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The *iEvolve with STEM (Inquiry and Engagement to Invigorate and Optimize Learning for Everyone)* project kicked off in May and continues to move forward, completing its first summer institute with enthusiastic responses from both teachers and administrators. This five-year project is funded by a \$7.28 million grant from the National Science Foundation and includes training teachers and their students to be true "citizen scientists". A total of 57 grades 3-5 teachers from Perkins Local and Sandusky City Schools are working together to enhance their students learning by utilizing hands-on instructional practices. The two-week summer institute focused on teachers' deepening their science content knowledge and becoming acquainted with the new science curriculum, which centers around Full Option Science System (FOSS) kits from Delta Education and is aligned with the new Ohio Learning Standards. The *iEvolve with STEM* curriculum development team is also making cross-curricular connections in Mathematics and Language Arts, and this fall will add in Social Studies connections. The basis of *iEvolve with STEM* is that science becomes the nexus for the study of everything, from language arts and reading, mathematics and social sciences to the arts.



Professional development will continue with these teachers during the 2013-14 academic year to further improve their ability to lead hands-on inquiry, differentiate learning to better meet the needs of all students, and prepare for the introduction of "citizen science research" across the curriculum which will begin in the summer of 2014.



Judy Steiner, *iEvolve with STEM* Project Manager,

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stated: "The research and assessment team has developed and tested the pilots of student science knowledge assessments and will be working throughout the summer to develop student

attitudes, motivation and engagement measures. We are also planning academic year activities, which will include at least bi-weekly and monthly sessions where teachers will convene to share their knowledge and further develop science teaching strategies."

**Project Partners** are Bowling Green State University, Erie County Soil and Water Conservation District, Lourdes University, Metroparks of the Toledo Area, Northwest Ohio Center for Excellence in STEM Education, The Ohio State University: Stone Laboratory, Perkins Local Schools, Sandusky City Schools, The University of Toledo, and Toledo Zoo.

More information can be found on the NWO website at:

<http://cosmos.bgsu.edu/ievolve>

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## Community STEM in the NEWS

### Local student wins national prize!

Ignited by his involvement in a summer tech camp where he was introduced to game coding software, **Brad Schmitz**, of Glandorf, Ohio, designed his own video game and submitted it to the 2013 National STEM Video Game Challenge. He found out in early July his entry, "Pixel Jet" was chosen as the winner in the "Scratch" category. "Pixel Jet" features a math war where students use mechanics to solve math problems as well as an arcade war where students shoot enemy ships. "I got to design the game and do all the programming and then submit it. I am really excited about winning," Brad stated. He likes to play mystery, puzzle, and brainteaser games on his computer and is also a Boy Scout, working towards becoming an Eagle Scout. Brad will enter high school in the fall at Ottawa Glandorf High School and is also excited about winning the prize for his creation: his own laptop, which will arrive later this summer and will feature educational and game coding software.



The competition aims to motivate interest in science, technology, engineering and math (STEM) among students in grades 5-12 by "tapping into their enthusiasm for playing and making video games". The top

original video games and game design concepts were selected in 14 categories from nearly 4,000 entries, which was the most received for this third annual competition. The National STEM Video Game Challenge was inspired by President Obama's "Educate to Innovate" campaign, which aims to provide U.S. students at every level with the skills they need to excel in the high-paid, highly-rewarding fields of science, technology, engineering, and math.

Brad's parents are Dave and Kathy Schmitz and Kathy stated, "He's always been interested in computers and the summer tech camp really sparked his interest." Brad is a four-year participant of Putnam County Educational Service Center's Youth Summer Tech Camps and is also a past participant of the Putnam County Science Fair.

The Joan Ganz Cooney Center at Sesame Workshop and E-Line Media sponsor the National STEM Video Game Challenge as well as the Entertainment Software Association, the AMD Foundation, and Microsoft's Xbox 360. Other national sponsors include the Institute of Museum and Library Services, the Hive Digital Media Learning Fund in The New York Community Trust, BrainPOP, the Corporation for Public Broadcasting PBS KIDS Ready To Learn Initiative, Global Kids, Learning Games Network, and Edmodo.

