Vision for STEM Instruction--Panel Discussion

Megan Schrauben, Michigan Department of Education; Jill Griffin, Michigan Department of Education
Primary Subject: AS, IN
Interest Level: EE, LE, MS, HS, CO
Location: Crystal Ballroom
MDE has a vision for STEM instruction, does it fit with what practitioners and researchers in the field say? Come listen and ask questions of the players in the field.

MSS - Taught Outdoors

Jody Harrington, E.L. Johnson Nature Center, Bloomfield Hills Schools
Primary Subject: EN
Interest Level: EE, LE
Location: Jade
Teach the MSS Disciplinary Core Ideas outdoors at a garden. Involve students in hands-on learning by connecting Science Practices and Crosscutting Concepts using the best Environmental Activities aligned by grade.

Building A Nature Rich Education

Ted Malefyt, Outdoor Discovery Center/ STREAM School; Bob Wandel, Outdoor Discovery Center
Primary Subject: GS, EN
Interest Level: EE, LE, MS, HS
Location: Topaz
Many of our students are missing a relationship with their nature world. How might we leverage a fresh set of state standards to reconnect with our natural world?

New, Free K-3 Science Units: A Bridge to MSS Implementation

Joseph Austin, Waterford School District
Primary Subject: AS
Interest Level: EE
Location: Coral
Oakland Schools has revised its K-3 science units to reflect the NRC Framework. These versions incorporate 3-D Learning and Writing while remaining targeted to the Michigan's science GLCEs. Sample products provided

NGSS Engaging Elementary Interactive Notebook Activities for Upper Elementary Classroom

Carolyn Mammen, Trinity Lutheran School, Traverse City
Primary Subject: GS
Interest Level: LE, MS
Location: Opal
Participate in an interactive session for upper elementary. I will share how a middle school lesson was modified for a 5th grade classroom, aligned with NGSS, plus Interactive Notebooks.

Formative Assessments--More Than Thumbs up, Thumbs down!

Mark Olson, Oakland University
Primary Subject: AS, IN
Interest Level: MS, HS
Location: Topaz
Oakland University secondary science student teaching interns share real examples of formative assessments they've found useful for gaining insights into their students' science understanding, and how these insights inform instruction.

Games, Games, Games

Rachel Badanowski, Wayne State University
Primary Subject: GS
Interest Level: LE, MS, HS
Location: Jasper
Using games to introduce, reinforce and review information in a hands-on presentation with handouts provided.

Fri 4:00 pm-5:30pm

Andrēs Ruzo, Geoscientist, National Geographic Explorer

Andrēs Ruzo, National Geographic Explorer
Primary Subject: GS
Interest Level: EE, LE, MS, HS, CO
Location: Sapphire
Andrēs Ruzo, Geoscientist,
National Geographic Explorer
Andres is the founder and director of the Boiling River Project, a non-profit organization, as well as a geoscientist, science communicator, author, and educator. He is a TED Speaker, TED Book Author, and National Geographic Explorer. Andrēs holds degrees in Geology and Finance from Southern Methodist University (Dallas, TX), where he is currently finishing a Ph.D. in Geophysics. His primary research focus is geothermal exploration and heat flow mapping. Andrēs originally heard about the Boiling River as a detail in a childhood legend.He began investigating the claim in 2010, while working on the Geothermal Map of Peru, and became the first geoscientist to obtain permission to study the Sacred River in 2011. He returns to the Amazon every year to continue the scientific research and conservation work in the Boiling River area.

Event Flyer: https://goo.gl/WszSNB

Session Key:

Primary Subject Levels:
AS – Assessment/Curriculum
CH – Chemistry
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Interest Levels:
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LE – Late Elementary
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HS – High School
CO – College

– SCECH Session
V – Vendor Session

Session Descriptions

Fri 5:00 pm-6:00 pm

HHMI Movie

Mark Eberhard, St. Clair High School
Primary Subject: GS
Interest Level: EE, LE, MS, HS, CO
Location: Opal
HHMI Movie: ***Trophic Cascades***
An interactive that explores examples of what can happen when there are changes in the population size of one species in an ecosystem.

