

# The **INTERCHANGE** Newsletter

Inspiring and engaging everyone in STEM

From the Regional Math & Science Center at Grand Valley State University  
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[InterChange homepage](#)

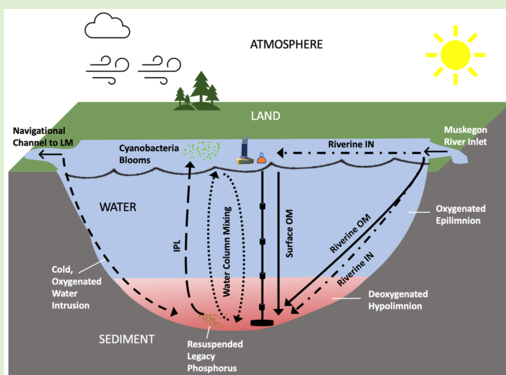
## Join us for Energizing Our Weekend Family Fun Event! November 4

On Saturday, November 4, 2023, the [Regional Math and Science Center](#) is hosting *Energizing Our Weekend!* A fun event for the community. Join us for this **FREE**, drop-in event and experience hands-on learning, science presentations, and STEM activities related to renewable energy and sustainability!



[Energizing our Weekend article](#)

## CONNECTIONS FOR THE STEM CLASSROOM



### Warming and Eutrophication's Child: Rising Hypoxia in Natural Waters

*Nate Dugener<sup>1</sup> and Bopi Biddanda, Annis Water Resources Institute, Grand Valley State*

University.

<sup>1</sup>Present address: Office of Emergency Response, Illinois Environmental Protection Agency.

Summary: The availability of oxygen is a major factor determining the abundance and distribution of life on Earth. Two recent peer-reviewed journal articles by GV students and researchers report on the annually recurring hypoxia (low oxygen conditions) in an urbanized Great Lakes estuary in West Michigan and deliberate on its implications for aquatic ecosystem health. These studies provide an insight into the role of temperature, precipitation, and phytoplankton production in driving the dynamics of bottom water hypoxia where colder and drier years over the watershed result in milder hypoxia, and warmer and wetter years result in severe hypoxia. Findings also have implications for aquatic habitat degradation via release of legacy phosphorus and the generation of greenhouse gasses under a warming climate and continued anthropogenic stress.

[STEM Connections article](#)

## Announcing the 2023 Dockeray Scholarship Winners

Two Mary Jane Dockeray Scholarships have been awarded for 2023. The scholarships are granted to graduating seniors from Kent, Ottawa, or Muskegon counties who plan to pursue a career in the sciences. The scholarships are offered in honor of the late Dr. Mary Jane Dockeray, founding curator of the Blandford Nature Center in Grand Rapids, through the Regional Math and Science Center. This year's winners are Jack Bradley and Jalin Halcome.

[Dockeray Scholarship article](#)



## Michigan Science Olympiad: Support students and foster their love for science!

Now more than ever students are looking for ways to connect and belong. Schools are looking for ways to help students explore STEM careers. One way to support students that are passionate about science is to create a

Science Olympiad team and compete in the **Region 12 Science Olympiad Tournament!**

[Michigan Science Olympiad article](#)

## AWRI Hosting MEECS Training

The GVSU Annis Water Resources Institute (AWRI) is hosting professional development workshops on the recently revised Water Quality unit of Michigan Environmental Education Curriculum Support (MEECS). These **FREE** workshops are open to all, including but not limited to: formal, informal, pre-service, and homeschool educators and **include dinner, MEECS curriculum, curriculum materials kit, and SCECHs.**

[MEECS Training article](#)



**VAN ANDEL  
INSTITUTE®**

## Van Andel Institute for Education Deploys Affordable Afterschool PD to Support Educators and Administrators

Van Andel Institute for Education (VAI) knows that K-8 educators and administrators face a number of challenges when it comes to afterschool programs. With much of the country facing a severe teacher shortage, VAI is deploying an affordable K-8 Project-based Afterschool Program that can support all teachers - new, experienced, or even non-teachers - in fostering cross-curricular learning events that align to grade-level standards. These project-based learning (PBL) experiences are flexible and come fully equipped to meet a variety of educational settings.

[Van Andel Institute for Education article](#)

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## Place-Based Education Conference Coming to Grand Rapids: November 9-11

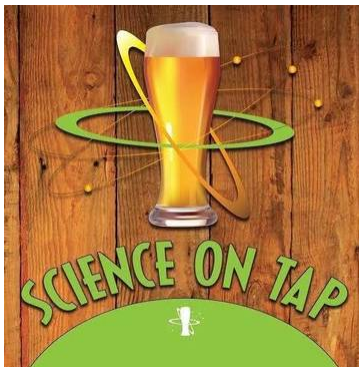


**PLACE-BASED  
EDUCATION  
CONFERENCE**

November 9-11, 2023, join us for the national 8th Place-Based Education Conference. Come experience a three-day event designed to inspire and support a community of educators around the power of place-based learning.

[Place-Based Education Conference article](#)

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## Attend Science on Tap!

**November Topic: Everything medicine wanted to know about philosophy but was afraid to ask**

By Elizabeth Flandreau, Psychology Dept., GVSU

Thursday, November 9, 2023

[Science on Tap article](#)

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## Check out the latest MiSTEM Network- Greater West Michigan Region Newsletter!



**Greater West  
Michigan Region**

The MiSTEM Network is connecting education, businesses, and community partners across the state to transform the way Michigan does



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