



Vol. 8 Issue #2

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assets

Advancing the Science Skills of Elementary Teachers and Students

"Project ASSETS: Advancing the Science Skills of Elementary Teachers and Students" is a new program soon to be underway with Washington Local Schools and faculty from the College of Education and Human Development at Bowling Green State University (BGSU) and the College of Natural Sciences at The University of Toledo (UT),

[The Toledo Zoo Great Lakes Symposium](#)

all partners of the Northwest Ohio Center for Excellence in STEM Education.

[FREE 5 hrs Grad Credit in Conceptual Chemistry](#)

Funded by an Ohio Department of Higher Education Improving Teacher Quality grant, the project will focus on Physical and Life Science concepts and instructional practices including the 5E/6E Model, science communities, differentiated instruction and formative assessment. Sessions will be facilitated by representatives of the School of Teaching and Learning and the School of Intervention Services at BGSU, Washington Local Master Teachers and content experts from BGSU and UT.

[Google for Education](#)

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The goals of ASSETS are to improve the academic achievement of 3rd, 4th and 5th grade science students in Washington Local Schools; to develop deep science teacher content knowledge and to expose participating teachers to effective reform-based teaching practices in science consistent with local, state, and national standards.

[Decoding Cancer](#)

[PD Opportunities at the Dayton Regional STEM School's Training Center](#)

Thirty 3rd, 4th, and 5th grade teachers will be recruited to participate in more than 100 hours of professional development that includes a spring kick-off session, a 2-week summer workshop, and regular academic year sessions.

[Junior Solar Sprint](#)

[Computer Science Principles Application](#)

"We are thrilled with this partnership and how our program will ultimately help the achievement of these students in the physical and life sciences," stated Dr. Emilio Duran, the principal investigator of the program and a faculty member in the School of Teaching and Learning at BGSU.

[PKAL Summer Leadership Institute](#)

[Seeking STEM School Designation?](#)

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Community STEM in the NEWS

Chemistry Teacher Gets Award For Her Passion

Local group honors Maumee educator

BY MATT THOMPSON
BLADE STAFF WRITER

Chemistry teacher Terri Mortemore was working with hydrogen balloons in her Maumee High School class Thursday, so naturally she made one explode. "Always safely," she quickly said about her controlled explosions in class. "I'm a teacher who does a lot of lab experiments. I've never been one who stood up and talked all day."

Some of those hands-on teaching tactics and passion helped Ms. Mortemore earn High School Chemistry Teacher of the Year for the Toledo area from the local American Chemical Society. The organization honored her for sharing the excitement of chemistry and inspiring future scientists through her dedication to motivating students.



Ms. Mortemore has taught chemistry, and sometimes freshman science, at Maumee High since 1989.

"I think it's fun to take a class every kid views as a difficult class, and I show them it doesn't have to be that hard," she said. "I like to have a little fun. We do a lot of demonstrations and explode things, burn things. Kids love that kind of stuff."

Her teaching has evolved over the years. Computers weren't common in the schools when she started, she noted, but now she's excited about new science mobile apps that help her teach. New technology has kept her excited and energetic each school year.

One reason Ms. Mortemore believes she was honored is her help with Project Seed, in which high-school students work on a summer projects at the University of Toledo. Students receive stipends to do research with professors, and Ms. Mortemore said that results in Maumee students enrolling at UT to study sciences. "She challenges students and gives them opportunities for applied chemistry to learn chemistry's practical uses," Principal Matthew Dick said. "She helps students see chemistry is more than what's in a book and on paper. She goes above and beyond. Terri is an outstanding teacher."

Mr. Dick believes Ms. Mortemore is extremely deserving of the award for all of her hard work. "I'm very, very honored," she said. "I just love teaching kids. I've had a good career - Maumee has been very supportive of me."

