



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

Vol. 6 Issue #5

May 2014

### In This Issue

#### K-16 STEM in the NEWS

[National Junior Science and Humanities Symposium](#)

## K-16 STEM in the NEWS

### National Junior Science and Humanities Symposium

#### Community STEM in the NEWS

[NWO hosts STEM Stakeholders](#)



#### STEM Opportunities

[Toledo Museum of Art](#)

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

[CS Ed Ohio Summer Institute](#)

[Community Resources Workshop for K - 12 Teachers](#)

[Challenger Learning Center of Lake Erie West Summer Camps](#)

[Do You Know a Budding Engineer?](#)

[EHOVE's Summer Camp!](#)

[2014 Summer Learning Conference](#)

[Northwest Ohio Soil and Water Conservation Districts Present](#)

#### Ohio Student Delegate Places Nationally!

The top four delegates from the Ohio JSHS all performed very well at the National Junior Science and Humanities Symposium, which was held last month in Washington, D.C. The 1st place OJSHS winner, Bluye' DeMessie from William Mason High School, won 3rd place in the Environmental Science division and will receive a \$4,000 scholarship! Bluye' is a junior this year and we are looking forward to seeing what he presents at the 2015 OJSHS after winning the Thomas Alva Edison Award as a freshman, and 1st place as a sophomore and junior.

The research offices of the Army, Navy, and Air Force and the Academy of Applied Science sponsored this 52nd annual National Junior Science and Humanities Symposium. The National JSHS brought together 230 top high school students who qualify for the competition by submitting and presenting original scientific research papers in regional symposia held across the United States and in military schools in Europe and Asia. Approximately 100 adult leaders, high school teachers, university faculty, ranking military guests, and others attended and joined in the encouragement of the future generation of scientists and engineers as well as celebrating student achievement in the

[Educators Extravaganza!](#)

[Science and Literacy - a Perfect Pair!](#)

[National Weather Association Grants for Grades K-12](#)

[Summer STEMstitute for K-8 Math and Science Teachers](#)

[ORC's new Common Core Toolkit for Mathematics Educators](#)

[The 2013 NACME Symposium Research and Policy Journal](#)

[The Ohio Teacher Showcase Project](#)

[STEM Higher Education Council Town Hall](#)

**NWO Hands-On STEM Activity**

[Snack Bag Assembly](#)

sciences.

**Community STEM in the NEWS**

**NWO hosts STEM Stakeholders**

NWO recently hosted a regional meeting of STEM Education community stakeholders to help expand and grow the NWO database of STEM education resources and to strategically plan the best ways to leverage this database for maximum impact. This meeting was followed by a press conference announcing the most recent contribution of the Battelle Memorial Institute Foundation to assist with the efforts to advance STEM education in our region.



Earlier the same day, the local PBS-TV affiliate, WBGU recorded a 30-minute program of the Northwest Ohio Journal on the needs and strategies for improving STEM education in our region, featuring Battelle Vice President of STEM Learning and Philanthropy Aimee Kennedy, BP Director of Public Relations, Mary Caprella, and NWO Hub director, Bob Midden.

This program was broadcast regionally on May 8 on the WBGU PBS and other affiliated television stations and will also be available for viewing on the WBGU-TV website. [Click here](#) for a link to the video on the WBGU-TV website.

**Top Photo: NWO Director Bob Midden and BGSU President Mary Ellen Mazey  
Bottom Photo: Battelle VP for STEM Learning & Philanthropy Aimee Kennedy and Bowling Green Mayor Richard Edwards**

**STEM Opportunities**

**Toledo Museum of Art**

**Where Art and Science Intersect**

**In Fine Feather: Birds, Art & Science;** an exhibition of 45 works from the Middle Ages forward, **opened April 25 in**



**Gallery 18.** Hand-colored engravings, etchings, lithographs, watercolors and books chronicle the intersection of natural science and art in the pursuit of identifying birds. Recently acquired original works by Roger Tory Peterson, the father of the modern field guide, are on view for the first time. **Admission is free.**

<http://www.toledomuseum.org/exhibitions/in-fine-feather/>

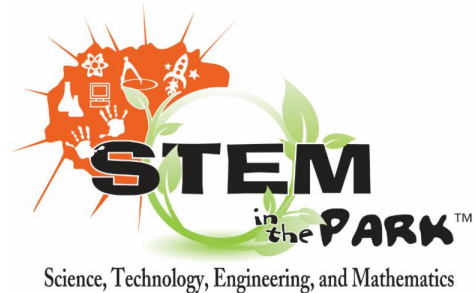
## Join us for STEM in the Park!

