



Vol. 9 Issue #1

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K-16 STEM in the NEWS

Maumee Valley Country Day School Announces Strong Finish for the Robotics Team in Fargo, ND Competition

The MVhawks Robotics team traveled to Fargo, ND, for the regional BEST Robotics competition last month and attained their strongest finish yet. This is the 3rd time the MVCDS team attended the regionals in their four years participating in the BEST Robotics program. Team mentors Phil Paskvan and Kevin Tolles, took 31 of the 33 member team to the competition over a four day period.

While the flashiest part of the competition involves robots, the lion's share of work covers the marketing of the robot, a tradeshow booth, a school spirit component, and an engineering notebook that serves as documentation of the



entire season's science and engineering processes. The notebook alone is worth 30% of the total score!

The scoring of this year's robot challenge was a satisfying 12th place out of 35 teams. This was MVCDS's first time making it to the semifinals in Fargo. The team also picked up 2nd place for most photogenic robot and 3rd place for the team mascot.



The team went to Fargo after earning a 3rd place spot in the local Falcon BEST robotics

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competition held at BGSU. This was a big deal for the team because the composite scoring of the entire team earned the spot, not just the robot challenge. It was a true group effort.

Maumee Valley Country Day School, 1715 S. Reynolds Rd., Toledo, Ohio offers education to children from preschool through grade twelve.

www.mvcds.org**NWO STEM Activity**[Make a Barometer](#)

Other schools from northwest Ohio that participated in the regional competition at Fargo included: Cardinal Stritch Catholic High School, Millstream Career Center, Port Clinton High School, St. Francis de Sales School, and St. Ursula Academy. We will feature information about their experiences in future editions of e-news.

Community STEM in the NEWS**Million Women Mentors Achieves Goal and Participates in National Mentoring Month**

Leadership in MWM has increased the goal to 2 million by 2020. In response to these pledges, there have been over 650,000 completed STEM mentoring relationships counted. The MWM Movement has grown over the past three years by bringing together leaders throughout the country with the shared goal of attracting, developing and retaining more women in the STEM workforce through high-quality mentorships.



"Milestone of 1 million is achieved because of all those engaged with Million Women Mentors; we salute you for believing we can change the lives of women and girls in great STEM careers through mentoring, sponsorship, internships and support," Edie Fraser, CEO of MWM, shared.

Representatives from industry, higher education, government and nonprofit organizations have joined the movement securing 50+ national sponsors and many others on the state committees, 39 state committees, 80+ non-profit partners, and engaging a number of Governors and Lieutenant Governors to serve as the honorary chairs.

The 1,000,000 was reached through the concerted efforts of many organizations with special recognition to those members responsible for the MWM technological component and others. These include TATA Consultancy Services (TCS), Science Olympiad, Mind Research, FIRST and many others. Leading sponsor corporations include BP, Cisco Systems, Walmart, PepsiCo, Johnson & Johnson, Intel, Sprint, and others. National nonprofit partners participating also include Mentored Pathways, Girls Scouts, National 4-H Council, AAUW, ORAU, and Girls Inc.

Million Women Mentors is also participating National Mentoring Month this month. Visit the Million Women Mentors website to share a story of mentoring activities or make a pledge to mentor women and girls in STEM study and careers.

Please visit: <http://www.millionwomenmentors.org/> to learn more!

Million Women Mentors aims to increase female participation in the STEM workforce by providing a national platform to engage industry, government, and implementation partners. It seeks to tap into the tremendous human capital potential of the nation's employers to excite, inspire, and recruit the next generation of STEM professionals. The Northwest Ohio Center for Excellence in STEM Education at BGSU is one of the many higher education institutions who are a part of this movement.

The Ohio Science Olympiad, also an MWM participating organization, will hold its regional tournament at BGSU on March 18, 2017 and more information can be found at: <https://ohso.osu.edu/regional-tournaments>.

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STEM Opportunities

WGTE Classroom Changemakers/Educators

PBS Digital Innovators set the bar for thoughtful tech integration in the classroom are K-12 educators who are not defined by the gadgets they



use, but by the unique way they approach education. PBS is looking for educators who love what they do and who have found creative and thoughtful ways to integrate technology and digital media in their instruction. PBS Digital Innovators receive ongoing professional development, opportunities to share their ideas in national setting, and all expense paid trip to San Antonio for PBS Digital Innovators Summit and the ISTE conference.