Brad is already thinking about his entry for next year's competition, and hopes to possibly major in physics in college.

To play Brad's game, visit: <http://scratch.mit.edu/projects/3285650/>

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## STEM Opportunities

### SAVE THE DATE for STEM in the Park 2013

Join us for STEM in the Park **Saturday, September 7, 2013**  
**10:00am - 2:00pm in the Perry Field House @ BGSU.**



A free event for all northwest Ohio families and the entire community, featuring: Four hours of engaging, hands-on STEM activities from over 75 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.nwocenter.org/STEMinPark](http://www.nwocenter.org/STEMinPark)



## FirstEnergy Accepting STEM Grant Applications From Educators

**FirstEnergy** Science, Technology, Engineering, and Mathematics Classroom Grants are awarded for creative individual classroom projects in grades pre-K-12. Any creative project in STEM will be considered. Grants may be used to compensate experts who come to work with students but not to pay teachers or staff. The resources requested should be an integral component of a well-planned classroom project/lesson plan and important to its success.

Grants will be awarded to educators and youth group leaders located in communities served by FirstEnergy's ten electric operating companies, or in communities where the company has generating plants or does business.

Complete program guidelines, information on eligible geographic areas, and the application form are available on FirstEnergy's Web site. [www.firstenergy.com](http://www.firstenergy.com)

## NWO Inquiry Series

NWO is very pleased to announce the theme and keynote speakers for the 2013-14 Inquiry Series. The theme of this year's five-part series is: ***Going Digital: the STEM Effect*** and will focus on incorporating digital tools and technology into the preK-16 STEM classroom. Sessions topics may include:

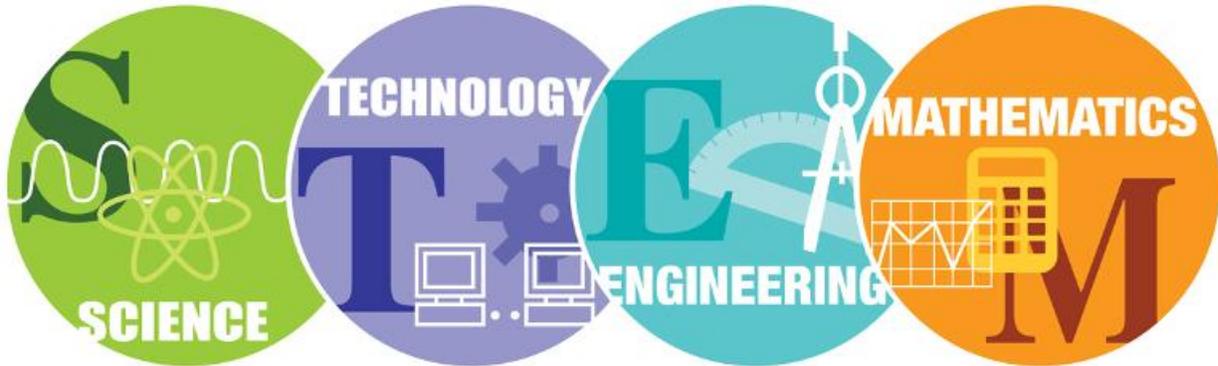
- Flipped Classroom
- Collaboration and Communication Tools
- Creativity Tools
- Digital Content
- Digital Inquiry



The Series will once again be held at WGTE/PBS in Toledo and headlining the first program will be Elliot Soloway from the University of Michigan and Cathleen Norris from the University of North Texas, two internationally known and sought-after speakers in the field of integrating technology into the digital classroom.

Registration information will be announced soon on our website at: <http://cosmos.bgsu.edu/inquiryseries>

## SAVE THE DATE - NWO Symposium STEM Teaching



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

### NOVEMBER 2, 2013 @ BGSU's OLSCAMP HALL

**KEYNOTE SPEAKER: ALFIE KOHN**, who will speak on: "Overhauling the Transmission Model: Teaching your students to be active meaning makers".

