proposals for presentations at the 2016 NWO Symposium on Saturday, November 19th at Bowling Green State University. To submit a presentation proposal, please click the link below and complete the online form. Please review the Symposium Strands listed on the web site; you will need to choose one of these strands for your presentation.

[Click Here To Apply by September 26](#)

All presentation proposals must be submitted by SEPTEMBER 26th at 5:00PM. Beginning September 27, NWO staff will review the proposals and notify prospective presenters if their proposal has been accepted. Accepted presenters will not be charged a registration fee.

For more information visit the Symposium website at: bgsu.edu/nwoSymposium

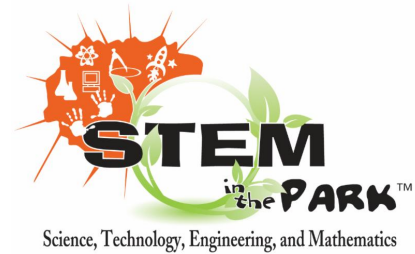
Questions? Contact nwo@bgsu.edu

Join us for STEM in the Park!

Saturday, September 24, 2016, 10:00am - 2:00pm
in the Perry Field House @ BGSU.

A free event for all northwest Ohio families and the entire community.
STEM in the Park features:

- Four hours of engaging, hands-on STEM activities from over 60 area businesses, schools and organizations,
- Free lunch and other refreshments (while supplies last),
- Free take-home activities,
- Free STEM materials, and best of all:
- Fun for the whole family!



Visit the website for more info at www.STEMinthepark.org

NCTM is Accepting Proposals for the Following Programs...

Pre-K-6 Classroom Research Grants program, which is designed to support and encourage classroom-based research in precollege mathematics education in collaboration with college or university mathematics educators.

Through the program, grants of up to \$6,000 will be awarded to mathematics educators or classroom teachers currently teaching mathematics at the pre-K-6 grade level. To be supported by a grant, the proposed research must involve a college or university mathematics educator and one or more classroom teachers teaching at the pre-K-6 level. <http://www.nctm.org/Grants-and-Awards/Grants/Pre-K-6-Classroom-Research-Grants/>

Connecting Mathematics to Other Subject Areas Grants (9-12)

The purpose of this grant is to create senior high classroom materials or lessons connecting mathematics to other fields. For 2017-18, grants with a maximum of \$4,000 each will be awarded to persons currently teaching mathematics in grades 9-12. Materials may be in the form of books, visual displays, computer programs or displays, slide shows, videotapes, or other appropriate medium. The focus of these materials should be on showing the connectivity of mathematics to other fields or to the world around us.

[http://www.nctm.org/Grants-and-Awards/Grants/Connecting-Mathematics-to-Other-Subject-Areas-Grants-\(9-12\)/](http://www.nctm.org/Grants-and-Awards/Grants/Connecting-Mathematics-to-Other-Subject-Areas-Grants-(9-12)/)

Google for Education Expedition

Expeditions is a new educational tool that allows teachers





to take their students anywhere in the world. From the Expeditions app, a teacher is able to send synchronized three-dimensional 360° panoramas to each student's Cardboard viewer, pointing out areas of interest in real time and instantly pausing the trip when needed. Used in conjunction with existing lessons and curriculum, Expeditions immerses students in experiences that bring abstract concepts to life and provide a deeper understanding of the world beyond the classroom.

<https://www.google.com/edu/expeditions/#about>

STEM Investigations Using TI-Nspire™ Technology

A Texas Instruments dynamic handheld device for the STEM, science & math classroom, lab & field.



August 8-10, 2016 | 8:30 a.m. to 3:30 p.m.