This article reprinted with permission from The Blade

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STEM Opportunities

Ohio JSHS

Registration for the Ohio Junior Science and Humanities Symposium **closes on February 21**. The event will be held at **Bowling Green State University on March 16 - 18**. This program is jointly sponsored by the United States Departments of the Army, Navy, and Air Force and is annually hosted by BGSU.



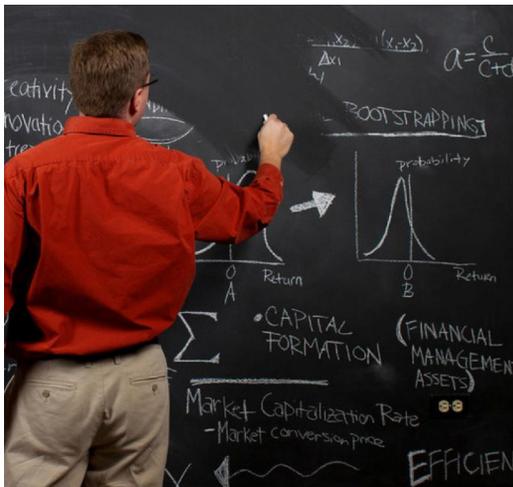
During the Symposium, the students will present their research and have the opportunity to interact with their peers and with distinguished faculty from BGSU, UT, Lourdes, and several other organizations. This competition brings some of the most accomplished and remarkable middle and high school students in the state to present and celebrate their amazing research accomplishments with their peers, faculty, families, and friends.

A total of \$4,500 in undergraduate tuition scholarships is awarded, and five students will receive expense-paid trips to compete in the national competition. .

More information about OJSHS and registration information is available at: http://cosmos.bgsu.edu/nwo_ojshs/.

Attention Teachers! FREE Tutoring Available!

The High School **Math in ACTION Tutoring Hub** is available to ALL students taking high school Math courses including Pre-Algebra, Algebra I, Geometry, Algebra II, Pre-Calculus, Calculus, Statistics, or any other math course your school offers.



When:

Mondays - Thursdays:

3:30-10 p.m.

Sundays: 4-9 p.m.

Where:

BGSU's Main Campus

Olscamp Hall Room 120

Contact Information:

419-372-1493

rhack@bgsu.edu OR

llapp@bgsu.edu

FREE Online Tutoring Via SKYPE. Call for more information: **(419) 372.1493**

Black Swamp Math Teachers' Circle

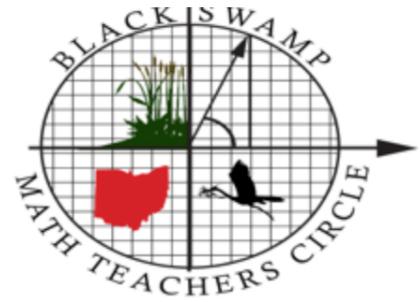
Math Teachers' Circles started in 2006 and have since spread across



the United States. Math Teachers' Circles bring together teachers and mathematicians to enrich the teachers' experience of mathematical problem solving.

There are four goals:

1. Increase the confidence of math teachers in problem solving.
2. Deepen teachers' content knowledge through exploring mathematically rich problems and develop an arsenal of techniques to solving unfamiliar and challenging problems.
3. Form long-term professional relationships among teachers and mathematicians, through regular, highly interactive meetings.
4. Provide support for teachers who want to bring richer mathematical experiences to their students.



The **2016 sessions are FREE and open to K - 12 math teachers in northwest Ohio**. Space is limited so register today to secure your spot.

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:

- March 3, 2016
- April 21, 2016

All meetings will be held at:

- Life Science Building
- Bowling Green State University
- Bowling Green, OH 43403

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

Elementary GLOBE for Grades PreK - 4 Teachers & Informal Educators

Elementary GLOBE - Atmosphere & Aerosols

Only 2 scholarships left!

