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The 50th annual Ohio Junior Science and Humanities Symposium was held with much success at Bowling Green State University on March 20-22. 84 high school students from around the region converged upon BGSU to compete for college scholarships at the symposium, which has been held on the campus at BGSU for the last sixteen years. Dr. Karen S. Bjorkman, Distinguished University Professor of Astronomy from the University of Toledo, was the Keynote speaker and addressed the budding scientists with an engaging lecture on "Exploring the Universe in the 21st Century". She holds a Ph.D. in Astrophysics and has provided significant service to the international astronomical community and is heavily involved in education and public outreach. Said Blythe Tipping, Ohio JSHS Assistant Coordinator and Science teacher at Sylvania Southview High School, "The keynote speaker, Karen Bjorkman, was extremely intelligent and engaging, revealing to the audience many of the changes in astronomy that have occurred this past decade and how they relate to the future of research. Many of my students spoke very highly of the presentation." She also stated, "In general, OJSHS is challenging and intimidating, yet extremely rewarding for all of the students. This is something that is consistent every year. The students that attend the program are typically some of the best and brightest in the state of Ohio."



The gold medal first place winner for research papers was awarded to Bluyé DeMessie of William Mason High School who presented, "Sustainable and

[PBL workshop in Akron](#)

Low Cost Approach for Cleaning Metal Contaminated Water Using Pyrolyzed Banana Peels".

**NWO Hands-On
STEM Activity**

Second place was awarded to Peeyush Shrivastava, also of William Mason High School, who presented, "Investigations into CaMKII Regulation of Cardiac Excitability". These two students will present their papers at the National JSHS.

[Discovering Dirt](#)

[\(read more\)](#)

Community STEM in the NEWS

Summer STEM Camps

Now is the time to book dates for summer camp and exploratory opportunities for students around the region. Listed below are camps designed to enrich the STEM fields. Please click on each link provided for more information and registration.

Armstrong Air and Space Museum

Join us for our annual summer Space Camp! Space Camp 2013 will be August 5th - 9th at Ohio Historical Society's Armstrong Air and Space Museum in Wapakoneta, Ohio. <http://www.armstrongmuseum.org>

Owens Community College Crime Scene Investigator (CSI) Summer Youth Camp (ages 13-17)

Become a student detective and learn how the world of forensic science can be the key to solving a crime. Working with a forensic team, enter the re-creation of an unusual and challenging crime scene where a real crime scene investigator will direct and coach students to use deductive skills, teamwork, math and science to solve a crime. Contact: cep@owens.edu

Camp Discovery at Children's Discovery Center (ages 6-12)

Experience a unique opportunity for a summer filled with adventure, learning and fun. "Passport to Adventure" curriculum features engaging, project-based lessons, exploring world cultures, using technology to participate in international learning experiences. www.childrensdiscoverycenters.com

Toledo Metroparks Summer Camps (ages 3 to 12) week-long and day camps at area parks all over the region. Financial aid available. Call 419-407-9701 or visit website: www.metroparkstoledo.com

Toledo Zoo Safari Camps/Explore Australia!

This summer, discover and learn about the exotic wildlife and wonders of the Australian outback. Become a junior zookeeper or fish the Lake Erie islands. www.toledozeo.org/camps

Lourdes University Center for Science Education & the Environment

Summer science camp "Naturally grown" for students in grades 5-10
July 8-12, July 15-19, July 22-26

www.lourdes.edu/csee.aspx or call Sr. Rosine Sobczak, OSF at 419-824-3691

Toledo Botanical Garden

TBGeez! Summer camps immerse children in nature and the arts during week-long camps or individual classes. 419-536-5589 or: www.toledogarden.org

Imagination Station

Hot summer camps - Cool Science 2013

While its HOT and steamy outside, Imagination Station has fun-filled, weeklong summer camps loaded with COOL science to experience. 3 exciting camp options to choose from: Super Splatter Science! Catapults, Coasters and Cars!; and NEW THIS SUMMER! - Survival Camp.

Super Splatter Science!

June 17-21

June 24-28

July 1-5

Survival Science (NEW!)

July 8-12

July 15-19

July 22-26

Catapults, Coasters and Cars!

