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K-16 STEM in the NEWS

Get Your Wheels Turning at STEM in the Park 2018!

NWO's **STEM in the Park** will feature new activity zones at its 8th annual event on **September 23 from 9:30 am to 2:30 pm.**

Rotate, spin and roll into the NEW **All Wheels Zone** where participants will encounter all types of wheels, tires and gears! This new zone is sponsored by Thayer Family

Dealerships in Bowling Green and will feature local organization **The Right Direction**, a youth development program that reaches out to the community through action sports.

According to co-founders Don DiBartolomeo and Matt Bowley, they believe that the participation in action sports provides an excellent platform for positive youth development in a non-traditional setting. Don shared, "The best part about working with the kids is sitting back and listening to their amazing ideas and help them transform that into reality.....you are never too old to learn a lesson and they continue to inspire me to do what I do. Our kids have shown that one single idea can have a major impact on the communities they live in and the causes they choose."



Unlike traditional sports, action sports lack a guidance and support system to help kids develop to their fullest potential. This is where The Right Direction Youth Development Program comes in. Directed and mentored by

[Google gives students interactive tools for STEM and internet safety \(engadget\)](#)

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professional athletes, they offer youth involved in action sports a support system that facilitates progression and development as both athletes and young people. "Our Mission is to empower youth by increasing the impact and access to action sports as a tool for positive youth development."

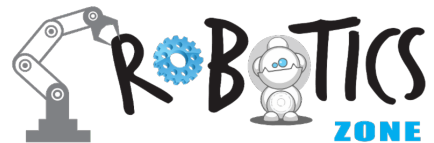
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The Right Direction was chosen to be an exhibitor at **STEM in the Park** for a variety of reasons, stated Jenna Pollock, **STEM in the Park** Coordinator, "We are thrilled to have The Right Direction at **STEM in the Park** this year, especially because of its strong positive message for youth, it's STEM application in physical science concepts and the high energy demonstrations."

The team of professional action sports athletes will put on thrilling demonstrations that have a positive impact for children. The positive messages covered in the demos include helmet safety, drug and tobacco free initiatives, anti-bullying, and leading a healthy lifestyle. More information about The Right Direction can be found at: <http://therightdirection.org/>

Another new zone at this year's **STEM in the Park** is the **Robotics Zone**, where participants can interact with organizations highlighting cutting edge technology that deals with the design, construction, operation, and application of robots.



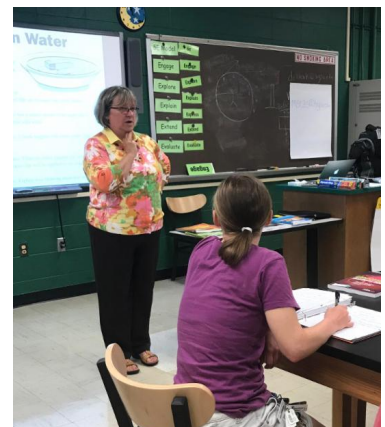
For more information on STEM in the Park, please visit: www.steminthepark.org

Community STEM in the NEWS

Page Keeley Wows Teachers at Professional Development Session

Project ASSETS (Advancing the Science Skills of Elementary Teachers and Students) is a professional development program for the region's teachers that offers more than 100 contact hours of high-quality, research-based teacher professional development for 30 Ohio teachers in grades 3-5 on inquiry science and STEM-related curricula.

Led by BGSU associate professor Emilio Duran and Education Program Manager Jenna Pollock, the two week summer session at BGSU ended in late June with a lively presentation from NSTA author Page Keeley.



The backbone of **Project ASSETS** is a co-teaching team at each grade level comprised of a Science Educator (practicing Master Teacher), Special Educator, and Science Content Expert who deliver inquiry-based lessons in the 6E learning cycle model (Engage, Explore, Explain, Extend, Express, Evaluate). The participants are trained on how to integrate formative assessment probes with their students through a variety of delivery methods by incorporating unique and thought-provoking Page Keeley strategies, which typically involve critical thinking skills.



Dr. Duran stated, "Page Keeley solidified this process in her session on the last day of the summer workshop as she modeled a variety of probes and techniques and engaged the teachers in participating as their students would. She also discussed how the formative assessment probes were created around science misconceptions that a majority of students hold and how teachers can equip themselves to combat these misconceptions. Teachers especially appreciated being able to interact with Page in an intimate classroom setting and engage in conversation about teaching and learning."

Page Keeley is the Senior Science Program Director at the Maine Mathematics and Science Alliance, where she directs projects in the areas of leadership, standards-based curriculum and instruction, formative assessment, professional development design, and instructional coaching. She is the author of nine books including the top selling titles, "Uncovering Student Ideas" and "Picture Perfect Science Lessons". <http://www.uncoveringstudentideas.org/>

Project ASSETS is an Ohio Department of Higher Education grant-funded program offering no-cost, Ohio Learning Standards-based sessions, a focus on diverse learners, science and cross-curricular materials, and a \$300 stipend to grades 3-5 teachers who participate. Project ASSETS is open to Ohio grades 3-5 teachers of all subject areas who would like additional professional development in inquiry and STEM subject areas.