**Saturday, September 27, 2014, 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.nwocenter.org/STEMinPark](http://www.nwocenter.org/STEMinPark)



## CS Ed Ohio Summer Institute

Cleveland State University in collaboration with the University of California, San Diego invites you to participate in the CS Ed Ohio Summer Institute. The program will prepare teachers to teach the new Computer Science Principles course at the high school level.

For more information please contact **Nigamanth Sridhar** by phone at **216.687.5341** or by email at [n.sridhar1@csuohio.edu](mailto:n.sridhar1@csuohio.edu), and visit website at <http://www.csedohio.edu>.

## Community Resources Workshop for K - 12 Teachers

**Registration is now open** for this week-long workshop that features activities addressing the new common core standards, STEM learning, and 21st Century skills. It will be held June 16-20, 2014 at local community partner sites.



The cost to attend the workshop is \$150 and includes a contact hour certificate, most meals, all materials, parking, entrance fees and much more. Please visit <http://cosmos.bgsu.edu/CRW/CRWHome.htm> for details and registration.

**communityresources**  
workshop



**Challenger Learning Center of Lake Erie West**

**SUMMER CAMPS**

Sponsored by the Educational Service Center of Lake Erie West



Summer Camp opportunities abound for campers in grades K-6. Please see website for registration and more information: <http://www.eslakeeriewest.org/challenger-learning-center>

## Do You Know a Budding Engineer?

NACME's (National Action Council for Minorities in Engineering) new "Engineer Something Amazing!" materials are designed to spark the interest of middle and high school students and help them to choose an engineering career.



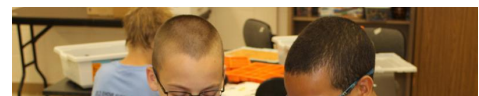
Students can see how engineers have changed the world, the types and rewards of engineering, and the path to becoming an engineer.

These materials are available for middle and high school students and in both English and Spanish.

<http://www.nacme.org/middle-high-school-programs#MS>

## EHOVE's Summer Camp!

Kids in grades 5-9 who are interested in STEM can participate in EHOVE's summer camps. With offerings including LEGO robotics, inventing, engineering, culinary arts, athletic speed & performance, duct tape design, design/fab/build/fly and video gaming, these week long, half day camps are tons of fun with hands-on projects that are out of this world!



Camps run 8:30am - 11:30 am for the morning session and 12:15pm - 3:15 pm for the afternoon session, **Monday - Friday for the week of June 16 - 20**. Campers may attend the morning and/or afternoon session. Cost is **\$50** per camp session.

Register online at: [www.EHOVE.net](http://www.EHOVE.net). Please note that these camps fill quickly and registering online will immediately reserve your child's space.



EHOVE Career Center is a leading career tech school in Milan Township. This high school and adult education facility draws students from a variety of locales, and serves multiple school districts in Erie, Huron, and Ottawa Counties. Students are given the opportunity to take challenging academic classes in a customized and relevant curriculum, and gain hands-on training and real world experience to prepare them for college or a specific career. For more information: [www.EHOVE.net](http://www.EHOVE.net) or call **419-499-4663 x232**. Adult classes are also available.

**Photo: (L-R) EHOVE Summer Campers work on Seth Kromer and Ian Janssen, both of Huron, work on the robot they built in last year's LEGO Robotics camp.**

## 2014 Summer Learning Conference

[Registration](#) is now open for the **2014 Summer Learning Conference** on **May 31**. Please consider joining colleagues in summer programming to focus on Motivating Students. There will be a variety of sessions ranging from STEAM to Character Education, Literacy to Developmental Assets, and so much more! All members of teams are welcome and encouraged to attend this **FREE** day of professional development! Step Up to Quality sessions will be available, and free breakfast and lunch are provided.



