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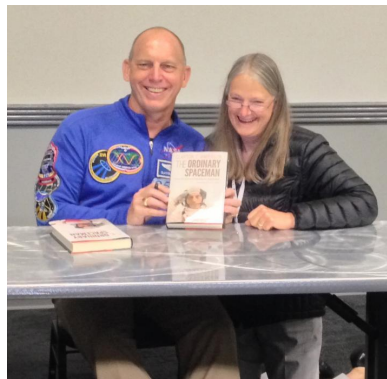
**K-16 STEM in the NEWS****Local teacher Attends NASA LiftOff Institute**

**Mrs. Jackie Kane**, a teacher from St. Ursula Academy in Toledo, Ohio, joined educators from across the nation for the "LiftOff Summer Institute" at NASA's Johnson Space Center in Houston, Texas last month. This program, sponsored by NASA's Texas Space Grant Consortium, selects teachers from across the U.S. who will increase their knowledge of space education through this professional development summer institute.

"LiftOff" is a collaborative effort of Texas Space Grant Consortium members and affiliates, NASA, and industry partners. Teachers apply for "LiftOff" and are selected competitively. The workshops are organized around an aerospace or space science theme drawn from NASA's diverse engineering and scientific research programs. The theme for "LiftOff 2017" was Starry Night! The primary focus was on objects in the night sky including planets, stars, the moon, and the sun.



Opening the week-long institute was a presentation by Jerry Woodfill, an engineer at NASA Johnson Space Center, and the first alert warning system engineer on Apollo XIII, who shared "Thirteen things that saved Apollo XIII".



Four astronauts spoke to the educators during the week: Apollo XIII astronaut Fred Haise shared his momentous experience; former Astronaut Clay Anderson shared his message of "Teach Them to Dream" and each teacher received his book "The Ordinary Spaceman"; former Astronaut Jerry Ross shared his experiences as a 7-time space walker while giving each teacher his book



"Spacewalker" and accompanying DVD; and former Astronaut Mike Foreman shared stories from his space flight

## NWO STEM Activity

### [Ice Cream Science - At Home](#)

experience.

With the United States experiencing a total solar eclipse on August 21 of this year, teachers conducted eclipse activities, modeled phases of the moon with Jody Hodges, and participated in Discovery dome activities with Dr. Patricia Reiff of Rice University. A highlight was seeing the James Webb telescope in the chamber preparing for testing. Teachers increased their knowledge of working and living in space while visiting scientists and engineers in the Astromaterials Lab where they viewed the Apollo Moon Rocks, Genesis Lab, Stardust Lab, CT chamber, Food Lab, Neutral Buoyancy Lab, and Robotics Lab. Norm Chaffee walked the teachers through each stage of the Saturn V rocket while Tim Hall, Deputy Chief of Extravehicular Activities at JSC shared NASA's vision of what the future holds.

Being certified to check out the Lunar and Meteorite Samples and sharing proven lessons for the classroom were highlights according to those attending.

Each teacher will return to their respective districts, train other educators, and use new resources received in the classroom. The "LiftOff" workshops demonstrate that teachers and their students are excited about space science and exploration. The resources will be used to enrich STEM education for students nationwide.

The workshops also provided teachers the rare - and for most, a unique - opportunity to spend a week working with professional scientists and engineers at the cutting edge of space exploration.

Mrs. Kane, the director of the St. Ursula Academy STEM club, is a longtime educator and STEM enthusiast. When asked about this experience, she exclaimed, "This was an incredible once-in-a-lifetime experience! I encourage other teachers to participate next year!"

This nationally competitive, educational training for teachers is sponsored by NASA's Texas Space Grant Consortium. Teachers interested in applying for LiftOff 2018 may obtain information from the internet at the following URL: <http://www.tsgc.utexas.edu/liftoff/>

## Community STEM in the NEWS

### **BGSU's AIMS Students Participate in Summer Learning Festival**

22 dragon boat teams raced on the Maumee River for the 16th annual **Dragon Boat Festival**, as part of Partners in Education's annual Summer Learning Festival.



