



### Greetings from STEM@SVSU

The school year is flying by, and we've been busy, busy, busy with STEM programs and events! Enjoy reading highlights from the fall and winter and check out all of our upcoming spring and summer STEM opportunities. We are fortunate to collaborate with so many incredible entities across SVSU's campus and throughout the Great Lakes Bay Region, including a wide variety of business and education partners that make it possible to implement high-quality STEM experiences and meet the needs of the current and future STEM talent pipeline.

Watch our website [www.svsu.edu/stem](http://www.svsu.edu/stem), Facebook, and Instagram pages for the most updated information and opportunities available. As always, please contact us with any of your STEM support needs. We wish you all the best for a successful end to the school year!



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Keep in touch with STEM@SVSU on social media!



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### Upcoming STEM Opportunities for K-12 Teachers and Students:

- **STEM Family Night Activity Kits** are available for checkout! Are you planning a STEM Family Night at your school this spring? We have STEM activity kits available on a first come, first served basis. Cost is just \$5 per kit and includes all the materials needed for your students and their families. Complete the STEM Family Night Activity Checkout Form at [www.svsu.edu/stem/k-12teachers](http://www.svsu.edu/stem/k-12teachers) at least 3 weeks prior to your event.
- **A.H. Nickless Innovation Award Competition** will take place on Saturday, April 15, 2023. This is the final round of the competition, and the top teams will be competing at SVSU in the Alan W. Ott Auditorium for scholarships and STEM education grants. This event is open to the public. If your high school is in Bay, Midland, Saginaw or Tuscola County and is interested in competing next year, check out more information at <https://ahninnovationaward.com/index.html>
- **Chief Science Officers Program Registration** is happening now. If your middle/high school is in Arenac-Bay, Midland or Saginaw County and interested in joining the CSO program, email Adrienne Cole at [acole@svsu.edu](mailto:acole@svsu.edu) for more information. All schools and students must register by June 1.
- **STEM Innovators Program.** This free camp is open to high school students interested in making a STEM idea become reality. Participants will work with SVSU engineering, business, and health sciences faculty to explore innovative STEM solutions, develop a business idea, conduct a feasibility study, learn marketing strategies, design a prototype, and pitch your creative solution to local experts. A true "Shark-Tank" experience! Camp dates are June 19 - 22 and information is now available on our website [www.svsu.edu/stem](http://www.svsu.edu/stem)
- **SMEKplus Jr. and Sr. Camp** registrations will open later this month on our website [www.svsu.edu/stem](http://www.svsu.edu/stem). Experience engaging, age-appropriate STEM activities at the Science and Math Extravaganza for Kids camps July 11 - 13 (2nd - 4th grade) and July 25 - 27 (5th - 8th grade). Scholarships are available to assist with the cost of these camps.

***It's been a STEMazing school year!***

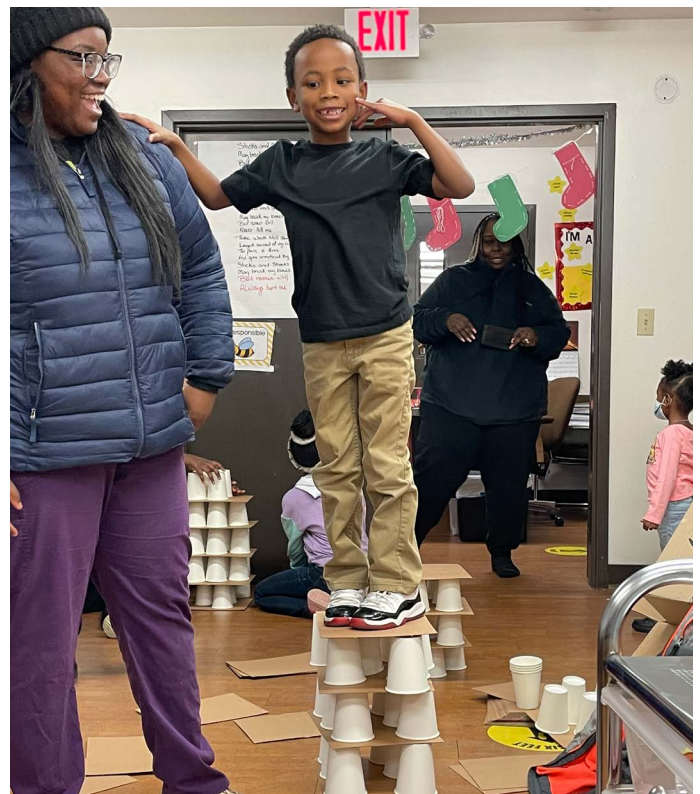
*Read on for fall and winter highlights. Many thanks to all who have participated or supported these programs.*

***Another Successful Hour of Code Event!***

Over eighty 4th grade students participated in the 6th annual SVSU Hour of Code last November. Teachers Mary Beth Neetz (All Saints Elementary, Bay City), Stephanie Shay (McAlear-Sawden Elementary, Bay City), Marcia VanderElzen (Carrollton Elementary), and Kamie Pike (Trinity Lutheran, Reese) were selected for this experience. Coding activities were led by Dr. George Corser, Professor of Computer Science & Information Systems, as well as SVSU students from the Association of Computing Machinery organization. Elementary students also toured the Marshall M. Fredericks Sculpture Museum and used binary code to make beaded keychains. We look forward to hosting more Hour of Code days in the future!

