

Advancing science, technology, engineering, and mathematics education for people of all ages.



March 2025

What's happening at NWO?

As part of the Project EDUCATE (Educators of Diversity: Unified and Collaborative to Aspire Teacher Education) grant project with Washington Local school district, students in the afterschool club at Washington Junior High began planning an Student of Color Panel to be held at Whitmer High school in late April. Junior High students will have the opportunity to ask questions of high schoolers on current topics and learn what it's like to be a high school student today.



K-16 STEM in the NEWS

Hawkins STEMM Academy earns STEAM designation

Hawkins STEMM Academy, a K-8 school in Toledo, Ohio has recently earned the distinct designation as an Ohio STEAM Designated School! Ohio law provides a specific pathway for schools to seek and receive designation as a STEAM (Science, Technology, Engineering, Arts, and Math) school. Designation recognizes a school as an effective

place for STEAM learning. “We are one of only 10 schools in the entire state to earn this designation,” said Cynthia Madanski, Instructional Coach at the school in Toledo Public Schools district. “We integrate the arts into our curriculum working with the Toledo Museum of Art, Toledo Ballet, and Unruly Arts. It is difficult to earn the designation, and we are very proud to have accomplished it.”



Initially designated as an Ohio STEM school, Ms. Madanski worked with staff to integrate the arts into all inquiry, design thinking, and problem-based learning lessons. It was a schoolwide STEM-focused implementation across all K-8 core content, engineering and technology areas when the school transformed to STEM designated school and it was later decided to seek and add the STEAM designation to honor the additional work being done by all staff members and students.

She stated, “We have the Toledo Museum of Art serving on our TPS STEMM Advisory Group, and they are working with a variety of grade levels on projects that will benefit our community. In addition, we work with a dance instructor from Toledo Ballet throughout the school year, who plans with teachers to incorporate our STEMM Identity and yearly themes into dances, and students will showcase what they learned during a recital in the spring at the Toledo Botanical Garden.”

In addition, the school partners with Unruly Arts, a small art studio that supports the artistic visions and needs of people with disabilities, on digital art lessons. Hawkins students have held a student art show in the Unruly Arts studio that is housed at the Toledo Botanical Garden, which is adjacent to the school.

Ms. Madanski also went on to say the school is a “beacon of innovative education.” Schools apply for STEM and STEAM designation from the Ohio STEM Committee, a committee of state and community leaders. The Ohio STEM Learning Network and the Ohio Department of Education and Workforce support the designation process.

Schools interested in this process in the northwest Ohio region can also contact the Northwest Ohio Center for Excellence in STEM Education (NWO) at Bowling Green State University’s College of Education and Human Development for resources on the designation process. NWO is one of the seven hubs of the Ohio STEM Learning Network. For more information please see: <https://www.bgsu.edu/nwo.html>

Community STEM in the NEWS

Astronaut remarks, student ideas cap design challenge

Each year, the Ohio STEM Learning Network (OSLN) hosts a statewide design challenge, culminating in a showcase of students from around the state. This year's challenge focused on the Starlab space station program, in partnership with the [George Washington Carver Science Park](#) at The Ohio State University



Last Tuesday, the top 21 teams gathered to meet experts, receive recognition from state leaders, and showcase their projects.

Top awards went to:

- Elementary: Hillview Elementary (Newark)
- Middle: Indian Hill Middle School
- High: Marysville STEM Early College High School

This year was the eighth annual statewide design challenge hosted by OSLN, as a service to all schools in the state. OSLN is a public private partnership between Battelle and the Ohio Department of Education & Workforce.

Casey Coughlin at the George Washington Carver Science Park at The Ohio State University wrote up a detailed piece including quotes from speakers and photos of participating students. With permission, that piece is included below.

Read complete story [here!](#)

STEM Opportunities

NWO STEM Inquiry Series

The STEM Inquiry Series features four 3-hour inquiry-based sessions highlighting current trends in STEM education research and professional development during the Spring of 2025. Session topics include concepts from the Ohio Department of Education STEM School Quality Model: A Culture for STEM Learning, STEM as an Approach to Teaching and Learning, and Pathways to Careers. The series is



sponsored by Bowling Green State University's College of Education and Human Development, NWO, and the Ohio STEM Learning Network.

