



Vol. 7 Issue #10

October 2015

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STEM In The Park Is Moving Full STEAM Ahead!

The sixth annual "STEM in the Park," a free, family day of hands-on STEM fun at Bowling Green State University, was held on Sept. 27 and drew another record crowd of over 4,300 people from all over northwest Ohio and southeast Michigan. The theme for this year event was: "STEM in the Park is moving full STEAM ahead - Science, Technology, Engineering, and Mathematics meet up with the Arts!" This year featured an expansion into the arts with an activity station from the Toledo Museum of Art and musical groups performing throughout the event to highlight the important and vital relationships between Science, Technology, Engineering, and Mathematics with the Arts and indeed, with virtually all aspects of human activity.

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The 2015 event also grew from over 100 to 144 activity stations, with many new exhibitors and stations facilitating multiple hands-on STEM activities. "STEM in the Park" also provides free lunch for everyone catered by local favorite Tony Packo's and activity cards and takeaways to extend the learning at home. The activity cards from this year's event can be found at: <http://cosmos.bgsu.edu/STEMinPark/activitycards.htm>.

A local teacher who brought a group of students stated, "Thank you for encouraging myself and my students to attend. It was a first for most of us. The experience was amazing! There was so much to do. It was organized very well and the staff was amazing."



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Activity Station hosts included BGSU's Marine Lab and Herpetarium, Verizon, Toledo Botanical Garden, Challenger Learning Center of Lake Erie West, Imagination Station, ERG Environmental Services, Nature's Nursery, and the Toledo Zoo, plus more than 80 other institutions and organizations. A full list of exhibitors and their activities can be found at: <http://cosmos.bgsu.edu/STEMinPark/activites2015.htm>.



Participants at the 2015 event to encountered Rexie the T Rex, made ice cream, operated a robot, launched pop rockets, held reptiles, measured their accuracy in their favorite sports and much more.

The "Science of Sports" and the "Roots to STEM Pre K-2" zones returned this year featuring activities specific to the zone themes. A new addition this year was the "STEM Stage" that featured large-scale demonstrations hosted by Imagination Station and the Toledo Zoo.



"STEM in the Park" is the brainchild of Drs. Emilio and Lena Duran, both faculty members in BGSU's College of Education and Human Development. Inspired by "Literacy in the Park," an on-campus spring event that brings families in for a variety of literacy-boosting activities, "STEM in the Park" seeks to increase public engagement in the STEM disciplines. "Once again, it is a true pleasure and privilege for our BGSU family to be able to provide people of all ages in our community and all over northwest Ohio and beyond with enjoyable and engaging opportunities to participate in hands-on STEM learning," stated Dr. Emilio Duran. Dr. Lena Duran added, "What a great day to be a proud BGSU Falcon! We are very fortunate to have a fantastic and passionate group of individuals as part of our team."



The Northwest Ohio Center for Excellence in STEM Education (NWO) at BGSU, organizes the free event on campus for the entire northwest Ohio and southeast Michigan community. NWO is a partnership among a number of area universities, K-12 schools, and community partners who all come together at this event to showcase innovation and educational opportunities and promote positive attitudes toward STEM teaching and learning.



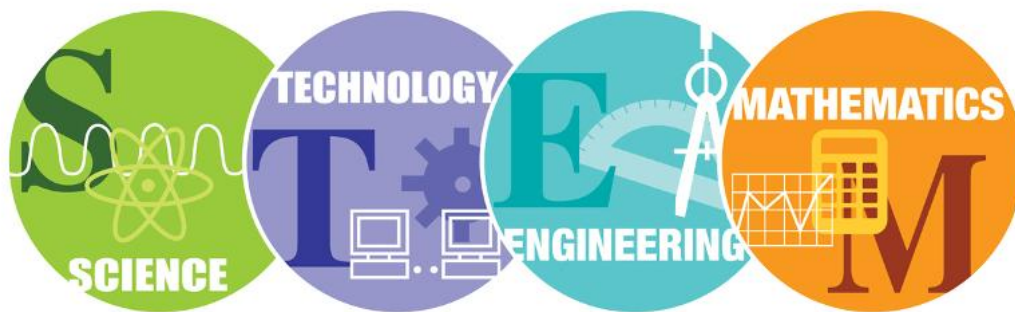
According to Jenna Pollock, NWO Education Program Manager, "NWO is committed to increasing attendance among low-income and at-risk children. For the fourth consecutive year we provided transportation for families from several school districts in urban and low-income neighborhoods."