Aerosols are particles found in the air. They can make the sky change color! This program is aimed at helping children be excellent sky watchers by observing clouds and the colors of the sky. Your students can even report their sky observations as citizen scientists to projects that share student generated data with the world... including NASA!!
JOIN US and LEARN HOW!



Wednesday & Thursday, March 2nd & 3rd

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

COST: \$175 [Regularly \$275/teacher, but Xcite Learning earned a grant from The GLOBE Program & NASA allowing us to offer a \$100 scholarship to the first 20 teachers!]

Teachers Receive:

- Free online Elementary GLOBEteacher Guides for FIVE units of study: Clouds, Soil, Seasons, Water, and Aerosols.
- Class sets of storybooks for Aerosols
- CEU Certificates [14 contact hours]
- \$50 in classroom materials (hands on science kit to DO GLOBE)
- Plenty of good food and great conversation!
- ** We will SKYPE with NASA during this workshop to learn how you can partner with a NASA Cloud Satellite mission!
- A great STEM experience for your students!



Contact **Jodi Haney** at jhaney@xcitelearning.com or **419.350.8469** for more information.

REGISTER TODAY @ <http://goo.gl/forms/IDMEQ5LHwZ>

The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)

These awards are the nation's highest honors for K-12 teachers of mathematics and science (including computer science). Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science education. If you know great teachers, nominate them to join this prestigious network of professionals.

Presidential awardees receive a certificate signed by the President of the United States; a trip to Washington D.C. to attend a series of recognition events and professional development opportunities; and a \$10,000 award from the National Science Foundation.



The **deadline for nominations is April 1, 2016** and the **deadline for applications is May 1, 2016**. For more information on nominations and applications, visit www.paemst.org. For materials to help spread the word about PAEMST, please visit <https://www.paemst.org/recruitment>.

The Toledo Zoo Great Lakes Symposium

Feb. 24, 2016, 9:00 am - 12:30 pm

The Toledo Zoo is sponsoring a Great Lakes Symposium on **Wednesday, February 25, 2016, 9:00am-12:30pm** at the **Zoo's Indoor Theater in the Museum of Science**.

The symposium is **FREE** and open to middle and high school students and teachers.

Registration is required

To register & for more information: toledo zoo.org/symposium

Questions? Contact the Education Department at **419-385-5721 ext. 2042** or peggy.coutcher@toledo zoo.org



FREE 5 hrs Grad Credit in Conceptual Chemistry

Learn what it takes to really teach Chemistry for Teachers of Grades 4 -9

FREE TUITION - FREE MATERIALS

All classes meet at Kent State University at Tuscarawas * 330 University Dr. NE, New Philadelphia, Ohio

Conceptual Chemistry is funded by the Ohio Board of Regents' Improving Teacher Quality State Grants Program. The purpose of Conceptual Chemistry is to assist school districts by providing quality professional development experiences for middle and high school teachers. This program provides **free tuition, a \$2,425** value, for all participants along with approximately \$850 worth of equipment, supplies, activity books and other hands-on materials for use in the classroom. For more information visit the website at: http://personal.kent.edu/~cfenk/Chemistry/Conceptual_Chemistry.html

[Click here](#) to download a brochure.

[Click here](#) to download an application.

Google for Education

A slew of coding programs for your students

Get your students ready for the many coding programs coming soon: **Code Jam**, **Summer of Code** and the **Hash Code challenge**.

Want to inspire your students to love science, coding or technology? Go behind the scenes at Google with Nat and Lo as they talk with engineers, play with giant Internet balloons, hike in Street View backpacks and more.

Find 11 episodes on their YouTube channel. <https://goo.gl/PYSfTD>

Community Programs

Welcome 5th grade teachers!

Interested in providing your students with programming to complement what you are teaching in the classroom? Working in partnership, northwest Ohio educational organizations have created this guide to provide an easy-to-follow overview of programming for 5th grade students. The chart at the front of the document provides a quick way to review the types of experiences offered for your students including field trips, outreach programs, teacher professional development, online resources and more! Once you identify a program you would like to know more about, greater detail is available in the document after the chart. Each organization is listed in alphabetical order.