The training will be **May 31, 8:00am - 4:00pm** at **ProMedica Toledo Hospital**, in the Education Center (2142 N Cove). Parking is free and plentiful!

**Please promote this FREE professional development opportunity with your partners!** Register today at [this site!](#) Contact Gayle at [glake@partnerstoledo.org](mailto:glake@partnerstoledo.org) with any questions.

Please note: \$10 will be charged for all registrants who do not attend the workshop. If you register, but are unable to attend, please email [glake@partnerstoledo.org](mailto:glake@partnerstoledo.org) to unregister.

## Northwest Ohio Soil and Water Conservation Districts Present Educators Extravaganza! "Raising the Standards"

**June 17, 18 & 19, 2014**



**LOCATION:** Ottawa National Wildlife Refuge in Oak Harbor and Kelleys Island

**COST:** This year participants may choose to attend all three days for a total of \$120 OR may choose individual days at a cost of \$60 per day. Fee includes meals, refreshments, and all workshop materials! Payment must be included with your registration.



**REGISTRATION:** Attendance is limited so pre-registration is required. Registrations must be post-marked on or before Friday, May 30, 2014. (First come - first served basis). Further information and a map will be sent upon receipt of registration.

**WHAT TO BRING/WEAR:** Rain gear, boots, binoculars, camera, a mug, etc... This is an out-door/environmental workshop - dress appropriately.

**FIELD TRIPS:** We will carpool to the sites.

**LPDC:** Local credits may be available through your Local Professional Development Committee. You will be presented with a certificate verifying your attendance and the number of contact hours.

**REFUND POLICY:** No refund is possible after May 30th.

For more **information and to register** download the pdf [HERE!](#)  
For more information on the **sessions** download the pdf [HERE!](#)

## Science and Literacy - a Perfect Pair!

**June 12, 2014**

**9:00am - 3:00pm**

**The Metro School: 1929 Kenny Rd., Columbus, Ohio 43210**

**Presenters:**

Jessica Fries-Gaither, Lower School Science Teacher at Columbus School for Girls  
Terry Shiverdecker, Director of STEM Initiatives for the Ohio Resource Center

**Fee:**

Participants will receive a copy of "Inquiring Scientists, Inquiring Readers: Using Nonfiction to Promote Science Literacy, Grades 3-5" (\$37.95 value). **Lunch will be provided and parking is free.**

To register click here: <http://ohiorc.org/r/MRL11>

## National Weather Association Grants for Grades K-12

**Sol Hirsch Education Fund Grants** are awarded annually to teachers/educators of grades K-12 to help improve the education of their students, school, and/or community in the science of meteorology.

Teachers, program directors, school district supervisors, and other individuals or groups proposing to improve the education of K-12 students in meteorology may submit an application. Grants are available for up to \$750. **The deadline is June 1.** For more information, go to: <http://www.nwas.org/grants/solhirsch.php>

## Summer STEMstitute for K-8 Math and Science Teachers

The Summer STEMstitute: Using Common Core Strategies & Technology to Teach Mathematics & Science will be held at Milford High School (Ninth Grade Community Wing), One Eagles Way, Milford, Ohio, on **June 23-26, 8:00-3:30**. For more information: <http://www.curriculumengineers.com>

## ORC's new Common Core Toolkit for Mathematics Educators

To support the transition to the Common Core State Standards for Mathematics in 2013 - 2014, ORC has created a Common Core Toolkit for Mathematics Educators. The toolkit offers a wealth of materials designed to assist with the interpretation and implementation of the Common Core, all of which are **free of charge**. You can find the toolkit at <http://ohiorc.org/for/math/commoncore>.

## The 2013 NACME Symposium Research and Policy Journal

The 2013 NACME Symposium Research and Policy Journal has been completed and is now available for download on [nacme.org](http://nacme.org). The document features research-based practices that are required to move the needle on advancing more successful underrepresented minority women and men into STEM education and careers.

