

## Greetings!

Welcome back to a great new academic year! STEM@SVSU is in full gear to support many initiatives on campus and in the Great Lakes Bay Region.

The newsletter will come to you quarterly to keep you updated on STEM events and news in our region.

The next date of publication in 2015 will be in early December. In 2016, you will receive the newsletter in early March and June.

Please feel free to check out our website STEM@SVSU by going to [www.svsu.edu/stem](http://www.svsu.edu/stem) for continual updates and information and, of course, feel free to contact our office.



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- Exciting New STEM Program for Elementary Students (page 4)

## Summer Events at SVSU Attracted K-12 Students and Teachers

### Dow Science and Sustainability Education Center Summer Research Experience



- 10 middle and high school teachers involved from seven different school districts:
  - Jeff Albrecht, Bangor Township Schools
  - Tricia Benkert, Saginaw Township Community Schools
  - Ben Cooper, Valley Lutheran High School
  - Craig Coopersmith II, Saginaw Township Community Schools
  - Ernie Delemeester, New Lothrop Area Public Schools
  - Aaron Jurek, Bangor Township Schools
  - Jean Marie Learman, Saginaw Public Schools
  - Bob Peterson, Freeland Community Schools
  - Jesse Place, local substitute science teacher
  - Tom Short, Freeland Community Schools
- 22 high school students involving 13 school districts-each student worked 30 hours per week and was paid for being a part of the research team. The students were selected from a pool of 76 applicants!
- 10 undergraduate SVSU students and six faculty members
- Research projects included:
  - Evaluating the effects of soil conservation
  - Practices on reducing nutrient flow from agricultural fields
  - Functionalization of cellulose to form adsorbents for the removal of phosphates from wastewater

- Isolation and characterization of aromatic hydrocarbon degrading microbes from the Saginaw Bay watershed
- Measuring microbial contamination and other water quality parameters in the Saginaw River and its tributaries
- DNA fingerprinting of Saginaw Bay walleye
- Distribution and transport of phosphorus in the Saginaw Bay watershed



### Dow Corning /SVSU STEM Community Partnership



- 17 middle school/high school teachers involved representing nine school districts and involving 11 SVSU faculty and 11 Dow Corning professionals
- The teachers spent two weeks on campus engaged and planning a project with SVSU faculty and Dow Corning professionals.
- Bay City Public Schools: Cindy Altes, Allison Van Driessche, Lisa Welch
- Bullock Creek School District: Erin Martin
- Carrollton Public Schools: Nancy Francis
- Essexville-Hampton School District: Kim Wright
- Frankenmuth School District: Gordon Culver, Amy Kolb, Julie Leach, Tosha Miller
- Freeland Community School District: Nickie Clark, Jen Peruski
- Millington Community Schools: Michael Moore, Jennifer Meitz
- Saginaw Public Schools: Melissa Haworth
- Saginaw Township Community Schools: Craig Coopersmith II

- Bay Arenac ISD (Bay-Arenac Community High School): Sam Langhorne
- 11 SVSU Faculty
- Example projects to be carried out by the involved teachers (each with a \$2,000 grant) in the 2015-16 school year include:
  - Building a greenhouse powered with a renewable energy source
  - Robotics curriculum
  - Compost/hydroponics

### Mi-STAR Conference at SVSU partnered with Michigan Technological University & Midland Public Schools

**MichiganTech**

**SV SAGINAW VALLEY**  
STATE UNIVERSITY

**The Herbert H.  
and Grace A.  
Dow Foundation**

- 26 middle school teachers involved in three two-week units to develop a thematic science unit for middle school based on the new science standards.
- The project was facilitated regionally by Penny Miller Nelson, Midland Public Schools, and Heather Phelps, Bangor Township Schools, and was assisted by four SVSU faculty and staff from Michigan Technological University.
- Teachers came from districts across the state with the following representing our Great Lakes Bay Region:
  - Midland Public Schools: Brent Doty, Vicki McPeak, Rebecca Stinson, Sharon De Rees, Christine Swan, Sue Trahan, Carmen Kessler, Jennifer Lehman, Jen Lenon
  - Bangor Township School District: Gwen Windiate
  - Coleman Community Schools: Patrick Fettig





## STEM Scholars Network



The Herbert H.  
and Grace A.  
Dow Foundation

- Funded by a grant from the Herbert H. and Grace A. Dow Foundation, three STEM camps were offered for high achieving high school students at no cost, taught by SVSU Faculty. 31 students participated representing eight school districts, including Bay City Public Schools, Clio Area Schools, Freeland Community Schools, Midland Public Schools, Saginaw Public Schools, Saginaw Township Community Schools, Swan Valley Schools, and Valley Lutheran High School.
- Topics offered during the three one-week sessions were science, robotics and math.