Fri 5:30 pm-6:30 pm

Awards Reception

Marlenn Maicki, Detroit Country Day School
Primary Subject: AS, AST, BI, CH, CO, EN, ES, GS, IN, IS, LT, PH
Interest Level: CO, EE, HS, LE, MS
Location: Fireside
Awards Reception, separate registration required

Fri 6:30 pm

Awards Banquet

Marlenn Maicki, Detroit Country Day School
Primary Subject: AS, AST, BI, CH, CO, EN, ES, GS, IN, IS, LT, PH
Interest Level: CO, EE, HS, LE, MS
Location:
Awards Banquet, separate registration required

Saturday, March 25, 2017

Sat 8:00 am-8:45 am

Making Grades More Meaningful

Brian Langley, Novi High School
Primary Subject: GS
Interest Level: MS, HS
Location: Ruby
Learn about one teacher's quest for more meaningful grading practices, gaining strategies immediately transferable to your classroom. Perfect for those seeking field-tested alternatives to common grading procedures.

Games, Games, Games

Rachel Badanowski, Wayne State University
Primary Subject: GS
Interest Level: LE, MS, HS
Location: Emerald
Using games to introduce, reinforce and review information in a hands-on presentation with handouts provided.

Our Public Treasures, Our Public Lands

Larry Feldpausch, retired from Ida High School, Ida Public Schools
Primary Subject: BI, EN
Interest Level: MS, HS
Location: Topaz
Ready for immediate use, this one class period primer on our recreational public lands, will teach your students what they are, who manages them and for what purposes.

Engineering a Carnivorous Plant

Amie Smith, Pleasant Lake Elementary, Walled Lake Schools; Bradley Smith, David Hicks Elementary School
Primary Subject: EN
Interest Level: LE
Location: Ivory
Come explore a 5E lesson that will engage and excite your students. Teachers will create an ecosystem and engineer a carnivorous plant that lives in that ecosystem.

Outstanding Science Trade Books from the CBC and NSTA

Conni Crittenden, Explorer Elementary, Williamston Community Schools
Primary Subject: GS
Interest Level: EE, LE, MS
Location: Garnet
Check out some of the Outstanding Science Trade Books from this year and previous years.

Using Google Docs in the NGSS Classroom

Cheryl Matas, retired
Primary Subject: AS, IN
Interest Level: EE, LE, MS, HS, CO
Location: Moonstone
Get ready to go deeper into Google Docs. Participants will learn the awesome features that students can use to bump up their projects that teachers can easily assess. Handout provided.

Renewable Energy Dashboard for Student Education

Christine Gleason, Activate Learning
Primary Subject: CO, EN
Interest Level: MS, HS
Location: Jade
The Greenhills School Renewable Energy Dashboard monitors, displays and archives performance data from multiple renewable energy resources for use in middle/high school student education. Data can be shared with schools.

High School Chemistry Teachers Meeting

Mary Jordan McMaster, Allen Park High School
Primary Subject: CH
Interest Level: HS
Location: Granite
What are districts doing to adopt the NGSS and how does it affect Chemistry? Bring your coffee and catch up with other high school chemistry teachers around the state.

Session Descriptions

Antibiotic Stewardship: What Should Teachers and Students Know?

Elaine Bailey, Michigan Antibiotic Resistance Reduction Coalition
Primary Subject: BI
Interest Level: EE, LE, MS, HS
Location: Coral
You will learn about the public health crisis of antibiotic resistance and the role that everyone plays in being better "stewards" of antibiotics. Free K-12 curriculum will be shared.

Neuroscience for the 99%

Greg Gage, Backyard Brains
Primary Subject: BI, PH
Interest Level: MS, HS, CO
Location: Crystal Ballroom
Bring the NGSS biology, physics, physiology and engineering standards to life with fascinating student-led neuroscience investigations which deeply integrate science practices, engineering practices, and brain content together.