July 29-August 2

August 5-9

August 12-16

<http://www.imaginationstationtoledo.org/content/2013/01/2013-summer-camps/>

Ohio Forestry and Wildlife Conservation Camps

June 9 - 14 FFA

Ohio Forestry & Wildlife Conservation Camp is the place to be! Camp is held at FFA Camp Muskingum, which is situated on Leesville Lake in the beautiful rolling hills of Carroll County. Any student who has completed 8th grade and is at least fifteen (15) years of age is welcome to participate. Be prepared to obtain valuable forestry information, make many new friends and HAVE FUN! www.ohioforest.org

Circle Pines Center Summer Camp

Locally-sourced organic foods. Peace, social justice, environmental stewardship and cooperation. Delton, Michigan www.circlepinescenter.org

Computer Camp

Notre Dame College, Cleveland

Residential and Day programs

<http://ohio.nccamp.com>

Toledo area Catholic High Schools offer a wide variety of summer camp opportunities for elementary students:

St. John's Jesuit: www.sjtitans.org

St. Ursula Academy: www.toledosua.org

Notre Dame Academy: www.nda.org

Penta Career Center STEM SUMMER CAMP June 10-14

A summer career exploration career activity for students currently in grades 7 - 9 from the following districts: Anthony Wayne, Bowling Green, Eastwood, Elmwood, Genoa, Lake, Maumee, Northwood, North Baltimore, Oak Harbor, Otsego, Perrysburg, Rossford, Springfield, Swanton and Woodmore.

For more information contact: Kristie Reighard kreighard@pentanet.k12.oh.us

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STEM Opportunities

Google Science Fair - Its your turn to change the world

An online science fair - an excellent opportunity for students! Sponsored by CERN, Scientific American, Lego, National Geographic and Google, this science fair is open to **students ages 13-18** from all over the globe. Teachers play a crucial role as mentors and partners to young scientists, offering practical advice on their projects, but also inspiring them on their journeys of exploration and discovery. Students will have the opportunity to explore an area of science or engineering that they're really passionate about, and share their work with people from all over the world. Students compete for AMAZING prizes such as visit to Darwin's living laboratory at Galapagos, many scholarships, and much more. For more info: www.google-sciencefair.com

Ohio Environmental Council

Vernal pools are dynamic, seasonal wetlands that are vital to Ohio's natural environment. They improve water quality, serve as a bellwether wetland, hold flood waters, provide habitat to hundreds of species, including migratory birds, and are an excellent educational tool. Unfortunately, Ohio is losing its vernal pools to development and other destruction.

Help us continue to monitor and protect these special places! The Ohio Environmental Council has developed a variety of materials to educate people of all ages about vernal pools including a field guide, DVD, and printed monitoring forms. The next step is to take these monitoring forms and other information from paper and into the palm of your hand!

We need YOUR help to raise funds to produce this essential mobile app - the only one of its kind in Ohio! The vernal pool monitoring mobile app is a critical tool that will streamline monitoring, making it easier and more efficient to gather information vital to protecting these special places. While we already have dozens of Ohioans helping us to monitor vernal pools, a mobile app will encourage new people to go into the field and gather the critical information we need. Learn more about the OEC's Vernal Pool App and how you can help! We have great prizes for every donation level! <http://www.theoec.org/VernalPools>



Attention Inspired Teachers! Making Connections Retreat

Making Connections Retreat is an intensive two-day professional development retreat and creative experience for inspired teachers wishing to hone their skills in quality integration design and instruction. Teachers will leave renewed, motivated, and armed with creative courage to take passion back to the classroom to engage students. No prior art experience is required. All teachers in all grade levels will benefit.

Gain The Power Of Art In Your Classroom

- Engaging students
- Deepening learning
- Fostering creative thinking in all subjects

Instruction & facilitation by Journey 360°

829 Bethel Road #245
Columbus, Ohio 43214
855-360-3670
journey360.org

STEMTM
STEM to the Art PowerTM

JOURNEY 360°

The Ohio STEM learning Network

Monthly technical assistance calls for new/emerging STEM schools are available from 3:00 p.m.-4:00 p.m. on the second Friday of every month. The call in number is **1-877-336-1839** and the **access code is 2919097**. The call is open to anyone who might have STEM school/program related questions. During the calls, the OSLN team will answer questions related to STEM school start-up and ongoing management. Please visit the OSLN website for more information. www.osln.org

Ohio STEM Learning Network

SETGO Bridge Program

Science, Technology, Engineering & Math Enthusiasts & Teachers,
Please pass this opportunity along to your students and friends that may be interested in majoring in Science, Technology, Engineering and/or Math.

Are you or a friend...

- interested in a **FREE** summer program that gives you 3 college



credits and \$1,000 for successful achievement?