"**STEM in the Park**" Presenting Sponsors for 2015 were BGSU, BP, First Solar, Lubrizol, and Verizon. Community Sponsors included Carolina Biological, Hanson Digital Agency, John Deere, Perrysburg Rotary Club, Spectra, Thayer, and Walmart, and the Bowling Green Community Foundation. Cooper Tires, K12, Kroger, SSOE and Tony Packos comprise the General Sponsor list.

NWO staff is extremely grateful for the many volunteers and support from BGSU.

STEM Opportunities

Announcing the 2015 NWO Symposium on STEM Teaching



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

A local professional development conference for PreK-12 teachers, administrators, pre-service teachers, college faculty/staff, and informal educators.

Featuring a keynote presentation by BGSU Professor of Teaching Excellence, Dr. Daniel Brahier!

A passionate and dedicated educator for 27 years, Dr. Brahier continues to have a tremendous impact on mathematics education nationwide. He has written several books, including the top-selling textbook for middle and high school mathematics teacher preparation, and is the co-author of *Principles to Action*, an NCTM-published guidebook centered on mastering teaching practices with core principles for today's educators.

Dr. Brahier has taught mathematics and science at many levels during his career. He currently teaches mathematics education courses at BGSU, and serves as the Director of Science and Math Education in

ACTION, a program designed to train STEM teachers in current and effective teaching methods.

Saturday, November 21, 2015 at Bowling Green State University from 8:30 AM - 4:00 PM.

Online registration is now open! [Click here](#) to for more info. and to register.



Teachers/Administrators: Please pass this information on to students who may be considering careers in teaching science and/or mathematics...

Four-year scholarships are available at Bowling Green State University for incoming freshmen considering careers in teaching science and/or mathematics. This unique program called **Science and Math Education in ACTION** offers recipients nearly \$20,000 over four years (based on continued state funding)!

High school seniors considering teaching either secondary science or math OR middle childhood science and math may be eligible for this scholarship program.

The basic criteria for consideration includes:

1. Ohio resident
2. Incoming freshman fall 2015
3. Minimum high school GPA of 3.0*
4. Recommended minimum ACT 23*
5. Considering a career teaching science and/or mathematics

*Most ACTION scholars are well above these minimum requirements.

The deadline to apply for Fall 2016 is January 15, 2016.

In addition to four-year scholarships, the ACTION program also offers unique opportunities for students such as a month-long Summer Bridge program to prepare incoming freshmen for college, personal interactions with faculty, involvement with science or math research projects, and real-world, hands-on experiences in science and math.

For more details and an application, go to www.bgsu.edu/action. For additional questions, please call 419-372-6561 or e-mail action@bgsu.edu



Teachers/Administrators: Please pass this information on to students who may be considering careers in the area of STEM disciplines...

Four-year renewable scholarships are available at Bowling Green State University for incoming freshmen considering careers in STEM disciplines. The AIMS Program offers up to \$22,000 in scholarships.

The objectives of the AIMS Program are to develop a pipeline of high school students who matriculate at BGSU and pursue careers in STEM fields. To increase the number of well-prepared underrepresented minority and women graduates who major in mathematics, sciences and technology. To increase the number of underrepresented minority and women graduates who obtain terminal degrees in these fields.

Admissions Requirements:

1. Incoming Freshmen
2. Minimum high school GPA 3.0* (preferred)
3. Recommended ACT Score 21*
4. Considering a STEM field

The deadline to apply for Fall 2016 is January, 15, 2016

Benefits of AIMS Program:

- Four-year renewable scholarships
- Exploration of career paths and self-assessment of interests
- Free tuition, room and meals for the summer residential program
- Early exposure to the college experience and courses
- Broad science exposure via mini-courses and lab experiences
- Opportunities to meet professionals in research, industry and education
- Interaction with faculty mentors who are established and accomplished in their respective fields
- Undergraduate research opportunities
- STEM fields offer competitive salaries and rewarding careers

For more details and an application, go to www.bgsu.edu/aims. For additional questions, please call 419-372-5401 or e-mail Chris Mitchell at cmitch@bgsu.edu

2016 SECO Annual Conference - Call for Proposals

This year, the SECO annual conference sessions will focus on Ohio's Learning Standards For Science and how to successfully implement and assess them. The goal of the Ohio Science Institute is for participants to learn specific information about science education that pertains to their grade level and content area. Instructional and assessment practices reflecting Ohio's Cognitive Demands for Science will be highlighted in all strands. **The Institute will be held at the Columbus Hilton at Easton, on January 25-26, 2016.** Registration for this event will open soon!