Enhance your Classroom Experience with Animals 4 Kidz(Tadpoles & more!)

Chara Watts, Animals 4 Kidz
Primary Subject: ES, GS
Interest Level: EE, LE
Location: Amethyst
Animals 4 Kidz is enhancing classrooms across Michigan with our Tadpole Experience and Watch me Grow indoor gardening programs. Enjoy hands-on activities, handouts and a taste of our science experience!

'You Be The Chemist-Teaching Chemistry through Inquiry

Kathleen O'Connor
Primary Subject: CH
Interest Level: LE, MS
Location: Silver
The ' You Be The Chemist' program is designed to provide educators with methods for teaching chemistry concepts through hands-on learning . Educators will receive a flash drive containing resources from the Chemical Education Foundation.

Muffins for Members

Robby Cramer, MSTA; Jen Arnswald, MSTA/Ionia Public Schools
Primary Subject: GS
Interest Level: EE, LE, MS, HS, CO
Location: Fireside (dinner/reception)
MSTA Membership Meeting- Stop in for a muffin and provide feedback and guidance to the MSTA board.

Objectives-Based Grading: How to Make Grades Meaningful

Michelle Vanhala, Tecumseh High School
Primary Subject: AS, GS
Interest Level: MS, HS
Location: Opal
Attendees will learn how a high school teacher uses objective-based grading in a traditional grading system to make grading easier while providing students with meaningful feedback.

Sat 8:00 am-9:45 am

Walk Like An Engineer!

Kathleen Jenkins, Beaverton Rural Schools & CMU RET Program; Katie McMahon, Central Michigan University
Primary Subject: GS, IN
Interest Level: MS, HS, CO
Location: Bronze
Integrating original thinking and exploration can be a foreign concept to teachers but the NGSS science and engineering standards invite us to walk like engineers. Hands-on with handouts provided.

MEECS Climate Change

Janet Vail, GVSU Annis Water Resources Institute (AWRI)
Primary Subject: AS, EN
Interest Level: MS, HS
Location: Copper
MEECS Climate Change Unit: Learn about climate and weather, the energy balance, the carbon cycle, and the Greenhouse effect. Students will observe change in the Earth's cycles and climate.

Data Nuggets: Scaffolding Claim-Evidence-Reasoning Using Real Data in Context

Melissa Kjelvik, Michigan State University; Cheryl Hach, Kalamazoo Math and Science Center; Marcia Angle; Elizabeth Schultheis
Primary Subject: AS, IN
Interest Level: LE, MS, HS, CO
Location: Sapphire
Data Nuggets, free activities co-designed by scientists and teachers, bring authentic data and research into classrooms. See how integrating DNs into your curriculum can help students construct evidence-based claims.

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8:00 a.m. - 9:45 a.m. *continued*

Saving Elephants: Using Molecular Tools to Solve Ecological Problems

Mark Eberhard, St. Clair High School
Primary Subject: BI, EN
Interest Level: MS, HS, CO
Location: Pearl
Using HHMI's award winning interactive activities, we will explore how molecular tools and DNA sequencing may be key to stabilizing the threatened African elephant population. Incorporates NGSS science practices! FREE resources!

Reducing Natural Hazard Risk: A Mi-STAR Unit

Stephanie Tubman, Michigan Technological University - Michigan Science Teaching Assessment and Reform; Cindy Lysne, Michigan Technological University - Michigan Science Teaching Assessment and Reform; Jessica Good, Bangor Township Schools; Carmen Kessler, Midland PS
Primary Subject: ES, PH
Interest Level: MS
Location: Gold
Mi-STAR is developing an integrated science curriculum for Michigan. Participate in hands-on activities from a classroom-tested unit on the mitigation of natural hazards. Aligns with MS-ESS3-2, MS-PS4-3. Handouts provided.