- a high school junior or senior?
- enrolled this fall or considering Owens Community College or Bowling Green State University?
- Interested in a Science, Technology or Math degree?



If so, go to www.bgsu.edu/setgo for details and to print an application. Application materials due May 15th for the SETGO Bridge program.

Prepare yourself for your college-level Science and Math courses while having fun! Call **419-372-4238** for questions.

Square One Education Network

STEM Incubator Grants Now Available!

The Square One Education Network, a Michigan based non-profit Foundation is interested in funding for new, innovative and creative STEM projects. If you are a school related participant, or a business that is chomping at the bit to do a cool, project-based endeavor with schools, these Incubator Grants might be exactly what you are looking for!



Square One has very successful with investing in ideas from teachers and/or businesses that draw upon the expertise of the professionals who have the drive to establish highly relevant projects. These projects are not textbook or workbook driven, but "gear" and human ingenuity driven! They are not intended to replace old equipment, renew subscriptions to software companies, or essentially extend an effort that needs "replacement parts."

Please contact:

Karl Klimek, Executive Director
Square One Education Network
313-590-4000

<http://www.squareonenetwork.org>

Leading Minds Guide the Way at 2013 Conference



The National Conference
June 17-19 2013



June 17-19, 2013
Austin, Texas

U.S. News STEM Solutions brings the brightest and boldest minds in education, business and government together to discuss and solve the most relevant issues facing STEM education and employment. The 2013 conference will feature a lineup of high-impact speakers that will inspire and challenge attendees to deliver innovative solutions to fill jobs now and impact the strength of the U.S. STEM workforce for years to come. <http://usnewsstemsolutions.com>

SAVE THE DATE for STEM in the Park 2013

A free event for all northwest Ohio families and the entire community. Held on the campus of BGSU on **Saturday, September 7th, 2013 from 10:00am - 2:00 pm**. 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



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<https://twitter.com/NWOstem>

Research Cruise Opportunity for Teachers

Applications are now being accepted for a week-long workshop for educators interested in incorporating Great Lake science and technology into their classrooms. The annual Shipboard and Shoreline Science Workshop, held from **July 7-13**, will give teachers for grades 4-12 an opportunity to study Lake Ontario aboard the Lake Guardian, a research vessel operated by the EPA Great Lakes National Program Office (GLNPO).

Applications for the 15 available spaces will be accepted until April 30. These annual research cruises, which take place on a different Great Lake each year, give teachers and non-formal educators a unique opportunity to work alongside scientists as they conduct field research. This year, participants will study species at the bottom of the food web, monitor water quality, and learn more about the organisms living on the floor of Lake Ontario. Educators will also work together to examine classroom activities that expand students' understanding of the Great Lakes and identify new ways to incorporate hands-on research into their classroom. Sea Grant specialists will be onboard to provide educational resources and support.

For more information visit: www.nyseagrant.org/lakeguardian. The annual Shipboard and Shoreline Science Workshop is hosted by the Center for Great Lakes Literacy and coordinated by the Great Lakes Sea Grant Network and GLNPO. Funding comes from the Great Lakes Restoration Initiative. Future workshops are scheduled to take place on Lake Erie in 2014 and Lake Michigan in 2015.

Problem Based Learning (PBL) Workshop

June 17 - 19, 2013

Hosted in Akron by the OSLN Akron Hub's Training Center, this 3-day workshop is designed to provide participants with an introduction to problem-based learning (PBL). Educators will experience PBL from the viewpoint of a learner as they engage in a problem and explore the learning process. By the conclusion of the session, each participant will have explored PBL while immersed in actually designing a PBL unit for use in their classroom.



For more information, please contact Alison White, Director Ohio STEM Learning Network (OSLN) Akron Hub,

330-761-3195, or email: awhiteua@akron.k12.oh.us

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NWO Hands-On STEM Activity

Discovering Dirt

Grade Level: K-5

It is Spring! Time to take your students outdoors to learn about their environment. This lesson is from: www.discoveryeducation.com



Lesson Overview

In this lesson students will identify the needs of plants and examine the qualities and ingredients of soil. They will identify which types of garden plants are typically grown in their area and why. They will investigate the effects of growing plants in different types of soil.

Learning Objectives

- Identify the different types of soil
- Identify the ingredients that make up a good soil for growing plants
- Explain what is helpful and harmful for plants growing in each soil type

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.

Join NWO on [Facebook](#)

Find Even More Ohio STEM Education Resources

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

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