Deadline Feb. 14 more information and register: www.pbs.org/education/digitalinnovators

Xcite Learning Project Based Learning Workshop

Project Based Learning [PBL] integrates your curriculum: Science, Mathematics, Social Studies, and Language Arts!

Project Based Learning (PBL) 101 & 201
[Grades PreK -12, multidisciplinary focus]

February 16 & 17

The 577 Foundation, Perrysburg, OH
8:30 - 3:00 pm



PBL 101: Examine PBL as a powerful and effective inquiry-based and interdisciplinary learning framework. This workshop is for teachers of all disciplines, not just science! TEACHING TEAMS are highly encouraged to attend together, but individual teachers will also benefit. First time participants receive a PBL Design book and access to PBL classroom materials and resources.

PBL 201: Teachers who have previously attended this workshop are encouraged to COME AGAIN! You and your team will participate in a "writer's workshop" in place of many of the PBL 101 sessions, allowing you to create new PBL units for your students.

COST: \$300/participant

[Team Discounts. \$275/participant for school districts sending 2+ to the workshop]

Each Participant Receives:

- The PBL Starter Kit, the leading Buck Institute on Education (BIE) "how to" book to guide classroom design and implementation
- CEU Certificates [14 contact hours]
- An OPTION to earn 1 graduate credit hour thru Ashland University (\$195 additional cost)

To register: <https://goo.gl/forms/D0sZz4Bph0SJrP872>

Contact **Jodi Haney** at jhaney@xcitelearning.com or **419.350.8469** for more information or visit: <http://www.xcitelearning.com>

OETC

Registration is open for the 2017 Ohio Educational Technology Conference to be held in Columbus Feb 14-16. Register now and take advantage of early bird discount.



The Ohio Educational Technology Conference (OETC) is the premier P-20 state educational technology conference. Each year, more than 4,000 educational technology professionals and enthusiasts come together to explore the forefront of P-20 learning and innovation in Ohio.

For more information: <http://oetc.ohio.gov/For-Attendees#4306-register>

Toledo MetroParks

The Toledo MetroParks have winter programming opportunities:
"Winter Quest: Don't Hibernate; Get Outside, Get Active"



Winter Quest is a new series of programs in January and February to get people outdoors and active this season. Download the Winter Quest Log to get started, and participate in a scheduled program listed or any outdoor activity and record it. Enter to win prizes each week.

<https://goo.gl/Xrdflz>

ESSA SOLUTIONS LAB from 100Kin10

January 18, 2017 , 4pm

Learn about the STEMX co-sponsored tools to communicate about STEM in ESSA.

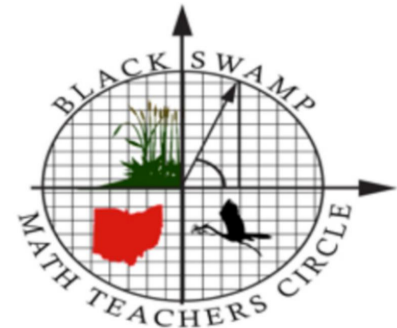
<https://goo.gl/fKVmbX>



Black Swamp Math Teachers' Circles

Math Teachers' Circles bring together teachers and mathematicians to enrich the teachers' experience of mathematical problem solving. The 2017 sessions are **FREE** and open to K - 12 math teachers and college faculty/staff in northwest Ohio. Space is limited and participants will receive:

- Great professional development.
- Networking with mathematicians, higher education faculty and other classroom teachers.



BS-MTC meets from 6:30 - 8:30 PM on the following dates at BGSU. Attend 1, 2, or 3 meetings on following dates:

Monday, January 23, 2017

Monday, March 13, 2017

Tuesday, April 11, 2017

For more information, please contact Dr. Debra Gallagher, Bowling Green State University, at dgallag@bgsu.edu or **419-704-1920**.