The Festival serves as a showcase of educational programs and summer learning opportunities in the Summer Learning Village. Partners in Education and its nonprofit partners host hands-on stations with activities and resources to extend learning into the summer, so families can enjoy learning together, while raising funds to support their mission of increasing literacy and numeracy among Toledo's youth. The theme of the event was 'Learning and Culture' for kids and families.

Participating in the Summer Learning Village this year were students from BGSU's AIMS (Academic Investment in Mathematics and Science) program, who offered numerous hands-on and inquiry-based STEM (science, technology, engineering and mathematics) activities to nearly 500 participating children and their families in the learning and cultural area.

Partners in Education places an increased emphasis on College and Career Readiness programming through academic success and literacy, as the future workforce in the U.S. needs to be highly proficient in the STEM disciplines.

Sarah Jurden, Assistant Director of the AIMS program stated, "Overall I believe it went very well, and we were excited to participate."

For more information on BGSU AIMS program, please see: <https://www.bgsu.edu/aims.html>

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## STEM Opportunities

### STEM in the Park

**SATURDAY, SEPTEMBER 23, 2017**

9:30 a.m. - 2:30 p.m.

Perry Field House @ BGSU

**SAVE TIME... Pre-Register Online!**

[Click here](#) to Pre-Register



***"Get Your Wheels Turning with STEM"***

STEM in the Park will feature interactive displays and activities created by area universities, community partners,

and local businesses to engage children of all ages in science, technology, engineering, and mathematics.

For more information visit: [www.STEMinthePark.org](http://www.STEMinthePark.org)

## NWO SYMPOSIUM - Online Registration now OPEN!

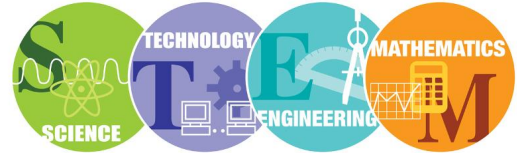
### NWO Symposium on Science, Technology, Engineering and Mathematics Teaching

November 18, 2017

8:45 AM - 3 PM

Oiscamp Hall @ BGSU

Featuring the 2017 keynote speaker: **Dr. Gabriel Matney**



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

### 2017 NWO SYMPOSIUM STRANDS

1. STEM in the Community: Thinking Outside the Classroom
2. Putting Creativity to Work: Teaching STEM With Innovation
3. Integrating Technology in the Classroom
4. Teaching and Learning in SCIENCE
5. Teaching and Learning in MATHEMATICS
6. Teaching and Learning in ENGINEERING

[CLICK HERE](#) to register online!

Program now available online at: [bgsu.edu/nwoSymposium](http://bgsu.edu/nwoSymposium)

## Google Education

**Digital Citizenship and Safety:** Check out the free, interactive online training course for educators in the Google for Education Training Center. Participants will learn fundamental lessons of digital citizenship and safety, as well as fun ways to integrate them into your curricula.

To help kids learn foundational lessons in digital safety and citizenship in a way that's fun and immersive, Google created an adventure-packed game called Interland. It's free, web-based and, most importantly, it's in a format kids already love. In this imaginary world, kids combat hackers, phishers, overshareers and bullies, practicing the skills they need to be good digital citizens. Check out the accompanying Internet Awesome curriculum and other resources at [g.co/BeInternetAwesome](http://g.co/BeInternetAwesome).



**Google Earth:** Google just launched 10 new Google Earth Voyager stories built specifically for the classroom.

Google collaborated with National Geographic Society, PBS Learning Media, HHMI Biointeractive and Mission Blue to create beautiful, curated Voyager stories which offer students a new perspective on the world.

<https://www.google.com/earth/>

## Solar Eclipse Resources

This will be the first total solar eclipse visible in the continental United States in 38 years. While Ohio is not inside the path of totality, we will still be able to see an amazing astrological display, and take this opportunity to learn more about eclipses!

NASA has compiled all their eclipse resources into an interactive website that students and educators alike can use to learn more about the science behind the eclipse, when and where to view it, and how to do so safely.



As part of a NASA-funded project, Bringing the Universe to America's Classrooms, WGBH has developed a variety of resources for those who wish to explore and have fun with the eclipse. Whether in or out of the path of totality, or your districts are in school or not, please find tips, activities, and resources to make the eclipse a meaningful learning experience!

