

Greetings from STEM @ SVSU

With the New Year comes many new opportunities for our students in the Great Lakes Bay Region through partnerships with STEM@SVSU and our regional industry leaders. We have exciting updates from our MiSTEM Network Director, our newly featured Student Spotlight, multiple events like the STEM Teacher Dinner, FIRST Robotics State Competition, and so many summer STEM opportunities! We are looking forward to hosting Girls Who Code Club and the WeCode camps again this semester and were overwhelmed by the incredible amount of interest in these programs! We are working to incorporate more computer science opportunities in the future as well.

The Great Lakes Bay Region is a true leader in STEM education, thanks to the incredible work of so many educators and others in our region to make all we do possible. With a busy semester ahead, we hope you take advantage of the many opportunities we have to offer and enjoy reading about all things STEM@SVSU!



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East Central Michigan Region

Regional MiSTEM Advisory Council Grants

MiSTEM Advisory Council Grants provided funding to regions for the implementation of STEM programming. Selected programs must be in the STEMworks database. This year selected programs include Math Recovery, Mi-STAR and Code.org.

One of the goals of Math Recovery is to increase content knowledge and pedagogy through extensive professional development. This will increase the effectiveness of elementary mathematics instruction in the region. www.mathrecovery.org/.

Mi-STAR is a middle school curriculum and professional development initiative that supports 6-8 grade science teachers in Michigan. It is aligned with the State of Michigan and the Next Generation Science Standards (NGSS). mi-star.mtu.edu/.

Code.org provides professional development and curriculum resources to K-12 educators. No prior computer science training is necessary for teachers to participate in the Code.org training. <https://code.org/about>.

For more information on MiSTEM, please contact:
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2019 STEM Teacher Dinner

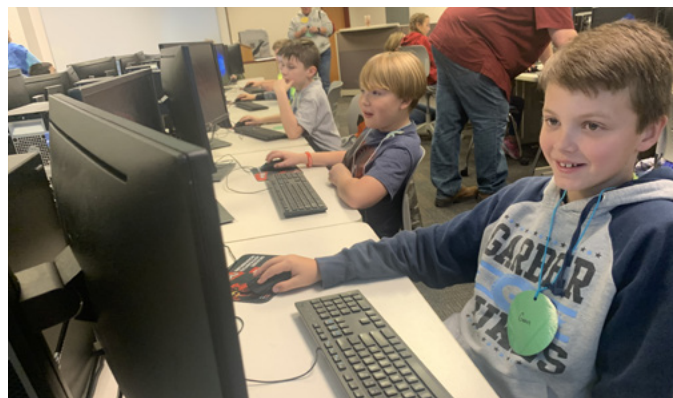
STEM Teacher Dinner Announced

The 6th annual SVSU STEM Teacher Dinner will be held on Monday, March 16 at 4:30 pm in Curtiss Hall Banquet Rooms A and B. Please join us for a fantastic presentation by Melanie Kalmar, Chief Information Officer for Dow, a delicious dinner, STEM door prizes, and to learn details of upcoming STEM opportunities for you and your students!

This FREE event is open to all K-12 STEM educators, but seating is limited. RSVP by February 26 at www.svsu.edu/stem.

This year, we are excited to partner with MiSTEM, East Central Michigan Region, to recognize STEM Stars in our region. A STEM Star may be a K-12 classroom teacher, Robotics Coach, STEM Coordinator, or someone else in your building who makes incredible contributions to STEM education. Districts may nominate more than one individual as a STEM Star. All nominations will be reviewed by a committee and those selected will receive a \$300 award to enhance STEM education in their classroom or program. Nomination forms can be found on our website www.svsu.edu/stem.

Another successful Hour of Code Event!



Over 100 fourth grade students participated in the 4th annual Hour of Code day on Friday, November 22. Teachers Nancy Humphries and Amy Kulmacz, from Verellen Elementary in Essexville, Blair Grew from Hampton Elementary in Bay City, and Beth Pufahl from Havens Elementary in Swan Valley were selected for this experience. Coding activities were led by 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 necklaces. We look forward to hosting more Hour of Code days in the future!



FIRST Robotics State Championship returns to SVSU for a 4th year!

The state competition for FIRST in Michigan will once again be held at the SVSU Ryder Center. The event will take place from April 9-11, 2020. SVSU is proud to host the competition and excited to welcome 200 teams and their families to campus. Come and feel the excitement!



of congressmen and women. The GLBR CSOs were able to make strong connections with CSOs from around the world, including Kuwait and Mexico. It's safe to assume, our CSOs and CSO Advisor had a STEMazing experience!

Chief Science Officers Explore Nature and Our Nation's Capital

Author: CSO Carrie, Heritage High School

Chief Science Officers from the Great Lakes Bay Region went to their first cabinet meeting at the Chippewa Nature Center in October. CSOs explored forest trails, learned about threats to native plant species in Michigan, and discovered how nature benefits our health. STEM professionals from Chippewa Nature Center, Little Forks Conservancy, and the U.S. Fish & Wildlife Service informed our CSOs on the importance of protecting our environment. This cabinet meeting was a wonderful learning experience, and all the CSOs had a blast!

In October, two GLBR CSOs had an exciting week in Washington DC for the Chief Science Officers International Summit. CSO Maggie from Frankenmuth High School and CSO Carrie from Heritage High School, with CSO advisor Mrs. Morse, attended leadership sessions at Arizona State University's Satellite Campus, spoke with STEM professionals at the Defense Intelligence Agency and National Science Foundation, and met with staff

Some CSO activity highlights this year include assembling Math in the Mail kits with the Saginaw ISD, working with the Great Lakes Bay Regional Alliance, hosting a Community Flight Night, and kicking off several new STEM clubs.