Project TILES: Teams for Immersive Learning Experiences and ThingLink

March 19, 2025, 5:00 - 8:00 pm

BGSU Levis Commons 1655 N Wilkinson Way, Perrysburg, OH 43551

(Light Dinner Provided)

Facilitator: Allison Goedde & Mark Stevens

Registration: <https://tinyurl.com/m9hk9zyy>.

The TILES (Teams for Immersive Learning Experiences) project is an initiative created to support the construction of educators digital learning materials for customized learning experiences. NWO is featuring a professional development opportunity for educators to learn to build immersive learning experiences using a platform called Thinglink.

Using Thinglink and the TILES initiative, a STEM/STEAM focused classroom can become space where educators and students collaborate on projects that require critical thinking and problem-solving skills. This classroom encourages student creativity, collaboration, communication, and artificial intelligence. [The Partnership for 21st Century Learning](#) suggests that collaboration, critical thinking, communication, and creativity are the four Cs of a 21st-century learner. When students are empowered to collaborate during the creation process, they demonstrate depth of knowledge.

Through technology integration and TILES initiative, educators will meet the needs of a new era of learners (the alpha generation) and will empower students' digital interaction and updated communication channels.

Certificates for contact hours will be provided.

**Current Ohio STEM
Learning Network (OSLN)
opportunities**

Ohio STEM
Learning Network

STEM Deep Dive

The Ohio STEM Learning Network, together with the Northwest Ohio Center for Excellence in STEM Education at Bowling Green State University, invites educators, school administrators and/or staff to participate in a daylong workshop to gain a deeper understanding of the three domains of STEM education by exploring the STEM Quality Model of the Ohio Department of Education and Workforce.* This session will provide an overview of how culture, curriculum, and connections to the community work together to support STEM best practices for a school-wide approach and will guide participants to understand how STEM education transcends content areas, resulting in a shift in the way students engage in learning from kindergarten to graduation. Facilitators will present what distinguishes a STEM school from other schools with strategies to support all students and will assist schools interested in seeking STEM or STEAM designation. **Thursday, April 17th** at BGSU Levis Commons, 1655 N. Wilkinson Way, Perrysburg, OH 43551, beginning at **9:00 a.m. until 3:30 p.m.** with lunch provided.

Registration: <https://forms.gle/5L7EMLQzPHZymPiX7>. **Space is limited.**

**Computer Science professional learning programs applications close
March 31**

OSLN, Putnam County ESC, and ESC of Central Ohio are teaming up to bring computer science education to more Ohio classrooms. At no cost to teachers and schools, Ohio educators can join a year-long cohort and build the skills to bring computer science to any classroom. No matter the grade level or prior experience, these programs help dedicated teachers inspire students, connect to relevant standards, and build life-changing skills.

Elementary: Teaching computer science in early grades develops critical computational thinking skills in young learners. OSLN's K-5 Computer Science Program provides the tailored solutions elementary teachers need.

Middle and High School: To succeed as a part of tomorrow's workforce, every student will need a grounding in computational thinking. With support from Code.org, OSLN has brought three programs to Ohio: Computer Science Discoveries (6-10th grade), Computer Science Principles (9-12th grade), Computer Science A (9-12th grade)

[Priority applications close March 31.](#)

Spring into STEM 2025

Tour any of eleven schools with Spring into STEM 2025

Join the Ohio STEM Learning Network this spring as the network's seven regional hubs host open tours at select STEM schools across the state.

From elementary to high school, these tours offer a chance to visit schools that will inspire you to rethink education. Discover how to leverage industry partnerships, implement work-based learning opportunities, and integrate cutting-edge technology. Bring it all together with updated best practices in STEM teaching and learning. Learn more and register at osln.org/spring.

Celebrate National AI Literacy Day with Learning Blade!



LearningBlade

Powered by eDynamic Learning

National AI Literacy Day is March 28, 2025!

