



In This Issue

K-16 STEM in the NEWS

K-16 STEM in the NEWS

[SSOE Offers Real-World Job Experience to Rogers High School's Visual Communication Design \(VCD\) Career Technology Program](#)

Community STEM in the NEWS

[NASA Selects Partners for Mars 2020 "Name the Rover" Contest, Seeks Judges](#)

STEM Opportunities

[STEM in the Park - Save the Date](#)

[Challenger Learning Center of Lake Erie West](#)

[BiG Fab lab](#)

[BGSU Planetarium](#)

[Imagination Station Summer of Speed](#)

[Oak Ridge National Laboratory](#)

SSOE Offers Real-World Job Experience to Rogers High School's Visual Communication Design (VCD) Career Technology Program

SSOE Group (www.ssoe.com), a global architecture, engineering, and construction management firm, announced today that they are proud to have partnered with Rogers High School's Visual Communication Design (VCD) Career Technology Program on several projects, allowing students to gain valuable on-the-job experience during their senior year. Rogers is a high school within the Toledo Public School District.



Members of SSOE's Marketing Department joined students in the VCD class to assist them with several video editing projects. Students were presented with individual project summaries and assigned the task of producing a 60 to 90 second video that summarized the highlights from each project related to services that SSOE performed. They were given a creative brief and project imagery along with the corporate color palette and approved fonts to get started. SSOE's marketing team shared examples and walked the students through expectations for the project. A follow-up visit took place to provide real-time feedback and work with the students to simulate the exercise of incorporating design changes into their work.

Betsy Hurner, SSOE's Director of Marketing and Public Relations joined Rogers VCD advisory board last year. Commenting on the program Hurner stated, "This project was beneficial for both SSOE and the students-we received materials that can be used to market our services in the future and the students gained practical, real-world experience. Our experienced creative team enjoyed working with the students to provide feedback in order to help them produce a real project video that can be added to their portfolio. Students got to learn about the creative brief and review processes, which helped them determine

[NASA STEM Engagement](#)

NWO STEM Activity

[Bottle Rockets - It really is rocket science](#)

what content was important to include or exclude. The final videos were great, and a testament to the hard work the seniors put into the process!"

"It was fun to work with someone outside the building on real projects that can benefit both the students and SSOE. My hope is that the students will use this experiential learning opportunity to showcase their portfolio to potential employers and colleges. It's exciting to know that their work will be used in the industry for a real purpose. SSOE even presented some of the students with Amazon gift cards in appreciation of their hard work," stated Daphne Hereford, Rogers High School's Visual Communication Design Teacher.

The VCD Career Technology Program is offered at two Toledo Public High Schools, Rogers and Waite. Students have access to the Adobe Creative Suite software and learn the theory and technique of computer-based graphics production, digital audio, recording, and editing. Both juniors and seniors have the opportunity to experience the fields of audio electronics and visual communications.

To view videos produced by this year's Rogers High School VCD class, [click here](#) for the YouTube playlist.

About SSOE Group

As a Top 10 Engineering / Architecture firm for the past 6 years (BD+C), SSOE focuses on delivering Great Client Service to clients through a full range of project delivery solutions. They have been named a "Great Workplace" (Great Place to Work®) and one of the "Best AEC Firms to Work For" (BD+C).

With more than 20 offices around the world, SSOE is known for making its clients successful by saving them time, trouble, and money. Over the company's 70-year history, it has earned a reputation for providing quality project solutions to semiconductor, automotive, food, chemical, glass, manufacturing, healthcare, power, and general building industries-with projects completed in 40 countries. Visit www.ssoe.com for additional information and career opportunities.



Community STEM in the NEWS

NASA Selects Partners for Mars 2020 "Name the Rover" Contest, Seeks Judges

*From the
NASA Explores newsletter*

NASA has selected two partner organizations to run a nationwide contest giving K-12 students in U.S. schools a chance to make history by naming the Mars 2020 rover. An application to become a judge of the contest also is now available online.

Battelle Education, of Columbus, Ohio, and Future Engineers, of Burbank, California, will collaborate with NASA on the Mars 2020 "Name the Rover" contest, which will be open to students in Fall 2019. The student contest is part of NASA's efforts to engage the public in its missions to the Moon and Mars.