To find out more information about the International Chief Science Officers program, visit <https://chiefscienceofficers.org/>.



Summer STEM Programs for K-12 Students:

- **Camp Infinity.** Introduces girls to computer and internet technologies through hands-on activities. Registration information available on our website in March. Camp dates are June 22-26 (5-8 grade) and July 27-31 (9-12 grade).
- **Dow Science and Sustainability Education Center Summer Research Experience.** 16 high school students will be hired to work with SVSU faculty and undergraduate students on Saginaw Bay watershed research. Program dates are June 29-August 6. Application information available now on our website www.svsu.edu/stem.
- **STEM Scholars Network High School Summer Camps.** Free one-week camps incorporating hands-on, problem-based learning. For more information on this year's topics and how to apply for these camps, check out our website www.svsu.edu/stem later this month.
- **Summer STEM Opportunities Camp.** Open to middle school students in Saginaw City and Bay City Public Schools. A fun way to reinforce fundamental math concepts! Camp dates are July 6-31. Applications will be available to partner schools in April 2020.
- **SMEK Jr. and Sr. Camps.** Have fun at the Science and Math Extravaganza for Kids camps July 7-9 (2-4 grade) and July 14-16 (5-8 grade). Contact Kathy Anderson (kkanders@svsu.edu) for more information.



Summer STEM Opportunities for Teachers:

- **Dow Corning Foundation / SVSU STEM Community Partnership.** Open to 20 teachers. Learn more about changing attitudes in STEM, and develop programs to take back to your schools! Dates are: June 24-26, June 29-30, July 22-24, and July 27-28. Application information is now available on our website www.svsu.edu/stem.
- **Dow Science and Sustainability Education Center Summer Research Internship** – open to 8 teachers from the Great Lakes Bay Region. Get paid to do research on the Saginaw Bay Watershed, and work alongside SVSU faculty and undergraduate students, as well as local high school students. Application information is now available on our website www.svsu.edu/stem.



Grant available for K-12 Educators

The Michigan Space Grant Consortium (MSGC) is a NASA-supported program that fosters awareness of, education in, and research on space-related science and technology in Michigan. The K-12 Educator Incentive Program through the MSGC offers (1) up to \$400 to support K-12 teachers to attend STEM conferences and workshops; and (2) up to \$200 to purchase materials and supplies for innovative instructional initiatives. For more details, visit the K-12 Educator Incentive Program tab on their website <https://mi.spacegrant.org/>. Applications are accepted throughout the year until annual funding is depleted.

Spotlight on Student: Emily Jaremba



Emily Jaremba is a freshmen here at SVSU majoring in biochemistry. A graduate of Carrollton High School, Emily has been awarded nine academic scholarships, many reflecting her passion for STEM education. Some of the scholarships include the Dow Science and Sustainability Education Center Scholarship,

AT&T STEM Camp Scholarship, and the Great Lakes Bay Region Youth Leadership Institute Scholarship. Aside from her academics, she frequently dedicates her time volunteering in her community at organizations such as the Amazing Grace Animal Rescue, Kids Against Hunger, and the Carrollton Senior Citizen Club. Emily is currently an intern at the Great Lakes Bay Regional Alliance and has been a mentor at our very own Camp Infinity!

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

Some of my interests include chemistry, biology, hunting, volleyball, the outdoors, and furthering my education!

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

Definitely a highlight was being a Chief Science Officer (CSO) for two years. Through that program, I had the opportunity to attend the 2018 Spring STEM Ecosystems Conference as well as the 2018 Chief Science Officers International Summit, both held in Washington, D.C. The CSO program highlighted the importance of being a STEM leader in my school and community. Another incredible experience was being a high school student intern with the Dow Science and Sustainability Education Center and conduct research on the Saginaw Bay Watershed. This year, I'm excited to be an undergraduate research student in a chemistry lab at SVSU, as well as an intern at the Great Lakes Bay Regional Alliance, where I focus on STEM initiatives in the region.

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

At SVSU, there are various opportunities for students of any age to explore all aspects of STEM, enabling them to discover their passions and interests within these fields. When choosing a higher education institution, SVSU delivers exceptional learning experiences for its students, preparing them for bright futures.

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

I decided to pursue a STEM-related major at SVSU because of the opportunities that I have had and will have here in the future. Through various camps and programs, I have experienced the passionate professors and various resources that are available, leading me to know that I will succeed. Through programs like the Dow SSEC Summer Research Internship, AT&T Residential STEM Camp, and the Chief Science Officer Program, along with my high school science classes, my passion for the sciences flourished, leading me to pursue a degree in biochemistry.

SVSU STEM Calendar of Events:

• Michigan Regional Science Bowl

Saturday, February 22, 2020. Contact Andrew Chubb (achubb@svsu.edu)

• Math Counts Competition

Saturday, February 29, 2020. Contact Brian Vokal (bjvokal@midcogen.com)

• You Be The Chemist Regional Competition

Wednesday, March 4, 2020. Contact Adrienne Cole (acole@svsu.edu)

• Math Olympics

Friday, March 13, 2020. Registration deadline is at noon on March 6, 2020. More details can be found at www.svsu.edu/matholympics

• STEM Teacher Dinner

Monday, March 16, 2020. RSVP by February 26 at www.svsu.edu/stem

• FIRST Robotics State Competition

April 9-11, 2020. Check out www.svsu.edu/firstatsvsu for more information.

• A.H. Nickless Innovation Award Competition

Saturday, April 18, 2020. This is the final round of the competition and the top 20 teams will be competing at SVSU in the Alan W. Ott Auditorium. This event is open to the public.

• Dow Corning – SVSU STEM Community Partnership Symposium

Wednesday, May 27, 2020. This event is open to the public.