Sat 9:00 am-9:45 am

How To Create Your Own Country: Inquiry and Earth Science

Cheryl Matas, retired
Primary Subject: ES
Interest Level: EE
Location: Garnet
What could be more exciting than creating your own country? In this session, participants will be introduced to a project that integrates curriculum and uses creating maps and models extensively.

Practice Make Perfect: Developing Science Teaching Excellence

Mary Stein, Oakland University; Betty Crowder, Oakland University; Crystal Brown, Downriver STEM @Weiss Elementary
Primary Subject: GS, IN
Interest Level: EE, LE, MS, HS, CO
Location: Opal
From preservice teachers to award-winning professionals, specific pathways to develop new teaching strategies are explored during this interactive session. High-leverage teaching practices and Science Talk provide the frameworks for developing and improving specific teaching practices, whether novice, expert, or in-between.

An Overview of the Environmental Educator Certification (EEC)

Cindy Fitzwilliams-Heck, MAEOE - Michigan Alliance for Environmental and Outdoor Education; MAEOE Education Committee, MAEOE
Primary Subject: GS, EN
Interest Level: EE, LE, MS, HS, CO
Location: Moonstone
The Michigan Alliance for Environmental and Outdoor Education (MAEOE) is offering a state environmental education certification following the guidelines of the North American Association for Environmental Education (NAAEE). Much of the process is self-paced and requires five strands to be completed before certification is conferred.

For more information on the EE certification go to www.maeoe.com

Carbon TIME: Free NGSS-aligned Curriculum, PD, and Teaching Networks

Christie Morrison Thomas, Michigan State University; Dave Russell, Huron High School, Ann Arbor
Primary Subject: BI, EN, AS
Interest Level: MS, HS
Location: Coral
The Carbon TIME (Transformations in Matter and Energy) curriculum includes six phenomena-based units tracing matter & energy through processes such as photosynthesis & cellular respiration at different scales. Includes online assessments, coordinated PD, and professional networks.

STEAMing Up Our Science Program

Lloyd Hilger, Hanover Horton Elementary School
Primary Subject: GS
Interest Level: EE, LE, MS, HS
Location: Amethyst
I am currently teaching STEAM classes to elementary students. We will be looking at ways to add art and building of models to our science programs.

Outdoor Science Education on a Budget

Rebecca Sandee, Whitehall District Schools; Gabriel Knowles, Whitehall District Schools
Primary Subject: EN
Interest Level: EE, LE
Location: Ivory
Attend this presentation if you are looking for creative and low or cost-free ways to get your students outdoors studying an integrated curriculum. This is a "hands-on" activity.

Chemistry Modeling - Particle Drawings and the Gas Laws

Carolyn Grapentine, Flat Rock Community High School
Primary Subject: CH
Interest Level: HS
Location: Granite
Chemistry Modeling has changed my teaching and my students' learning. We will use white boards to draw particle diagrams and learn the gas laws in a new way!

Session Descriptions

Transitioning to NGSS from a Teacher's Point of View

Tricia Shelton
Primary Subject: GS
Interest Level: EE, LE, MS, HS, CO
Location: Onyx
Join Tricia Shelton as she discusses:
- Trish?s NGSS WHY
- Students as Partners
- Science for all Students
- Phenomena-- focus on figuring out

Tricia Shelton is a High Science Teacher and Teacher Leader with a BS in Biology and MA in Teaching, who has worked for 22 years in Kentucky driven by a passion to help students develop critical and creative thinking skills. Tricia is a 2014 NSTA Distinguished Teaching Award winner for her contributions to and demonstrated excellence in Science Teaching. As a Professional Learning Facilitator and NGSS Implementation Team Leader, Tricia has worked with educators across the United States to develop Best Practices in the Science and Engineering classroom through conference presentations, webinars, coordinating and co-moderating #NGSSchat on Twitter, and virtual and face to face PLC work. Tricia's current Professional Learning Facilitation includes work around the Next Generation Science Standards and helping STEM students develop the 21st Century Skills of critical and creative thinking, collaboration and communication.