***Diving Deep into STEM***

Last fall, we partnered with the Houghton-Jones Neighborhood Association's after school program in which students investigated different STEM themes and exciting hands-on engineering projects! Participants explored energy, gravity, and laws of motion while navigating various "Out of this World" space challenges, like building two types of rockets using film canisters and balloons. They also explored concepts of weight, energy, surface area, and insulation as they traveled "Around the World" with engineering design challenges such as building their own Greek columns and creating balloon and wind-powered cars to learn about aerodynamics and racing in Monaco. Maker space carts were also donated to both the Houghton-Jones Neighborhood Association and the City Rescue Mission in Saginaw. The carts included various building activities and supplies, allowing current and future students to explore engineering design concepts for years to come. Thanks to the Great Lakes Bay Regional Alliance for supporting this program through the Out of School Time Network!





## Girl Scout STEMpalooza



The 2023 Girl Scout STEMpalooza was a tremendous success with over eighty girls (grades K-5) attending! The Scouts built LED Play-Doh Circuits, explored chromatography, created inflatable lungs, drew and read various maps, designed geometric sculpture ornaments, and investigated handwashing techniques and adaptive medical equipment. Special thanks to the following for developing and leading these STEMazing activities: Nexteer Automotive, SVSU Chemistry Club, SVSU Biology Club, SVSU Geography Club, SVSU Nursing and Occupational Health Students, and the Marshall M. Fredericks Sculpture Museum.



## Health Sciences Teen Science Cafe

Last month, with the help of the Great Lakes Bay Region Chief Science Officers Leadership Council, we held a Teen Science Café focused on medical career exploration. Working with SVSU's own Medical Laboratory Sciences professor, Margot Alvey, and SVSU students, as well as STEM professionals from Covenant Healthcare, participants experienced hands-on activities that introduced them to essential concepts in medical fields. Teens discovered the importance of laboratory testing when treating a patient through microscopic examination of cells and diseases. They also interacted with Covenant Healthcare nurses, respiratory therapists, physical therapists, and pharmacists. Participants learned how to do CPR on medical mannequins, intubate adult and infant mannequins using cameras and other tools, and measure solutions. These explorations helped many teens consider what medical career might be right for them.



## Recognizing our 2023 STEM Stars

This year, we welcomed Mr. Dante Davis, Saginaw S.T.E.M. Founder, as the keynote for our STEM Teacher Dinner. In addition to an engaging speaker, wonderful dinner, and fantastic teacher appreciation prizes, we also recognized our 2023 STEM Stars. A STEM Star is a K-12 classroom teacher, Robotics Coach, STEM Coordinator, or someone else in a district/ISD who makes incredible contributions to STEM education. Awardees received a \$250 award to enhance STEM education in their classroom or program, as well as a 3D printed keepsake. Congratulations to our 2023 STEM Stars:



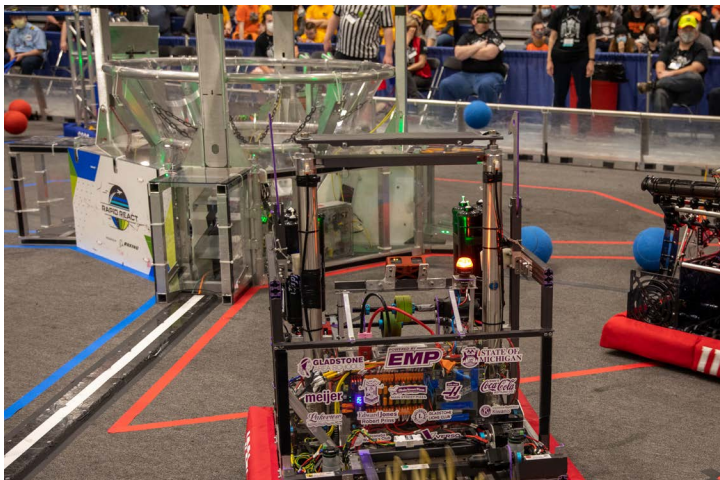
**Jolene Aylor**, Luce Road Early Childhood Learning Center  
**Zachary Baker**, Fulton Middle School  
**Jessie Bassett**, Frankenmuth High School  
**Kevin Beardsley**, Au Gres-Sims Middle & High School  
**Shelley Biver**, Bethlehem Lutheran School  
**Craig Blower**, Swan Valley Middle School  
**Theresa Bomba**, North Elementary School  
**Nickie Clark**, Freeland High School  
**Susan Doud**, Bullock Creek High School  
**Jessi Koehler**, Freeland Learning Center & Elementary School