The currently unnamed rover is a robotic scientist weighing more than 2,300 pounds (1,000 kilograms). It will search for signs of past microbial life, characterize the planet's climate and geology, collect samples for future return to Earth, and pave the way for human exploration of the Red Planet. The spacecraft is targeted for a July 2020 launch and is expected to touch down on Mars in February 2021.

"We're very excited about this exceptional partnership," said George Tahu, Mars 2020 program executive in NASA's Planetary Science Division at the agency's Headquarters in Washington. "Contests like this present excellent opportunities to invite young students and educators to be a part of this journey to understand the possibilities for life beyond Earth and to advance new capabilities in exploration technology."

By focusing the Mars 2020 "Name the Rover" contest on K-12 entries, NASA seeks to engage U.S. students in the engineering and scientific work that makes Mars exploration possible. The contest also supports national goals to stimulate interest in science, technology, engineering, and mathematics (STEM) and help create the next generation of STEM leaders.

Battelle will connect students to the Mars 2020 mission through its portfolio of STEM networks. It will help recruit judges and students and also curate resources for teachers.

Future Engineers is an education technology company that engages K-12 students with innovation contests and challenges. The Mars 2020 "Name the Rover" contest will be hosted on Future Engineers' web platform, which will serve as the online portal for entry submission and judging.

JUDGES NEEDED

K-12 students are not the only ones able to participate in the contest. NASA also is seeking volunteers to help judge the thousands of contest entries anticipated to pour in from around the country. U.S. residents interested in offering approximately five hours of their time to review student-submitted rover names may visit the Future Engineers website and register to be a judge:

<https://www.futureengineers.org/registration/judge/nametherover>

The Mars 2020 Project at NASA's Jet Propulsion Laboratory manages rover development for NASA's Science Mission Directorate. NASA's Launch Services Program, based at the agency's Kennedy Space Center in Florida, is responsible for launch management. Mars 2020 will launch from Cape Canaveral Air Force Station in Florida.

For more information about the Mars 2020 rover, visit:

<https://www.nasa.gov/mars2020>

For more about NASA's Moon to Mars plans, visit:

<https://www.nasa.gov/topics/moon-to-mars>

[\[back to top\]](#)

STEM Opportunities

STEM in the Park - Save the Date

Go Green with STEM in the Park!
Because there is no Planet B!

Featuring the new eco zone

SATURDAY, SEPTEMBER 28, 2019

9:30 a.m. - 2:00 p.m.

Perry Field House @ BGSU



Online registration opens on August 1st!

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, featuring the new ECO ZONE with Earth-Centric Activities.

Join us for a family day of hands-on fun at Bowling Green State University, featuring everything from giant bubbles to edible DNA. Families will receive at-home STEM activities and a free lunch. You won't want to miss it!

Back by popular demand at "STEM in the Park" are the Robotics Zone, the Food Science Zone, the Digital Media Zone, the Science of Sports Zone and the H2O Zone, which explores the science behind all of water's amazing uses. A Roots to STEM Pre-K-2 Zone is also back this year, featuring activities that cater specifically to younger children.

For more information visit: www.STEMinthePark.org

Challenger Learning Center of Lake Erie West

Spaces still available for summer camps: <http://www.esclakeeriewest.org/SummerCamps2019.aspx>

Sponsored by the Educational Service Center of Lake Erie West

WWW.ESCLAKEERIEWEST.ORG/CHALLENGER-LEARNING-CENTER

4955 Seaman Road

Oregon, OH 43616

Contact by phone at (419) 725-5926 or by fax at (419) 245-6201



BiG Fab lab

The Creative Café is now open in the BiG Fab lab in Bowling Green, with summer open houses and classes available.

<http://bigfablab.com>



BGSU Planetarium

Dawn of the Space Age, Celebrating the 50th anniversary of the Apollo 11 Moon Landing

Friday, July 19 - 8:00 pm. Saturday, July 20 - 2:00 pm. Sunday, July 21 - 7:30 pm

On July 20, 1969, humans first set foot on the Moon. The Planetarium celebrates the 50th anniversary of this historic event with three special showings of the Dawn of the Space Age.