MDE Updates from Assessment and Curriculum/ Instruction

Tamara Smolek, Michigan Department of Education; Megan Schrauben, Michigan Department of Education
Primary Subject: AS, IN
Interest Level: EE, HS, LE, MS
Location: Crystal Ballroom
MDE will share current updates related to the state summative assessment and the science implementation plan. This session will be interactive to allow for questions from the audience.

Goldilocks Was a Scientist

Rachel Badanowski, Wayne State University
Primary Subject: LT
Interest Level: EE, LE
Location: Topaz
Explore engaging science activities based on any book or story in this hands-on workshop complete with handouts.

STEM-ify Your Lessons

Brian Peterson, Musson Elementary School
Primary Subject: GS
Interest Level: EE, LE
Location: Silver
The new science standards do not mean you have to start from scratch! We will learn how to STEM-ify our current lessons using a classic science activity.

Sat 9:00 am-10:45 am

Engaging Science-Math Teachers in Collaborative Research on Environmental Modeling

Alex Mayer
Primary Subject: CO, EN
Interest Level: MS, HS
Location: Jade
MTU's PLACE program partners secondary science and mathematics teachers with engineering graduate students to conduct computationally-based research on the environment. Teams develop curriculum materials, which teachers implement in their classrooms.

Sat 9:00 am- 12:00 pm

New Models for Waves and NGSS alignment

Don Pata, Grosse Pointe North High School; Laura Ritter, Troy High School
Primary Subject: IN, PH
Interest Level: MS, HS
Location: Ruby
Participants will use cutting edge methodologies to explore new models in waves. The workshop will blend the 3 strands of the NGSS with the Modeling Method.

Sat 9:00 am- 1:00 pm

MESTA Rock Shop

Parker Pennington IV, MESTA
Primary Subject: ES
Interest Level: CO, EE, HS, LE, MS
Location:
The MESTA Rock Shop for your Rock, Mineral, and Fossil needs. Cash, check, and credit cards accepted. Proceeds fund our outreach programs including Stoney classroom grants and Cranson field scholarships.

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Sat 10:00 am-10:45 am

Cheap, Easy, Universal Demonstrations for All Areas of Science

Andrew Frisch, Farwell Area Schools
Primary Subject: CH, GS
Interest Level: LE, MS, HS
Location: Emerald
Several cheap and easy demonstrations will be performed along with explanations as to how they can be incorporated into a variety of science classroom settings. These demonstrations will emphasize the Laws of Conservation of Mass and Energy using NGSS.

Making Lab Reports Come Alive!

Michael Sinclair, Kalamazoo Area Math & Science Center
Primary Subject: GS, LT
Interest Level: HS
Location: Sapphire
In this session, I will describe how to use a variety of lab report formats (such as poetry, short stories, tweets, etc.) to encourage more creative explanations of the science.

Physics with the Raspberry Pi Computer

Larry Kolopajlo, Eastern Michigan University
Primary Subject: PH
Interest Level: HS, CO
Location: Amethyst
The Raspberry Pi Computer is cheap, tiny and flexible as a platform for programming, internet, and interfacing. A demo will show how to interface a temperature probe for calorimetry.

STEM and Inquiry Elementary Extravaganza!

Mary Stein, Oakland University; Betty Crowder, Oakland University
Primary Subject: GS, IN
Interest Level: EE, LE, MS, HS
Location: Onyx
Excite and engage your students with new STEM and Inquiry lessons developed by Oakland University preservice teachers. You?ll leave this hands-on session with a wealth of new ideas and resources.

Teaching Elementary Science Should be "Phenomena-L!"

Crystal Brown, Downriver STEM @Weiss Elementary
Primary Subject: GS, IN
Interest Level: EE, LE
Location: Garnet
Learn the importance of Phenomena in Elementary Science Lessons. Take away resources to find Phenomena to fit your curriculum. Learn how to transform experiences you already provide for your students into Phenomena for your NGSS Classroom. Experience Phenomena first-hand!

