



Vol. 9 Issue #2

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K-16 STEM in the NEWS**Imagination Station's GIRL POWER!**

A gloomy day outside went unnoticed inside Imagination Station last Saturday. Over 200 3rd - 8th grade girls exclaimed in delight while participating in various colorful and engaging science, technology, engineering and mathematics (STEM) activities at the event: *Girl Power! Imagination Station's STEM Career Day for Girls*.

The day began with morning workshops with female STEM professionals including a Clinical Pharmacist, Chemical Process Engineer, Web Developer, College Dean, Dietician, and a Toledo Firefighter. During one of the workshops, the girls were encouraged to present their questions before a panel of the STEM professionals. One girl asked an entomologist, "I was wondering, when did you start liking bugs?", while another asked the firefighter, "How did you get your courage to fight fires?" The girls were encouraged by the panel to keep asking questions as they grow up and to stay curious while trying new things. They learned that STEM careers are indeed possible and achievable for females through hard work and passion for STEM fields. Other workshops provided hands-on STEM activities and included building a Lego® tower, creating and setting off Alka Seltzer® rockets, and exploring all the demonstrations and exhibits that Imagination Station has to offer.



Kimberly Newman, a Meteorologist for WNWO NBC in Toledo, provided a lively keynote presentation during lunch. She shared her story with the girls and how her passion for cold and snowy weather drove her to study meteorology and mathematics in college.

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The 3rd Annual Girl Power! event was created to encourage girls to pursue STEM study and STEM careers. According to Sloan Mann, Imagination Station's Director of STEM Education, "Women are significantly underrepresented in the STEM fields. Despite making up 48% of the overall workforce, only 24% of STEM workers are women."

NWO STEM Activity

[Flubber](#)

For more information on Girl Power! and Imagination Station, please visit their website at: <http://www.imaginationstationtoledo.org/visit/events/event/girl-power!>.

Community STEM in the NEWS

Feed the World Alumni Educator Reaches Out at NWO Symposium

Feed the World (FTW) alumni, Donna Meller, led an outreach event, "Creating a Sustainable World: Ethanol as an Alternative Energy Source", at the NWO Symposium, held in November at Bowling Green State University.

Meller focused on how educators can integrate agriculture into the science classroom and why this is an important connection for the students. Many fields of science are used in agriculture and teachers need to be aware of the career possibilities. Meller led the participants through the activity "Corn Fermentation in a Bag". Lisa Fast of Ayersville High School won a free supply kit to do the lab in her classroom.



Meller has attended Ohio Corn & Wheat-sponsored Feed the World workshops in the past and wanted to reach out to other teachers. She said, "My goal is to share ways for teachers to make agricultural connections in the science classroom. Agriculture is a perfect way to provide hands-on activities that teach many science standards. Many students, even those from rural communities, have become disconnected from where their food comes from. Activities and lessons that teach science principles involving agriculture helps them better understand how food is grown and raised."



For more information and upcoming events: <http://ohiocorneducation.org/curriculum/topic/energy-and-ethanol/>

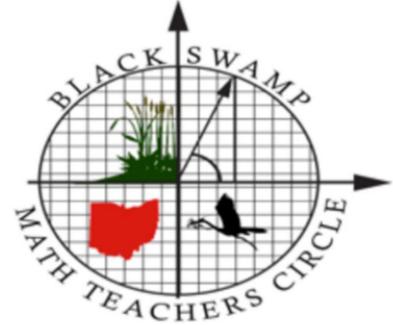
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STEM Opportunities

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: (no need to attend both). All meetings will be held at BGSU:

- Monday, March 13, 2017
- Tuesday, April 11, 2017

You can register for one or both of the remaining spring nights at: <http://www.bgsu.edu/nwo/programs/bs-mtc.html>.

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

Imagination Station

Free Teacher and Classroom Resources

Imagination Station posts videos for teachers to use in their classrooms. Use their videos as educational resources and make the most out of your next lesson.