The traditional "bunch o' facts" model of education applied to STEM subjects consists of filling students with information about decimals and variables, cells and minerals. The process typically relies on lectures, worksheets, grades, tests, and homework. But our challenge is to help students think like scientists and mathematicians so they can actively make sense of ideas - and, ideally, to take pleasure in doing so. In his keynote address, Alfie Kohn invites us to reflect on how we can bring about just such a shift in our classrooms.

**Presenter and Vendor Registration is OPEN!** Space is still available and you can submit your proposal by visiting: <http://cosmos.bgsu.edu/nwoSymposium/PresenterInfo.htm>

**Attendee Registration is OPEN!** Visit <http://cosmos.bgsu.edu/nwoSymposium/AttendeeInfo.htm> for more information and registration details.

### Registration open for the BGSU Volunteer Fair

On Tuesday, September 10 from 9 a.m. to 3 p.m., in the Lenhart Grand Ballroom of the BGSU Bowen-Thompson Student Union, the 4th Volunteer & Community Partnership Fair will take place.

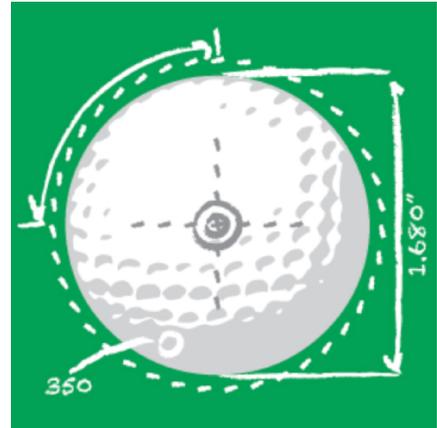
The Volunteer & Community Partnership Fair is designed to create a space for community partners to directly recruit students, faculty and staff members as volunteers, supporters and collaborators. It is a great opportunity for organizations to recruit long and short-term volunteers and to develop service-learning partnerships with faculty.

To register for a table at the fair, please follow the link below and fill out the online form at <http://bit.ly/10qnKRd>. If you have any questions or concerns, please e-mail [BGSPartnerships@bgsu.edu](mailto:BGSPartnerships@bgsu.edu) or call the Office of Service-Learning at **419-372-9865**.

## Golf Science at Imagination Station

**July 16-21**

In the spirit of the Marathon Classic Golf Tournament, Imagination Station is exploring the science of golf! Learn how composition and change in temperature affect how a golf ball bounces. If it lands in water, does it sink or float? What's inside that tiny white ball with all the dimples? There's only one scientifically tested method to find out. Experiment! Imagination Station opened them up so you can take a look inside and learn all about the guts of a golf ball.



Please visit the Imagination Station website for more information: <http://www.imaginationstationtoledo.org/>

## NSTA - NATIONAL SCIENCE TEACHERS ASSOCIATION

### Free Videos Bring Real-World STEM to the Classroom

A new free online resource called Spark 101 features interactive videos made by industry professionals on STEM topics. Teachers can use these brief (about 10 minutes long) videos to engage students in solving real-world problems during one or two class periods. The content is directly connected to national curriculum from the College Board's Advanced Placement, the National Academy Foundation, and Project Lead the Way, making it easy for teachers to integrate the videos in their classrooms. The videos have a three-segment format, with pauses for student dialogue. Spark 101's partners are employers from business, government, academic, and nonprofit sectors, who create and contribute videos highlighting real-world applications of STEM coursework. These partners include Lockheed Martin, NASA, Proctor and Gamble, PepsiCo, Deloitte, and the University of California, Berkeley. In addition to helping teachers bridge the gap from the classroom to the workforce, the videos are intended to inspire students to consider STEM careers.

While the website is free to all teachers nationwide, some regions are using Spark 101 locally to serve targeted student populations. For information on upcoming educator or industry training webinars, e-mail: [Spark101@114th.org](mailto:Spark101@114th.org).