For on information on **Conference Focus Strands** and **Guidelines for Session Proposals** please download a flyer [here!](#)

NSTA Columbus Area Conference - Save The Date!

Champions of Science: A Game Plan for the Future!
December 1-3, 2016



THEME: Champions of Science: A Game Plan for the Future!

Don't delay-submit a session proposal for NSTA's 2016 Columbus Regional Conference today!

The **deadlines for submissions is January 15, 2016** for the Columbus Regional Conference. For more information and to submit a proposal go to: <http://www.nsta.org/conferences/sessions.aspx>

Please note that this information is for teacher sessions only. If you wish to submit an exhibitor workshop for one of the above conferences, please visit the NSTA Exhibitor Page.

For on information on **Conference Focus Strands** please download a flyer [here!](#)

Leopold Education Project Educator Workshop

Saturday November 14, 2015
9:00 a.m. to 4:00 p.m.
Wildwood Preserve Metropark - Metroparks Hall

The Leopold Education Project (LEP) is an innovative, interdisciplinary conservation and environmental education curriculum based on the essays in A Sand County Almanac. Originally created by a Wisconsin high school science teacher, LEP uses Leopold's writings as a springboard for engaging students in



**METROPARKS
 TOLEDO AREA**
Your Clean, Safe, Natural Places To Be

Your Clean, Safe, Natural Places To Be

natural science curriculum. Co-sponsored with Wood- Lucas Pheasant's Forever.

Reservations needed by Nov. 5th

Fee: \$ 20.00

www.metroparkstoledo.com to register click proper date on program calendar or for more information contact Kim Kaseman at kim.kaseman@metroparkstoledo.com

Who should attend?

Formal and non-formal (e.g. homeschool), natural resource professionals, conservation employees, Environmental Learning Center educators, 4-H and Scout leaders, - anyone interested in learning about fostering a relationship between youth and the natural world.

The National Academy Of Engineering is Pleased To Announce The Annual EngineerGirl Essay Contest

The National Academy of Engineering invites students (**both boys and girls**) in grades 3-12 to submit an essay about how they would protect the environment and the safety, health, and well-being of the public as a responsible engineer.



Cash prizes of \$500, \$250, and \$100 are available for the best essays in each of 3 age categories. Submit your essay by February 1, 2016 at 6:00 pm EST.

Find out more at: www.engineergirl.org/2016contest.aspx

The National Council Of Teachers Of Mathematics Accepting Applications

The National Council of Teachers of Mathematics is accepting applications for Engaging Students in Learning Mathematics grants for grades 6-8 teachers.



The purpose of the grant is to incorporate middle school classroom materials or lessons that actively engage students in tasks and experiences that deepen their connection to mathematics. For 2015-16, grants of up to \$3,000 will be awarded to persons currently teaching math in grades 6-8. Materials may be in the form of books, visual displays, slide shows, videotapes, or other appropriate medium.

For more information on this and other NCTM opportunities, please visit: [http://www.nctm.org/Grants-and-Awards/grants/Engaging-Students-in-Learning-Mathematics-Grant-\(6-8\)](http://www.nctm.org/Grants-and-Awards/grants/Engaging-Students-in-Learning-Mathematics-Grant-(6-8))

The Dupont Challenge 30th Anniversary!

The Dupont Challenge Science Essay Competition began 30 years ago to honor the brave crew of the ill-fated Challenger space shuttle mission, which was to include the first teacher in space. Their memory lives on today through the thousands of students who pursue scientific excellence through their essays each year.



It's a very special and exciting time in the competition's history, and we want to share it with as many middle and high schools as we can. Help us make this the biggest year yet by spreading the word and taking The Dupont Challenge!

For more information Visit: <http://thechallenge.dupont.com/essay/>

Battelle For Kids Rural Education Forum

Rural Education National Forum was created to bring rural education leaders together to help reshape the rural economy, enrich the quality of life, own the future of learning, and prepare communities to be successful in a highly competitive, complex, and ever-changing world.

The logo for Battelle for Kids, featuring the text "Battelle for Kids" in white on a blue rectangular background.