All speakers from the 2013 NACME National Symposium contributed to this journal, connecting their work in education, policy, and the workforce to the theme for this event, which was "Take Action: Changing STEM Education for Underrepresented Minorities through Research and Policy." The journal features white papers and transcripts that address each of the following topic areas:

- Catalyzing the Pre-Engineering Pathway for URM Students; The College Affordability Crisis; The Mathematics Conundrum
- Innovations in STEM Teaching and Learning

NACME 40  
2013 NACME Symposium  
Research and Policy Journal



- Shaping Engineering Public Policy
- Ensuring a Diverse Engineering Workforce

## The Ohio Teacher Showcase Project

The Instructional Technology Integration Partnership of Ohio (ITIP Ohio), with support from the Ohio Department of Education, is **seeking innovative educators** who are utilizing technology to support the teaching of Ohio's New Learning Standards through project-based learning activities.

The Showcase will result in the development of model lessons and video 'documentaries', which capture in-class instruction and student learning in action, to create a collection of exemplar learning activities for Ohio teachers and students. Ultimately, this project will spotlight excellent teachers demonstrating promising practices and creative, high-quality teaching with technology.

### The Teacher Showcase Project...

**...is comprised of DISTRICT TEAMS** (20 teams from across Ohio)

A district team will be comprised of: two teachers of Social Studies, Math, Science, Special Education, and/or Gifted Education; a curriculum specialist, and a technology coordinator. District teams will work together to design, facilitate, and document (through video) the teaching of technology-infused PBL activities in 3rd-12th grade classrooms.

**...incorporates PROFESSIONAL DEVELOPMENT components**

District teams will attend a professional development day at the onset of the project. Teams will select a date and location convenient for them (May 27 in northwest Ohio, June 12 in central Ohio, or June 13 in southwest Ohio). Teams will also participate in some online professional development activities that will offer guidance in PBL design practices, technology integration methods, and content alignment strategies.

**...is seeking EDUCATORS WHO HAVE**

an understanding of PBL design and experience with integrating technology within the classroom.

**...will PROVIDE each participating teacher with**

A 'mini-grant' to support the purchase of an iPad with Retina. These devices will serve as the primary source for capturing, editing, and consuming video related to the project.

This is a wonderful opportunity to spotlight the amazing efforts and successes of teachers within your district. They will become part of an elite group of educational professionals that will be recognized and applauded for their skills in engaging students with technology and content-rich learning. We hope you will consider being a part of it!

[Sign up today!](#)



## STEM Higher Education Council Town Hall

**June 11, 2014 2:00 to 4:00 PM ET**

Leaders from the entire higher education ecosystem will share their strategies for how to best integrate STEM education into their field. Initiatives will be presented to address America's need for STEM talent through education, training and partnerships with business and industry. This Town Hall is produced by STEMconnector®'s STEM Higher Education Council (SHEC). SHEC's mission is to bring focused energy to Higher Education's leading high impact practices, increasing the emphasis on STEM pipeline-to-jobs (and what we call STEM 2.0).

The SHEC will inventory and integrate current efforts whenever possible, building on the energy of others in support of boundary-breaking collaborations between higher education (two and four year institutions) and industry to achieve significant results that can be recognized and scaled-up. For questions, contact **Brian Jackson** at [Brian.Jackson@STEMconnector.org](mailto:Brian.Jackson@STEMconnector.org). In the spirit of connecting and informing stakeholders in STEM education, the STEMconnector® Team would like to extend an invitation to join an upcoming Google+ Hangout Town Hall: <https://plus.google.com/events/c9os432lv6pcd9l1f84nj4jo59c>

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

## NWO Hands-On STEM Activity

**Snack Bag Assembly**  
*from eGFI (Engineering, GO FOR IT!)*

<http://teachers.egfi-k12.org/snack-bag-assembly/>



"In this delicious undergraduate activity modified for middle school use, teams of students in grades 6 to 8 learn about the field of industrial engineering and efficiency by creating an assembly line to pack as many snack bags in 2 minutes as possible. They then see if they can improve their process."

**Grade level: 6 -8**

**Time: 45 - 60 minutes**

### **Learning objectives**

After completing this activity, students should be able to:

- Collect data to frame and solve problems
- Connect time with task completion and productivity
- Understand that work can be broken down into discrete tasks
- Develop ways to improve a process ("work smarter, not harder")
- Understand the role of industrial engineers in making systems more efficient.

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

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

## **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](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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