Visit NSTA's Freebies for Science Teachers website for other free teaching resources: [www.nsta.org/publications/freebies.aspx](http://www.nsta.org/publications/freebies.aspx)



**Standards-based Elementary STEM Workshop  
at the Ohio State Fair  
Part of the Technology and Engineering Showcase  
Ohio Technology and Engineering Educators Association  
July 30 - August 1, 2013**

The Ohio State Fair in conjunction with the Ohio Technology and Engineering Educators Association's Technology and Engineering Showcase will be offering a 2 1/2 day elementary STEM workshop that will be based around Ohio's Academic Standards in science and other curriculum areas for grades 1 - 6. The workshop will explore hands-on activities and visit Fair venues (Natural Resources Park, agricultural exhibits, amusement park rides and others) to address four essential questions:

- #1 - How do organisms survive in their environments?
- #2 - What can we learn about force and motion?
- #3 - How can we protect our natural resources?
- #4 - How can we use different types of energy?

Attendees will develop short design briefs and lesson plan starters based around their Fair experiences that will be posted on the Ohio State Fair website so other teachers may benefit from their ideas.

The cost is only \$100 for fair admittance, parking and materials for all three days. A semester of graduate credit will be available through Ashland (OH) University for an additional fee.

**Registration is limited to the first 20 participants. Registration closes on Friday July 19, 2013.** Please direct questions to:

Bob Claymier/STEM Is Elementary  
248 N. Franklin St  
Delaware, OH 43015

Contact Bob at **740-816-9627** or [bob@stemiselementary.com](mailto:bob@stemiselementary.com)

**There is still time to sign up...**

Energy Efficiency Programs: Various dates July-September. Sign up now to participate in the 2013-14 school year.

High School Careers in Energy & Environment: Contact OEP to express your interest in participating.

Energy Summit, Workshop & Fair dates will be posted by September 2013.

Visit: [https://www.firstenergycorp.com/content/fecorp/community/education/educational\\_grants.html](https://www.firstenergycorp.com/content/fecorp/community/education/educational_grants.html)

## Free Workshop: Feeding the World: Science, Energy and Agriculture

**August 7-8, 2013**

Greene County Career Center and Conover Research Farm near Xenia, Ohio

A workshop where questions are answered: How do we feed 9 billion people? How does production agriculture affect water quality? What is the value of corn production? Why biofuels? How can ag biotechnology contribute to food security? Soil and Sustainability: what is the link?

Go to <http://geleerd.net/s13/corn> to find out more information and to register.

## INFOhio's Free 2nd Annual Online Boot Camp - Registration open!

*From the INFOhio website:*

**Destination: Spa! Aug. 5 - 7, 2013**

Escape the day-to-day doldrums! Let instructional therapists help you work out the stresses of Ohio's New Learning Standards. You'll relax, refresh, and rejuvenate your thinking



and emerge re-energized for the 2013-14 school year.

Attend as many of these sessions as you like:



**Day 1-August 5:**

- Detoxification with the Daring Librarian: Transparency is the New Black
- Healthy Snack: Using Pinterest for Your Library
- Alternative Therapies: Tools and Resources for College and Career Readiness and Wrap Up

**Day 2-August 6:**

- Rejuvenation: Common Core Instructional Shifts for English Language Arts/Literacy and INFOhio Resources
- Ohm! Ohm! Ohm! Letting Go of Lesson Planning Stress with AASL's Lesson Plan Database
- The Art of Judging Text Complexity and Selecting Resources

**Day 3-August 7:**

- Work the Knots Out of Your Presentations (And Your Stomach)
- Healthy Snack: Curating with Symbaloo
- Happy Hour: Fun Ways to Get Students and Teachers to Love the Library and Wrap Up

To register: <http://www.infohio.org>

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## NWO Hands-On STEM Activity

**Pinterest** (<http://pinterest.com/equinekdh/stem-activities>) is a pinboard-style photo-sharing website that allows users to create and manage theme-based image collections such as events, interests, and hobbies.

### TABLETOP BIOSPHERE

This month's Hands On Activity is from Pinterest.  
**"Tabletop Biosphere"** by Martin John Brown.

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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#### Find Even More Ohio STEM Education Resources

Visit our STEM clearinghouse, [nwostemresources.org](http://nwostemresources.org), for more STEM activities, programs, and information.

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