**Lisa McBride**, Chester Miller Elementary School  
**Darin Mogg**, Farwell Middle School  
**Angel Raymond**, Farwell Middle School  
**Heather Richards**, Western Middle School  
**Ken Schafer**, Mt. Pleasant High School  
**Kim Scott**, Saint Brigid Catholic School  
**Jamie Slate**, Hemlock High School  
**Ryan Stokoszynski**, Standish-Sterling Central High School  
**Laura Trombley**, R.B. Havens Elementary School  
**Sheri Turner**, Christa McAuliffe Middle School





## FIRST Robotics State Championship at SVSU!



SVSU was proud to host the *FIRST* Robotics Michigan State Championship once again. We welcomed 160 teams and over 9,000 visitors to campus. Congratulations to all who competed and best of luck to those continuing on at the world competition in Houston, TX!

## Chief Science Officers Visit Hemlock Semiconductor



In March, CSOs and advisors visited Hemlock Semiconductor for their Spring Cabinet Meeting. The group was welcomed by Sustainability Leader Steven Holty, who discussed the history of HSC and the technology needed to create hyper-pure polysilicon, used for semiconductors, solar panels, and battery technology. The students also met with CEO A.B. Ghosh to learn about the future of HSC and the importance of pursuing STEM careers. CSOs then toured the plant site, and participated in hands-on STEM activities, investigating engineering and electrical concepts. Thank you to Hemlock Semiconductor for being STEMazing hosts!

CSOs are also hard at work completing their STEM action plans. These include implementing family STEM nights, STEM career days, community flight nights, raising salmon in the classroom, and

creating STEM kits for local elementary students. The 2022-2023 Chief Science Officers Program is sponsored by Dow, Hemlock Semiconductor, IBEW Local 557, Michigan Works, MISTEM Network East Central Michigan Region, Morley, Nexteer Automotive, Saginaw Valley State University, and the Smith Family Foundation.



If you would like more information about how your school (Arenac, Bay, Midland and Saginaw counties) can join the CSO program or how your organization can sponsor the program, contact Adrienne Cole at [acole@svsu.edu](mailto:acole@svsu.edu).

Keep in touch with GLBR CSOs on social media!



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## STEM Student Spotlight: Ty Jarvis

Ty Jarvis is wrapping up his sophomore year at SVSU, majoring in physical education with a minor in general sciences. Ty graduated as Carrollton High School valedictorian in 2021 and also participated in Student Council, National Honors Society, Chief Science Officers, Science Olympiad, football, basketball, and baseball while in high school. Upon acceptance to SVSU, Ty received the Founder's Scholarship and many others through the Saginaw Community Foundation. Aside from academics, he currently volunteers at community STEM nights and coaches middle school football and varsity baseball in Carrollton. Ty is a student employee with STEM@SVSU, helping plan and coordinate STEM events and programs in the region. He also works for CSO International as a Program Coordinator and directs all CSO Alumni Relations.



### What are your interests (in and out of STEM fields)?

Growing up, I always had an interest in STEM, which inspired me to participate in *FIRST* Lego League, local math and science nights, and various STEM camps, as well as compete in Science Olympiad. As I progressed in school, I continued to have a strong interest in STEM; it was amazing to see all of the career possibilities and I began to see my STEM-related classes with a new scope. I am pursuing a degree in physical education (closely related to health sciences) because I realized the importance of fitness at an early age. Besides STEM, my interests include working out, coaching sports, volunteering at youth STEM and athletic camps, spending time with friends, and occasionally reading. I love to be adventurous and try new things no matter where it takes me. I live, learn, and grow through my experiences and try any opportunity that comes my way.

### What should local K-12 educators share with their students about opportunities in STEM studies at SVSU?

SVSU offers an amazing variety of STEM classes and fantastic professors that support you along your journey. SVSU has one of the smallest student-to-professor ratios in the state, allowing students to build better relationships with their professors. You can also join a variety of student clubs and organizations and there are tutoring centers to assist students with coursework too.

### What are the highlights of your current (or past) STEM experiences?

The highlight of my STEM experiences was my time as a Chief Science Officer. I was a CSO for two years at Carrollton High School and had the experience of a lifetime. I learned about so many different STEM careers from health sciences, engineering, nature science, and the rapid growth of technology. Trips to local companies in the Great Lakes Bay Region inspired me to stay right here and continue pursuing my own goals.

### Why did you decide to attend SVSU and pursue a STEM-related major?

I decided to attend SVSU because of the camps and experiences I had here while growing up. I participated in many athletic and academic camps at SVSU, and it was always a wonderful experience. During my time as a CSO, I toured campus and met many professors who were so supportive and encouraging toward all my goals. They showed me there are others to support and guide you through your journey on campus. They inspired me with the thousands of possibilities SVSU has to offer and made this place really feel like home.