## STEM Opportunity Camp



The Herbert H.  
and Grace A.  
Dow Foundation

- 60 students from the Saginaw Public Schools and the Bay City School District representing students entering seventh, eighth and ninth grade were on campus for four weeks in July enjoying an intensive math experience. The camp involved 18 high school assistants who were paid for their work with SVSU undergraduate students and three faculty.
- The camp was funded by a grant from the Herbert H. and Grace A. Dow Foundation.



## Dow Chemical Offers STEM AMBASSADORS to visit and support classrooms



- Did you know that, from March to June 2015, 74 Dow STEM ambassadors volunteered in classrooms and at community STEM events, impacting 136 classroom teachers and almost 3,000 K-12 students?
- Dow STEM ambassadors can bring demonstration and hands-on activities to your school, give career presentations, and act as teacher partners and science coaches. They can also assist with after school activities including FIRST Robotics and You Be The Chemist teams.
- If you are interested in having a Dow STEM ambassador visit your school, or to learn more about services ambassadors can provide, contact Adrienne Cole at [acole@svsu.edu](mailto:acole@svsu.edu) or (989) 964-4850. We are excited to serve you!





## Great Lakes Bay Regional STEM Impact Initiative moving forward

The STEM Funders Network has announced that the Great Lakes Bay Region is one of 27 communities selected to pilot the national STEM Ecosystems Initiative ([www.stemecosystems.org](http://www.stemecosystems.org)). The Great Lakes Bay Region is the only city/region selected from the state of Michigan!

The Great Lakes Bay Regional Alliance will be a part of the first ever STEM Ecosystem Community of Practice.

The following information describes the initial work of the STEM Impact Initiative, begun with a study and summit during the 2014-15 school year with the “launch” effort initiated in April 2015 and implementation planned for 2016:

- In the Great Lakes Bay Region, the Great Lakes Bay Region STEM Impact Initiative is moving forward following the STEM Summit in November 2014.
- Areas of priority of the impact initiative include:
  - College- and Career-Ready Students, Focus on Technical Skills for the Economy Driven by Employer Demand
  - Region Sustained by a culture of STEM
- Four STEM Networks have been formed with a network leader identified, a specific focus and housed at the following institutions:
  - Central Michigan University ((Julie Cunningham, STEM Education Program Coordinator) - Career and College Readiness and STEM Culture

- Delta College (Scott Schultz, Director of the STEM Talent Institute)- Focus on Technical Skills and Driven by Employer Demand
- Mid-Michigan Community College (Scott Govitz, Executive Director of Economic and Workforce Development) –Focus on Technical Skills and Driven by Employer Demand
- Saginaw Valley State University (Andrew Chubb, Associate Dean, College of Science, Engineering and Technology) - Career and College Readiness and STEM Culture
- Each group will offer proposals to address the four key areas noted in the STEM Impact Initiative in fall 2015. Over 110 individuals are currently participating in monthly meetings of the networks representing education, business and non- profits.
- Additionally, at Great Lakes Bay Region STEM Impact Initiative Steering Team is also meeting to guide and support the initiative. Members of the STEM Impact Initiative Steering Team include: Brian Brutyn, Midland Public Schools; David Brown, Bullock Creek School District; Deb Kadish, Bay Arenac ISD; Dennis Hoeg, Nexteer; Don Johnson, Midland ESA; Doug Trombley, Saginaw Township Community Schools; Ellen Talbott, McLaren Bay Region; Kathy Stewart, Saginaw ISD; Lori Flippin, Essexville-Hampton School District; Mat McRae, Swan Valley School District; Matt Felan, Great Lakes Bay Regional Alliance; Matt Cairry, Freeland Community School District; Michael Gault, Central Michigan University; Ray Stephens, Dow Corning; Rebekah Hornak, Saginaw ISD; Rob Vallentine, The Dow Chemical Company; Terrie Robbie, Saginaw Township Community Schools; Nate McClain, Saginaw Public Schools; Jen Stange, Hemlock Semi-Conductor.

## EXCITING NEW PROGRAM . . .

### Day of Code to be offered for elementary students

- Working with the SVSU Association for Computing Machinery under the supervision of George Corser, a one-day experience with CODING is offered to two fourth-grade elementary classes on Thursday, Dec. 4, 2015. The day will also include lunch, a STEM experience, and tour at the Marshall M. Fredericks Sculpture Museum. The only cost is transportation to SVSU, to be paid by the school district.
- The opportunity to apply for this experience is now available on the website ([svsu.edu/stem/dayofcode](http://svsu.edu/stem/dayofcode)).  
**Deadline for application is Sept. 25, 2015.**

# STEM@SVSU

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[svsu.edu/stem](http://svsu.edu/stem)

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