Not a 5th grade teacher? It's still worth taking the time to look at the various educational experiences. Many of the programs listed are offered at other grade levels or are easily adaptable.

<http://imaginationstationtoledo.org/content/community-programs>

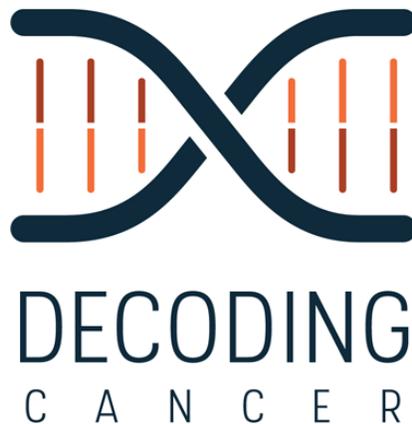
Leaders Institute Recruiting for 2016

The Innovative Leaders Institute is a year-long training and mentoring experience for educators led by some of the top STEM and innovative school leaders across the country. To date, over 130 educators from urban, rural, and suburban schools across five states - including Chicago Public Schools - have participated



Looking to lead STEM in your school? Begin building your team of two including an administrator now for the application, coming February 22.

For the details about program and this year's application, visit the website [here!](#)



"**Decoding Cancer**" is an innovative and interactive high school biology and cancer genetics program featuring the BioCONNECT curriculum that enhances science and literacy among youth. Created by The Val Skinner Foundation, the LIFE Center at Rutgers Cancer Institute of New Jersey in collaboration with the Rutgers School of Public Health, and Discovery Education, Decoding Cancer is a new, ground-breaking collection of standards-aligned interactive classroom resources designed to help students and families understand the science behind cancer.

Visit: DecodingCancer.org

Upcoming Professional Development Opportunities at the Dayton Regional STEM School's Training Center

Visits to the Dayton Regional STEM School

Educators and school leaders are invited to participate in a visit to the Dayton Regional STEM School. The next two visits are scheduled for **February 19th** and **April 15th**. Both will take place from **9:00-11:30AM**. Participants will receive an overview of the school, a tour of the school led by DRSS students, and visits to many of the DRSS classrooms in action.



To register for the February visit, [follow this link](#)

To register for the April visit, [follow this link](#)

Critique Workshop

This workshop will focus on how middle and high school students can be taught explicitly to be kind, helpful, and specific when reviewing each others' work by utilizing the *Six Thinking Hats* critique system, which is

based on Edward de Bono's work. Participants will step into the role of the student to experience a variety of the ways these skills are developed and assessed within the classroom. These strategies help students look critically at the work of others and themselves, assessing it for both content (utilizing classroom terminology to address learning targets) and construction (craftsmanship and professional execution). Critique also helps students to be responsive to the emotional needs of their peers, and sensitive to others' criticism in productive ways. Participants will leave with a solid grasp of the language used to guide critique in the classroom, as well as a series of activities that incorporate critique in meaningful ways. The workshop will be led by STEM Foundation teachers at DRSS.

Date: March 11th, 2016, 8:30AM-3:30PM at DRSS

Cost: \$100 (includes lunch)

To register, [follow this link](#)

Project Based Learning Residency

This two-day professional development opportunity consists of an extended visit to the Dayton Regional STEM School (DRSS), providing participants with an up-close look at the principles and practices that make DRSS unique. Participants will receive a foundational background about what PBL is (and what is not PBL); learn how teachers plan PBL units; and learn about how PBL is enacted and supported in various ways at DRSS. To register, follow this link.

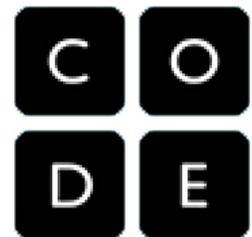
Dates: May 5-6, 2016, 8:30-3:30 both days, at DRSS

Cost: \$200 per participant; WSU graduate credit is also available for a reduced rate of \$250 for one semester hour.