Find all of our videos on YouTube! <https://youtu.be/UqkoYEOixK8>

Imagination Station also has information on upcoming workshops and field trips available: <http://imaginationstationtoledo.org/home>



Ohio Department of Education

Full Draft of Ohio's State ESSA Plan Released

After a year of engaging with more than 15,000 of Ohio's educators, parents and community members about their



vision for Ohio's educational system, the Ohio Department of Education released the full draft plan and technical submission of Ohio's State Plan for the Every Student Succeeds Act (ESSA).

The full plan and technical document covers several important aspects of Ohio's education system, including Academic Standards, Assessments, Accountability and School Improvement, among others. Most readers will still find the overview document the best source of information for what the state proposes.

The Ohio Department of Education invites the public to review and comment on the plan. The comment period will be open through March 6. Input will continue to be incorporated throughout the development of the final Ohio plan and technical submission. Once edits are made based on the comments received, the full draft plan and technical document will be submitted to the U.S. Department of Education in April.

<https://www.surveymonkey.com/r/ESSAOhioOverview>

Share The Young Scientist Challenge With Your Community



With global challenges abound, scientists are needed now more than ever to solve serious issues like access to clean water, adequate healthcare and clean energy. Whether you are a student, teacher or parent, The Discovery Education 3M Young Scientist Challenge needs YOU!

They are looking for passionate young people to help solve the world's biggest challenges using science and innovation.

Here's how to participate:

- **STUDENTS:** Challenge yourself to think outside the box and share your big idea for the chance to work one-on-one with a 3M Scientist to bring your innovation to life and win \$25,000!
- **TEACHERS :** Share this learning opportunity with your students and implement the challenge into your science curriculum.
- **PARENTS:** Encourage the young scientists in your family and community to enter, today.

For more information: <https://goo.gl/UbtfnP>



METROPARKS TOLEDO

Check out all the wide variety and **new summer camps** available this year.

There's a camp for every family budget, and financial assistance is available. Registration now open! Teens have a great opportunity to have fun while learning leadership skills as a Counselor in Training.

For more information: <https://goo.gl/1DvMed>

Chemistry of Sports: Smarter, Safer, Faster

CHEM-TENNIAL CELEBRATION EVENT!

Hosted by Lourdes' University-Dept. of Chemistry and Physical Sciences and The Toledo Section of the American Chemical Society

Tuesday, February 21 @ 7 pm

Franciscan Center Board Room, Lourdes University, 6832 Convent Blvd, Sylvania, OH 43560

Gather time/social/snacks: 6:30 pm
PIB/Webinar Program time: 7:00 pm

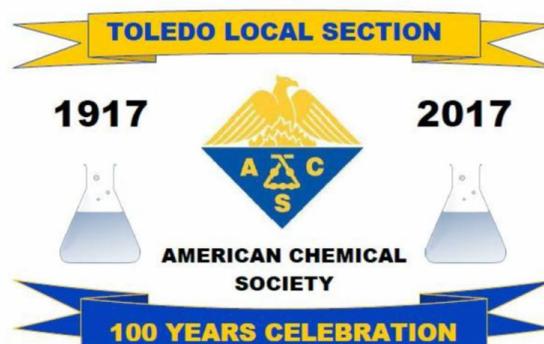
FREE

Please RSVP to Cindy Molitor at cmolitor@lourdes.edu

<https://www.facebook.com/lourdeschemistry/>

In the world of competitive and professional sports, chemistry is more impactful than you might think. Discover the materials that chemists are creating to enable athletes to perform better and stay safer, as well as how analytical chemistry is advancing to detect performance enhancing substances in order to keep the playing field level for everyone. During this interactive event, viewers will be able to network with young chemists and have an opportunity to ask questions live to the experts regarding the amazing work that is being done in sports science

Co-produced by acs.org/PIB with the Undergraduate Program Office and ACS Volunteer Support. With support from