- A comprehensive **Eclipse Toolkit** for formal and informal educators. This Toolkit is full of resource links, teaching tips and ideas, and input from educators: <http://bit.ly/EclipseToolkit>
- A folder gathering **eclipse resources on PBS LearningMedia**: <http://bit.ly/TeachEclipse2017>
- Recordings of **two teacher PD** events—a webinar and a Facebook Live—on the eclipse:
  - Recording link: <http://bit.ly/TeachEclipseWebRrec>
  - FB live: <http://bit.ly/EclipseFBLive>
- **Information sheets for both educators and families.** Distribute the link, or print them out for events:

[bit.ly/EclipseInfoTeachers](http://bit.ly/EclipseInfoTeachers)

[bit.ly/EclipseFamilyFlyer](http://bit.ly/EclipseFamilyFlyer)

- Search **#TeachEclipse2017** on Twitter for comments from WBGH's Eclipse Twitter Chat, and input from lots of contributors on eclipse resources!

<https://www.itsco.org/blog/2017-solar-eclipse>

## Learn With INFOhio!

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

Session 1 - Blended Learning with a Media Twist

Session 2 - Students as Creators: Inspiring Students to Launch Their Own Learning

Session 3 - Plagiarism? False Information? Take 'em to Court!

Session 4 - Using Digital Tools for Deeper Learning

Session 5 - 25 Picture Books to Use This Fall

Session 6 - Terrific Twenty Teen (Book)Talks

Session 7 - Hipster Google: Library Edition



<https://www.infohio.org/educators/pd/lwi/recordings/view/item/bc2017s1>

## First Energy Classroom Grant Opportunity

**Attention all K-12 "educators and leaders of youth groups" in MD, NJ, OH, PA, VA, WV**

You may be eligible for up to **\$1,000** to implement a "creative classroom project" through a FirstEnergy STEM Classroom Grant!

**STEP 1:** Determine if your community is serviced by one of FirstEnergy's family of electric companies via this company list and coverage map.

**STEP 2:** Visit the STEM Classroom Grant page to read through the requirements and download an application.

**STEP 3:** Submit your application by September 22, 2017 for the 2017-2018 school year.

Unsure of a project? Peruse CEF's You Be The Chemist® Activity Guides for inspiration! Design a series of "Test-It-Out Tuesdays" for students to explore a different YBTC Activity Guide experiment every week or utilize the "Modifications/Extensions" section to build out one - or multiple - Activity Guides into longer-duration project-based learning.

[https://www.firstenergycorp.com/content/fecorp/community/education/educational\\_grants.html#gsc.tab=0](https://www.firstenergycorp.com/content/fecorp/community/education/educational_grants.html#gsc.tab=0)

## Edutopia Offers Free Apps

**10 free apps** and tools for starting out (and staying) organized this school year: <http://edut.to/2vy1qt0> [#backtoschool](https://twitter.com/backtoschool)



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## NWO STEM Activity

In anticipation of this month's "**STEM in the Park**", this month's activity is from BGSU's Chemistry Department. More fun activities from STEM in the Park can be found on our website at: <http://www.bgsu.edu/nwo/programs/stem-in-the-park/activity-cards.html>

### Ice Cream Science - At Home

#### What You Need

- 1/2 cup milk
- 1/2 teaspoon vanilla
- 1 tablespoon sugar
- 4 cups crushed ice
- 4 tablespoons salt
- 2 quart size Zip-loc bags
- 1 gallon size Zip-loc Freezer Bag
- Gloves or mittens to keep fingers from getting too cold
- A kitchen timer



#### What To Do

1. Mix the milk, vanilla and sugar together in one of the quart size bags. Seal tightly, allowing as little air to remain in the bag as possible.
2. Double-bag by placing this bag inside the other quart size bag. Remove the air and seal it well.
3. Put the two bags inside the gallon size bag and fill the bag with ice, then sprinkle salt around it. Let all the air escape and seal the bag.
4. Put on your gloves and shake and massage the bag until the mixtures thickens into ice cream.

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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