If you have questions about any of these programs, please contact **Dr. Brian Boyd** atbrian.boyd@wright.edu.

Computer Science Principles Application

The new AP Computer Science course will be coming online during the 2016-17 school year, which means AP CS teacher training will take place this summer! [Code.org](http://code.org) will be offering **FREE** teacher training (**free includes travel expenses**) this summer in Atlanta. The training is rapidly filling up, so if you have teachers who are interested in being trained, go here <https://code.org/educate/professional-learning/cs-principles-application> and here <https://youtu.be/HoKRZRI9IDk>.



A friendly reminder - if a teacher signs up for this training, they are required to teach at least one class of AP CS Principles next school year.

Junior Solar Sprint (JSS) Registration Is Now Open!

JSS is a solar car competition sponsored by the US Army Educational Outreach Program that challenges students to design, build, and race solar electric vehicles using hands-on engineering skills and principles of science and math. JSS is designed to support the instruction of STEM in categories such as alternative fuels, engineering design, and aerodynamics. Students who are part of a registered Technology Student Association (TSA) chapter or who compete at an approved Army host site are eligible to compete in JSS. Teams must follow the official TSA middle school competition rules when competing in JSS.



[Click here](#) for more information and to register!

PKAL Summer Leadership Institute

The PKAL Summer Leadership Institute is designed for both early and mid-career STEM faculty engaged in leading projects aimed at transforming undergraduate STEM education in their classrooms, departments, and institutions. The five-day intensive Institute provides faculty participants with the theory and practice required to effectively manage the politics of such change and contribute to the national STEM higher education reform effort. **Applications Due February 24.**

Project Kaleidoscope (PKAL) Summer Leadership Institute for STEM Faculty

Institute I: July 12-July 17, 2016

Institute II: July 19-July 24, 2016

Institute III: July 26-July 31, 2016

The Claggett Center, Adamstown, Maryland

Applications Due February 24, 2016

<http://www.aacu.org/summerinstitutes/sli>

Seeking STEM School Designation?

Each year, a group of agencies from the State of Ohio convene to review proposals from schools that wish to be designated as STEM schools under Ohio law. **Applications are open now and due by April 1.**



Proposals may only be submitted by a partnership including all of the following:

1. School (including a JVS and some community schools*) or an educational service center
2. A college or university
3. Local business

Our organization, the Ohio STEM Learning Network, plays a few roles in this process. We advise the schools

seeking STEM designation.

We're also proud to provide formal recommendations to the State of Ohio on the applications for new schools.

And, as new schools are awarded designation, we welcome them into our network and connect them with Ohio's other [30+ STEM schools](#).

Click to read the rest on [OSLN.org](#)

Learn With INFOhio!

INFOhio's **FREE Professional Development** offerings are an easy way to fulfill required contact hours while learning about great resources and tools to use with students!

February 18, 3:30 - 4:30



Join teacher/librarian, Lori Lee, as she shares an engaging project that develops students into authors. Over the past three years, Lori Lee's sophomore honors English classes at Zanesville High School have completed a project-based unit in which students record family stories in a thoughtful collection of narrative nonfiction writing in which they tell specific family stories. Along the way, students conduct interviews to produce a journalistic piece of writing and then use creative writing techniques and literary devices to develop characters and settings. The project culminates with the publication of a professionally produced hardbound book.

<https://goo.gl/XKWBAP>

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NWO Hands-On STEM Activity

Building A Light Saber

This month's STEM Activity is from Build Your Own Lightsaber (BYOL) Lab via YouTube

Teachers! Use this STAR WARS THEMED ACTIVITY for a fun classroom lesson on engineering and physics.

[Click here](#) to view lessons on YouTube



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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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