Ohio Technology Summit

This summit is where education leaders and technology experts converge to exchange techniques and strategies for teaching and learning success. At OTS educators have the opportunity to explore the hands-on integration of technology across the curriculum - from kindergarten to college. The Ohio Technology Summit is hosted at META Solutions 100 Executive Dr., Marion, Ohio 43302



<http://www.ohiosummit.org>

BGSU Planetarium



The Bowling Green State University Planetarium is a 114-seat public science theater serving BGSU students, area schools, and the public of northwest Ohio. Set under a 40-foot dome, the state-of-the-art SciDome video system fills the dome with video that can immerse audiences in the cosmos and can show the sky as it would be seen from any place on the Earth at any time.

Teachers, plan a visit to the planetarium at BGSU January 13 - March 3 "**Edge of Darkness**" which will demonstrate missions to Pluto and the asteroids.

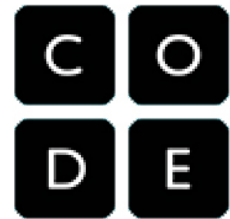


For further information, contact the Planetarium Director, Dr. Dale Smith by phone at 419-372-8666 or by email at dsmith@newton.bgsu.edu

<http://www.bgsu.edu/arts-and-sciences/physics-and-astronomy/bgsu-planetarium.html>

Code.org offering Computer Science Training

Code.org is now offering admission into its Professional Learning Program on Computer Science (CS). The intensive, year-long training prepares educators to teach CS Discoveries for middle school or CS Principles for high school. Designed for computer science veterans OR beginners, this training teachers will:



- Grow their teaching practice
- Become an expert in computer science materials and supports
- Bring high-quality approaches to computer instruction to help students

Battelle Education and Ohio STEM Learning Network will offer the course; more information at:

<https://goo.gl/93V6vB>



Registration is now open for the 2017 Kids' Tech University (KTU) program at Bowling Green State University. The 6th year of this novel science outreach program brings children between the ages of 9 and 12 together with nationally and internationally recognized scientists who present exciting, interactive sessions.

The four-session program begins Saturday, Feb. 11, and ends Saturday, April 8 and is open to students who live within a one-hour driving distance of BGSU. To participate, children must be 9-12 years old as of Sept. 30, 2015. There is an \$90 registration fee to participate. All students will receive KTU T-shirt.

Register online at: bgsu.edu/kidstechu



Google Launched A New Educational Platform for School Leaders ~ Educational Technology and Mobile Learning

Schools can't meaningfully change with technology alone. The Transformation Center is a hub of resources to help education leaders improve all aspects of their schools and work toward a vision for change.

<https://edutransformationcenter.withgoogle.com/>

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NWO STEM Activity

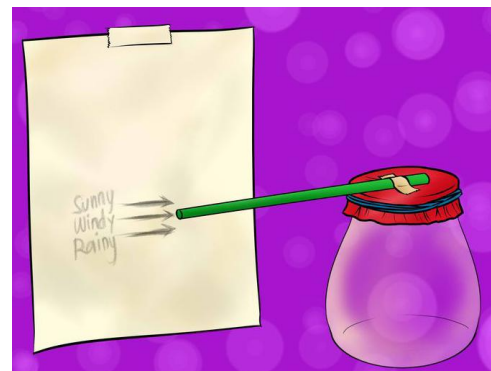
Make a Barometer

This month's STEM Activity is from www.weatherwizkids.com

Children will learn about atmospheric pressures by creating their own barometer. They will be able to observe how different pressures affect their creations.

MATERIALS:

- small coffee can
- plastic wrap
- scissors
- straw
- index card
- rubber band



PROCESS:

1. Tightly cover the top of the coffee can with plastic wrap, using a rubber band to hold the plastic wrap in place.
2. The cover should be tight making the can airtight.
3. Place the straw horizontally or sideways on the plastic wrap so that two-thirds of the straw is on the can.
4. Tape the straw to the middle of the plastic wrap so that it will not fall off.
5. Tape an index card to the can behind the straw. The straw will act as a pointer on the card.
6. Carefully record the location of the straw on the index card with a pencil. If desired, marks can be drawn on the index card to make observing the changes easier.
7. After 15 minutes, record the new location of the straw on the index card. Continue checking and recording the straw location as often as you want.

EXPLANATION:

High pressure will make the plastic cave in and the straw go up. Low pressure will make the plastic puff up and the straw go down. If possible, check your measurements with a real barometer.

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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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