Designed for middle grades and high school science and mathematics classrooms, this workshop explores:

- STEM Content
- Experimental and Engineering Design processes
- Data Collection and Analysis procedures
- Mathematical Modeling

Cost:

- \$300 (Workshop without TI technology)
- \$350 (Workshop with TI-Nspire™ CX or TI-Nspire™ CX CAS Handheld with TI-Nspire™ Teacher Software)
- Group discounts available

Location:

Oiscamp Hall, Room 208
Bowling Green State University
Bowling Green, OH 43403

Contact:

Jenna Pollock
Northwest Ohio Center for Excellence in STEM Education (NWO)
419.372.2739 | jpollock@bgsu.edu

<https://education.ti.com/en/us/professional-development/summer-workshops>

Ohio's Learning Standards in Science and Model Curriculum

<http://education.ohio.gov/Topics/Academic-Content-Standards/Science>

Standards Revisions

Ohio's Learning Standards update for English language arts and Mathematics is in process. The standards update for Social Studies and Science will begin this fall with the assistance of stakeholders statewide. Educators, parents and community members will submit suggestions with the release of the ODE Science Standards Survey. An advisory committee composed of representatives from educational organizations will provide direction to the working groups for the revisions of the standards and review their submissions to ensure they meet the stated charge. The standards revision working committees will complete the work outlined by the advisory committee. Applications for serving on the working committee can be found on the ODE Website.

Please note that NWO's Education Program Manager, Jenna Pollock, currently serves as a Science Network Regional Leader (NRL) for ODE.

The NRL's are a group of educational professionals throughout Ohio who provide local, regional, or state level leadership and assist districts, schools and other educational institutions by:

- Supporting the implementation of Ohio's Learning Standards,
- Sharing and modeling standards-based best practices for instruction and assessment, and
- Creating and revising resources for curriculum, instruction and assessment, as well as other ODE initiatives.

Regional leaders were selected based on content expertise, professional knowledge, experience, leadership ability and potential, demographics and location. The NRL's meet on a quarterly basis and serve as a liaison between the Ohio Department of Education and the field.



The ASM Materials Education Foundation supports educators involved in materials, science, and engineering through a free 40-hour materials science workshop called the ASM Materials Camp®-Teachers. STEM teachers can exchange ideas in the Educators Forum, can access grant funding for classroom projects, and be nominated for educator awards.

Teachers Camp , K-12 Educator Grants, and Educator Resources:

- The ASM Materials Education Foundation sponsors 20 \$500 grants annually for teachers. The purpose of these grants is to enhance awareness of materials science and the role of materials scientists in society.

Educator Resources:

- View helpful resources for educators to develop successful curriculum or lesson plans.

Questions, please contact: asmmaterialscaampteacher@asminternational.org

or visit: <http://www.asminternational.org/about/foundation/teachers>

Learn with INFOhio!

INFOhio's **FREE Professional Development offerings** are an easy way to fulfill required contact hours while learning about great resources and tools to use with students and colleagues.



Re-Boot with INFOhio's Annual Boot Camp: Diagnose, Discover and Restart! Gear up and get organized for your school year with INFOhio's free annual day of online professional development. In these live webinars, connect with INFOhio to learn to teach coding with dynamic sessions as well as learning to use infographics to support the school library. Also learn about new tech tools to use in the library and how to implement "genius hour".

August 2, 2016 9:00 am to 4:00 pm

<https://www.eventbrite.com/e/re-boot-with-infohio-boot-camp-registration-25273341244>

Integrated STEM Class for Ohio Teachers

The Discovery Center will be offering a new, iDiscovery 2.0 professional learning Advanced Explorations course for Fall 2016. The Ohio Learning Standards Advanced Explorations STEM K-8 course maintains key features of past iDiscovery workshops (e.g., 100% virtual participation, alignment with teachers' specific needs) but will provide more rigorous support for mastery of advanced topics in STEM content and pedagogy. The course is available to Ohio educators only.

The date of the class are from **August 18 through December 2, 2016**.

The location is Online via iDiscovery's Virtual Platform. <https://www.idiscovery.org/>

The cost is \$220.00 (program fee / graduate school registration) Participants will earn either 2 or 3 semester hours of graduate credits from Miami University, dependent upon previous participation in an iDiscovery course.

Please note that a limited number of course sections will be offered, so sign-up as soon as possible!

Registration will be first come-first served, and ends July 31, 2016.

. *Priority will be given to teachers from high-need districts/schools.

For registration/enrollment information, please contact Ms. Jean Richardson, Assistant Director, iDiscovery, at richarj@MiamiOH.edu



Discover the fun behind the design. What does it take to create a video game, line up rhythms like the best DJs or design a roller coaster that produces the biggest thrills? Go behind the scenes and explore how video game developers, music producers, roller coaster designers and other creative problem solvers use math and science to create something amazing!