<https://www.bgsu.edu/arts-and-sciences/physics-and-astronomy/bgsu-planetarium.html>



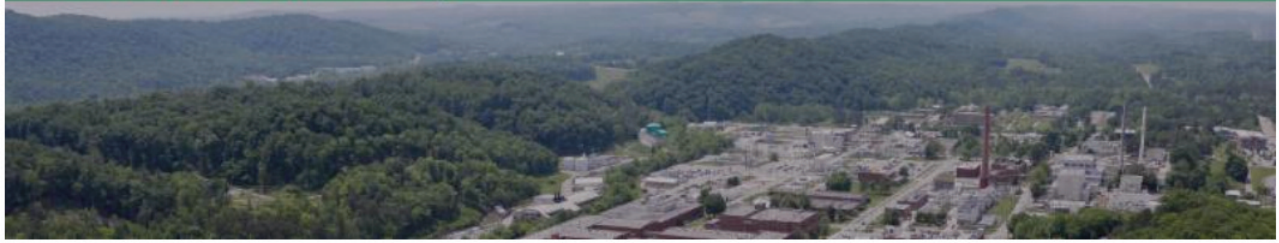
Imagination Station Summer of Speed

Zoom, blast and whoosh into Imagination Station to explore the science of speed! Investigate how race cars and rockets, planes and people, boats and baseballs overcome the forces of friction and gravity to move so fast. Don't miss the chance to build and test boats and rockets, construct a car, dismantle a Jeep and check throwing speed.

Summer of speed runs Saturday, June 1 - Sunday, September 1

<https://www.imaginationstationtoledo.org/visit/events/summer-of-speed>





Oak Ridge National Laboratory has reimagined STEM-Source: (stem.ornl.gov). The site is a resource for students, teachers, and community members to find educational materials, online learning resources, student and educator opportunities, upcoming and past events, and research.

NASA STEM Engagement

Sign up for the NASA STEM Express newsletter @: www.nasa.gov/stem/express. Announcements on workshops, contests, etc. with special Apollo 50th edition in July.

[\[back to top\]](#)

NWO STEM Activity

Bottle Rockets - It really is rocket science

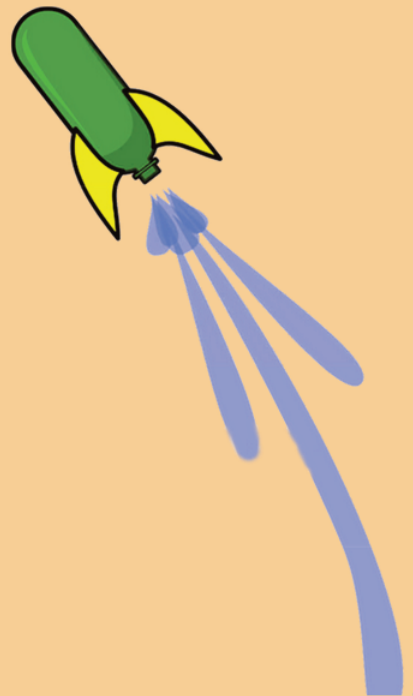
What You Need

- 2 -two-liter bottles (for Rocket & Ballast sections)
- Newspaper (Ballast)
- Foam tray, old real estate sign or
- foam poster board (Fins)
- Paper or paper towel tube (Nose
- Cone) - Optional
- Plastic Easter Egg or Ping Pong Ball
- (Nose Cone) - Optional
- Packing tape or Duct tape
- Scissors
- Decorations (Spray paint, Markers,
- Stickers)
- Help from an adult

What To Do

Step 1

- Cut the bottom portion of one of the two bottles off.



Step 2 Ballast

- Roll up newspapers into balls and place in top half of the cut bottle. You can use other material for the ballast such as foam peanuts.

Step 3

- Push bottom half of two liter bottle upside down into top half - keeps ballast in place.
- Use small piece of tape to secure bottom piece inside bottle.

Step 4

- Place the un-cut 2-liter bottle (pressure vessel) into top half. Try to make bottles straight. Use little pieces of tape to secure bottle. Once you have them lined up straight, wrap a piece of tape all the way around the seam.

[Download a pdf](#) of the complete hands-on activity by clicking here!

[\[back to top\]](#)

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.

Join NWO on [Facebook](#)

Follow NWO on [Twitter](#)

eNewsletters from the past!

Looking for past articles from our eNewsletters?

[Click here](#) view and download from our **eNewsletter** archives.