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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



"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

NWO SYMPOSIUM - Save the Date!

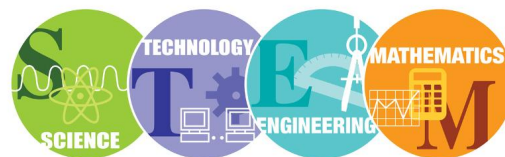
NWO Symposium on Science, Technology, Engineering and Mathematics Teaching

November 18, 2017

8:30 AM - 4 PM

Olscamp 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

For more information visit the Symposium website at: bgsu.edu/nwoSymposium

Ohio Department of Education Survey

Based on feedback from hundreds of Ohio teachers and parents, improvements are pending to Ohio's Learning Standards in science, social studies and financial literacy. The Department asks you to share your thoughts about proposed changes through a survey, now open through July 18.

A review of the standards began in November, when the Department asked teachers, parents and community members for suggestions. Based on this input, advisory committees representing education organizations selected some standards for revision. Educator working groups then proposed the changes we present in the survey. Those taking the survey will see the rationale for the suggested revisions, which primarily clarify text or change the grade levels at which students learn subject-related skills and knowledge. The survey also asks for feedback on newly proposed high school anatomy and physiology standards, which teachers asked for in the

fall.

Teaching and Learning Collaborative

Join K-2 educators and experience an innovative professional development program that brings science and literacy together in integrated units. The PD focus is on the integration of high quality science-themed nonfiction texts into inquiry-based science. NFTI Science is a collaborative effort between The Ohio State University and the Teaching & Learning Collaborative MPACT helps teachers develop instructional methods which provide all of their students with skills that will lead to future successes in STEM careers. IMPACT instruction is student-centered and develops the critical foundations in number sense, measurement and problem-solving.

<http://www.teachinglearningcollaborative.org>

Imagination Station

Summer is here, but this doesn't mean students have to lose all they have learned over the school year. Help students retain the knowledge they have gained and avoid the summer slip with Imagination Station's summer programming!

Students can keep the learning going all summer long - while also having fun! **Think Tank Workshops** will bring out their inner engineer and designer, while our Summer Camps offer a variety of ways to build, create and explore outside of the classroom. The new Dinosaurs Around the World exhibition also has tons to explore with dino-themed tinkering activities, events and weekends! Imagination Station is the summer destination for unique learning and guaranteed fun!

More information: <https://goo.gl/qht3n6>



Google gives students interactive tools for STEM and internet safety (engadget)

Google launched a new browser-based Google Earth this past April, adding educational tools to make it easier for teachers to show the world off to students without having to leave the classroom. The company also collaborated with the BBC to create a digital storytelling platform called Voyager that helps curate the discovery of various places of interest around the globe. Google is taking things even farther today at the International Society for Technology in Education (ISTE) conference, announcing a bevy of new tools and virtual experiences to empower students.

Google for Education

For More Information:
<https://goo.gl/uoaZFf>



Battelle for Kids Learning Hub



Stay connected this summer

Visit the Learning hub for free resources to help teachers foster 21st century learning experiences for all students. Topics include leadership, strategic planning, communication, human capital systems, instructions, assessment and more.

<http://battelleforkids.org/learning-hub>

Partners in Education Dragon Boat Festival

Partners in Education is in its 16th year of hosting the dragon boat festival in Toledo and will be held on **Saturday, July 22, 2017**. The Festival will serve as a showcase of summer learning programs and is Partner in Education's signature event to raise money to fulfill its mission "to support students success through community engagement."

This event is about learning, culture, fun, families, fitness, teamwork and team-building. NWO is partnering with BGSU's AIMS (Academic Investments in Mathematics and Science) Students to host three large group STEM Demonstrations at the event.



Please see the website for more information: <http://www.toledodragonboat.org/>

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NWO STEM Activity

This month's Hands-on Activity is from BGSU's Department of the Environment and Sustainability

Water Cycle Bracelet

What You Need

- Blue, white, clear, green, and yellow beads (can have one of each color, or repeat the pattern to fill up the bracelet)



- Hemp string or pipe cleaner

What To Do

- Place the beads on your pipe cleaner/string in a pattern that represents the water cycle.
 - The sun (yellow bead) heats up water in and on the earth (green bead). Water evaporates (clear bead), cools and condenses into clouds (white bead).
 - Then it rains, sleet, snows or hails (blue bead) and that water (called runoff) soaks into the earth where the sun again heats it, making it evaporate once again and continuing the cycle.
- After you place all of your beads onto your bracelet have an adult tie it around your wrist (not too tight).



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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