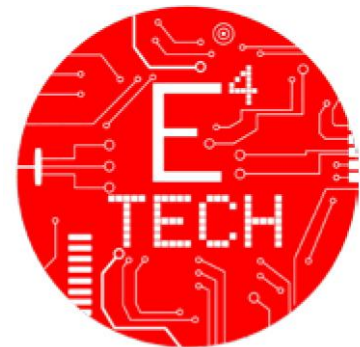
Imaginations Station's Design Zone is a highly interactive, hands-on exhibition where you can explore the wide array of creative concepts to learn the processes and tools needed to create a successful design. Separated into three thematic zones - art, music and engineering - there's an activity for every interest. The exhibition as a whole highlights the importance of science and mathematical thinking in areas critical to building creativity and innovation.

For more information: <http://goo.gl/4rwpHq>

E4Tech: Engaging, Exciting and Empowering Educators through the "T" in STEM

Register today to bring Computer Science into the classroom next year! E4Tech is currently recruiting up to 30 teachers to participate in this innovative program.

E4Tech is a professional development initiative for Grades 3-4 educators that utilizes TECH CORPS (TC) curricula and the professional development expertise of the Teaching and Learning Collaborative (TLC) to engage, excite and empower educators in the effective integration of computer science into the mathematics and science classroom. In this E4Tech Mini project, lessons are designed to emphasize mathematics through a computer science curriculum focused on Programming/Coding. The E4Tech curriculum aligns to Ohio's Learning Standards and the National CSTA (Computer Science Teachers Association) K-12 Computer Science Standards.



[\[back to top\]](#)

NWO STEM Activity

The Science of the Summer Olympics

The upcoming Summer Olympic Games provide many opportunities for students to learn about the science of sports, athletes and their incredible physicality, and the many other countries that participate in the Olympic Games. Listed below is a sampling of activities with an Olympic theme. As well, NBC Learn offers teachers a multitude of free resources on their website: <https://www.nbclearn.com/science-of-the-summer-olympics>



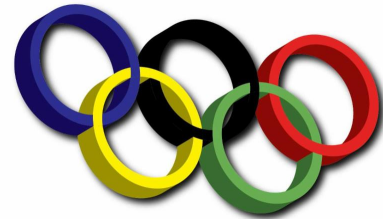
Olympic Science Lessons:

Fire-Bearer

Ask students if they were tasked with keeping the Olympic torch lit as runners brought it through their state, what materials would be needed to sustain the fire? What material would make the base that the runner will have to hold? Ask the students to explain why those materials are the best choice.

BodyWorks

Olympians' bodies work like well-oiled machines. After reviewing the different body systems, assign students a relevant body system (individually or in groups) to explain how that body system contributes to the athlete's ability to compete.



- Circulatory System (heart, blood, vessels)
- Respiratory System (nose, trachea, lungs)
- Immune System (many types of protein, cells, organs, tissues)
- Skeletal System (bones)
- Excretory System (lungs, large intestine, kidneys)
- Urinary System (bladder, kidneys)
- Muscular System (muscles)
- Endocrine System (glands)
- Digestive System (mouth, esophagus, stomach, intestines)
- Nervous System (brain, spinal cord, nerves)
- Reproductive System (male and female reproductive organs)

Going the Distance

Adjust equation problems dealing with speed, distance, velocity and acceleration according to Olympic statistics.

[\[back to top\]](#)

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. We are always looking for great STEM education stories to feature in upcoming newsletters.

Join NWO on [Facebook](#)

Follow NWO on [Twitter](#)

eNewsletters from the past!

Looking for past articles from our eNewsletters?

[Click here](#) view and download from our **eNewsletter** archives.



NWO/COSMOS, 241 Math Science Bldg., BGSU, Bowling Green, OH 43403-0212

[SafeUnsubscribe™ {recipient's email}](#)

[Forward email](#) | [Update Profile](#) | [About our service provider](#)

Sent by nwo@bgsu.edu in collaboration with



Try it free today