This is a great opportunity to introduce students to **artificial intelligence** and its impact on our world.

Get started today—sign up for a FREE Learning Blade account:

LearningBlade.com/States

Girls Who Code Summer Immersion Program



Girls Who Code offers [free, virtual Summer Programs for high school students](#). Applicants can choose between a

two-week Summer Immersion Program, featuring live

virtual classes and hands-on game design, or a six-week Pathways program for flexible, self-paced study in artificial intelligence, data science, cybersecurity, and web

development. For more information: <https://girlswhocode.com/>

Virtual Farm Trips

From dairies to pig farms and more, the LIVE Virtual Farm Trips schedule is filling up for this spring! Browse and register for an upcoming [LIVE Virtual Farm Trip](#) OR search, filter and sort through hundreds of [On-Demand](#) past trips to watch with students. All for FREE at VirtualFarmTrips.com!



Lucas Soil & Water Conservation District School Tree Giveaway

In honor of Earth Day and Arbor Day, Lucas County students have the opportunity to receive a Norway Spruce seedling, free of charge, compliments of Lucas Soil & Water Conservation District! As part of this program, students receive a seedling prepackaged with instructions on how to care for their seedling along with a fun program where they learn all about the needs of trees. If educators would rather do a class tree planted at the school, we can do that too! Supplies are limited with the tree seedlings.



To reserve your trees, please contact Patrick Troyer via phone at 419-893-1966 ext. 2# or email ptroyer@co.lucas.oh.us. by Friday, March 21, 2025.

2025 BGSU Summer Camps

Discover summer learning opportunities for youth in third grade through high school with Summer Academic and Youth Programs at Bowling Green State University.



This year, we are offering a combination of virtual and in-person camps. Whether at home or on campus, we promise the camps are engaging, fun and affordable.

Summer Academic Camps provide opportunities for students to connect to Bowling Green State University all while expanding their knowledge, building life skills, and exploring their interests.

Be sure to [visit the Falcon Youth website](#) as new programs are continually added!

VIRTUAL CAMPS & PROGRAMS

- [Academic Enrichment Camp](#) (Grades 3-8)
- [Forensic Science](#) (Grades 9-12)
- [Future Med: Exploring Health Careers](#) (Grades 9-12)
- [Veterinary Science](#) (Grades 9-12)

IN-PERSON CAMPS and PROGRAMS

- [Art Workshops](#) (Grades 9-12)
- [Advanced Manufacturing](#) (Grades 9-12)
- [BG: Cyber Guardians](#) (Grades 8-10)
- [Content Creator](#) (Grades 9-12)
- [Discovering Hidden Health Sciences](#) (Grades 9-12)
- [Explore Nursing](#) (Grades 9-12)
- [Farm 2 Fork Camp](#) (Grades 4-6)
- [Ignite STEM](#) (Grades 4-6)
- [Marine Biology Camp](#) (Grades 10-12)
- [News & Sports](#) (Grades 9-12)
- [Pre-Law Camp](#) (Grades 10-12)

- [Summer Music Institute](#) (Grades 7-12)
- [Veterinary Science](#) (Grades 10-12)

NWO STEM Activity

Air Traffic Management

Brought to you from NASA:

<https://www.nasa.gov/stem-content/air-traffic-management/>



HIGH SCHOOL Grades 9-12

Materials

Computer or tablet with internet access (or download all content to run locally)

Download file containing: Drone Sprites, Stages, and Geofenced Area Sprites

Programming language of your choice (Note: *Snap!* and *Scratch* can be downloaded to run locally) This activity gives instructions using *Scratch*

National STEM Standards

- **HS-ESS3-4 Earth and Human Activity**
 - Evaluate or refine a technological solution to reduce impacts of human activity on natural systems.
- **HS-ETS1-1 Engineering Design**
 - Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions accounting for societal needs and wants.
- **HS-ETS1-2 Engineering Design**
 - Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
- **HS-ETS1-4 Engineering Design**
 - Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

For the complete activity [click here](#) (pdf)

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.

eNewsletters from the past!

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