In partnership with the **Ohio**, **Kentucky**, and **West Virginia** Departments of Education, Battelle for Kids is pleased to host the third annual Rural Education National Forum, an interactive learning and collaborative experience for rural leaders.

<http://www.battelleforkids.org/events/rural-education-forum>

The logo for Google for Education, featuring the word "Google" in its multi-colored font followed by "for Education" in a grey sans-serif font.

Google Education publishes a monthly newsletter, chock full of tips for the classroom. [Click here](#) to check it out!

Ohio STEM Learning Network

"Science Like Sherlock"

Battelle Education Literacy Design Collaborative Science instruction for science teachers. Battelle scientists

have created science and literacy instruction for the collection. Mini-tasks for students were created as a part of Battelle's work to create a [collection of LDC science modules](#). [Sign up](#) to be notified when these prototypes are released.

21st Century STEM: Integrate To Innovate Conference In Phoenix

Special Pre-Conference Activities, January 21, 2016
General Conference Sessions, January 22-23, 2016

Join renowned STEM leaders and speakers including: HadiPartovi, Code.org; Elizabeth Holmes, Theranos; Jaime Casap, Google Education; and Jo Anne Vasquez, Ph.D, Author STEM Essentials.



**21st Century STEM:
Integrate 2 Innovate**
A Conference Designed by Teachers for Teachers

The conference strands include: Integrating & Innovating STEM across the Curriculum; Making the Case for STEM: How to implement a STEM Program by connecting STEM practices to core curriculum content and approach and ensure effectiveness instruction; STEM Pipeline: Preparing the Workforce for Tomorrow - The importance of preparing students for STEM professions; and STEM Student Showcase: STEM in action - showcasing of effective projects/ programs.

For more information: <http://arizona-stem-collaborative.org/21centurystem/about/>

Appold Planetarium At Lourdes University

The stars are shining brighter than ever at the Appold Planetarium at Lourdes University! Computers and projection equipment were upgraded this summer resulting in significantly higher resolution and clarity. The Appold Planetarium is a popular field trip destination for students of all ages. Students become astronauts exploring planets, moons, galaxies, and even black holes! Interactive programs meet Ohio Academic Content Standards. The Appold Planetarium is affiliated with both the NASA Museum Alliance and the NASA Space Place which has honored the planetarium for its outreach programs.



For more information please call 419-517-8897, email planetarium@lourdes.edu. For a full list of programs visit: www.Lourdes.edu/TeachStars

Free Professional Learning Community On STEM Learning: Full STEAM Ahead

Work together to help students grow into better learners today and better leaders tomorrow - with STEM lessons, experiences, and project-based learning that expand their collaboration, communication, and

creativity skills. Members of the community receive:

- Invitations to free webinars
- Free CE certificates
- Access to a resource library
- Online discussion forums

Visit: [STEM Learning](#)

Samsung Solve For Tomorrow Contest

To excite students about the possibilities of STEM education, Samsung started the Solve for Tomorrow education contest, giving schools across the U.S. the opportunity to raise interest in STEM subjects among students by awarding their schools with a share of over \$2 million* in technology products.



<http://www.samsung.com/us/solvefortomorrow/home.html>

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NWO Hands-On STEM Activity

*This month's STEM activity features one of the many exhibitors that was at this year's **STEM in the Park**. More fun activities from STEM in the Park can be found on our website at: www.nwocenter.org/STEMinPark*

Build a Foam Rocket

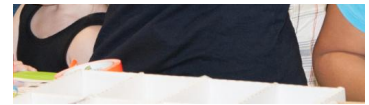
This month's Hands-on Activity is from Challenger Learning Center of Lake Erie West sponsored by the ESC of Lake Erie West

What To Do

1. Get a foam tube.
2. Cut 12 cm strip of duct tape. Cut it in half lengthwise.
3. Place the rubber band about halfway on top of one strip of duct tape.
4. Place the other strip over the top of it.
5. Tape the rubber band launcher to the top of the tube (where there is no slits).
6. Add tape around the nose to strengthen the attachment.
7. Get to fins and slide them together.
8. Slide the fins into the slits.
9. Close the fin slits with a narrow strip of tape.



10. Place your finger in the loop of the rubber band and pull back on the rocket to launch it.



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

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Find Even More Ohio STEM Education Resources

Visit our STEM clearinghouse, nwostemresources.org, for more STEM activities, programs, and information.

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