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<http://www.facebook.com/pages/Toledo-Section-American-Chemical-Society/128610157192543>



Discovery Education/Siemens #STEMday

The long-running program Siemens Science Day has been reimagined into the new Siemens #STEMday, a diverse portfolio of STEM engagement opportunities for K-12 educators and students alike. As part of the program re-launch, Discovery Education announced their greatest sweepstakes to date: the \$10,000 Possibility Grant Sweepstakes! "Fab" the school's lab with the latest and greatest gadgets or purchase top-tier technology and supplies for STEM students. The possibilities are endless, so be sure to enter every day! **Sweepstakes closes Friday, April 28, at 5:00PM EST**

When on the Siemens STEM Day website at: <http://www.siemensstemday.com/>, be sure to check the collection of more than 135 FREE, interactive activities for grades K-12.

<https://goo.gl/Ubtfnp>

Army Educational Outreach Program Virtual Judges Needed

Become a volunteer Virtual Judge for this year's National STEM Competition hosted by eCYBERMISSION. Help review, score and provide feedback to a few of the more than 22,000 online student submissions right from your desk. Judges are directly responsible for determining first and second place winners, which takes place between March 8 and March 24, 2017.



Volunteering has never been easier and is done entirely through a computer. Register through the eCYBERMISSION website at: <https://www.ecybermission.com/Register> and be provided with a rubric for all submissions, as well as offered support from the eCYBERMISSION Volunteer Team.

Registration closes Feb. 22. Help AEOP build the next generation of STEM rock stars.

For more information on the program visit: <https://www.ecybermission.com/>

Science Education Council of Ohio

Ohio Science Modeling Workshops

The workshops are searchable by content area and workshop location on the website:

By content: <http://modelinginstruction.org/professional-development/upcoming-workshops/summer-workshops/summer-workshop-by-content/>

By location: <http://modelinginstruction.org/professional-development/upcoming-workshops/summer-workshops/summer-workshops-by-location/>

Modeling workshops are also listed on the PhysTEC website: <http://www.phystec.org/pd/?set=Modeling>

- Bowling Green State University July 10-21
 - Physics/Chemistry - leaders Nate Ash and Kim Layden
 - Biology - leader Christine Newman
- Ohio State University, June 12-30
 - Mechanics - leaders Brian Carpenter and Charles Deremer
 - Chemistry - Liz Emmer and Tom Wizard
 - Biology - leader Matthew Kennedy
 - Curriculum development - Heidi Kresge and Rick Jacox

Contact **Kathy Harper:** Harper.217@osu.edu

Chemical Education Foundation (CEF)

Virtual Workshop in Honor of Women's History Month

Essential Elements Teacher Training Webinar

March 6, 2017

5:00 pm - 7:00 pm EST

Registration closes Feb. 20, 2017



Register today and participate virtually as skilled facilitators lead participants through a collaborative, hands-on, interactive professional development opportunity. Register for free and log in with colleagues and friends, and CEF will mail a box of giveaways, resources, and materials to follow along live they demonstrate ways to bring chemistry to life in any setting!

<https://www.chemed.org/programs/essential-elements/workshops/?ee=155>

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NWO STEM Activity

This month's STEM activity features one of the many exhibitors from the 2016 **STEM in the Park**. More fun activities from **STEM in the Park** can be found on our website at: www.STEMinthePark.org.

Flubber

What You Need:

- 2 bowls
- 1 1/2 cup warm water
- 2 cups white glue
- 1 1/3 cups hot water
- 3 tsp. Borax Powder (non-toxic/available by laundry detergents)
- Food coloring
- Metal spoon



What To Do:

1. In a bowl, combine warm water, white glue and food coloring.
2. In a second bowl, combine hot water with Borax. Mix thoroughly.
3. Pour contents of small container into the large container.
4. Slowly pour Borax mixture into the glue mixture while stirring quickly. Stir until the mixture leaves the side of the bowl. Slime will be sticky. Knead the mixture until it is no longer sticky.

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.

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