Conservation Project: Connecting the Classroom to the Field

Vic Bell; Diane Miller, Detroit Zoological Society
Primary Subject: EN, IS
Interest Level: LE
Location: Ivory
Connecting students to real-world applications of what they learn in the classroom is vital to creating informed and empowered global citizens. Detroit Zoo's Conservation Project is providing those opportunities.

Effective use of Screencasts and Simulations for Online Learning

Deborah Herrington, Grand Valley State University
Primary Subject: CH
Interest Level: HS, CO
Location: Granite
Participants will learn about research-based best practices for using simulations and related screencasts to help students construct conceptual understanding of key chemistry concepts in out-of-classroom learning environments.

One in a Million

Bill Cline, LAB-AIDS
Primary Subject: CH
Interest Level: HS
Location: Lab Aides Lab Demo Room
Walk away with some effective ways to teach the structure of an atom. Using the Lab-Master, user friendly spectrophotometer, explore how light interacts with dyes. Good foundation lab NGSS HS-PS4-4.

Transforming Student Illustrations into Scientific Models

Jessica Ashley, Oakland Schools; Mike Gallagher, Oakland Schools
Primary Subject: IN
Interest Level: EE, LE, MS, HS
Location: Pearl
Explore how to transform simple student illustrations into scientific models that can test ideas and make predictions about systems. Support and resources for model development included!

Engaging in Argument from Evidence in Secondary Urban Science Classrooms

Susan Heiss-Ransom, Westwood Community School; Tyler Cederlind, Wayne RESA
Primary Subject: GS, IN
Interest Level: MS, HS
Location: Coral
Hands-on, real-life phenomenon and academically productive talk in the secondary science classroom allows students to engage with language that represents real world dialogue and allows student expression

Session Descriptions

Rates of Earth Processes: Extremely Fast to Super Slow

Steve Mattox, Grand Valley State University; Emily Siriano, Grand Valley State University
Primary Subject: ES
Interest Level: MS, HS, CO
Location: Moonstone
Earth materials and systems interact over fractions of seconds to billions of years. We will provide numerous classroom-ready examples to be used across your school year.

Invigorate your Photosynthesis and Cellular Respiration Investigations with Algae Beads ∨

Tamica Stubbs, Bio-Rad Laboratories
Primary Subject: BI
Interest Level: MS, HS, CO
Location: ExHall3
Learn how to upgrade your classroom experiences using a simple algae bead system and a colorimetric, CO2 tracking solution while invigorating your passion to teach photosynthesis and cellular respiration.

Integrating Science in Social Studies

Brian Peterson, Musson Elementary School
Primary Subject: ES
Interest Level: EE, LE
Location: Silver
This cross-curricular session will teach where all water exists on earth. We will examine the history and use of the Flint River and engineer water filters for the river's water.

The Secrets to Project-based Learning and Success in STEM ∨

John Spicko, Accelerate Learning - STEMscopes
Primary Subject: GS
Interest Level: EE, LE, MS, HS
Location: ExHall5
Project-based Learning can be challenging. Experience how hands-on, engaging PBL strategies provide student autonomy to solve problems of interest; see high levels of engagement lead to high levels of learning.

Modeling in Physical Science: A New Approach for New Standards

Robert Peters, Caro Community Schools
Primary Subject: IN
Interest Level: HS
Location: Copper
This hands-on workshop will introduce a new first-year high school Physical Science program the utilizes Modeling Instruction and aligns with the three dimensional framework of the NGSS.

IQWST-Making Critical Thinking More than a Clich, Using 3-dimensional Learning

Christine Gleason, Activate Learning - IQWST
Primary Subject: IN
Interest Level: MS
Location: ExHall4
Come engage in investigations where middle school students experience phenomena, construct explanations, and argue from evidence. Teach students to think like scientists applying a claim, evidence, reasoning framework to explain investigations.

Engineering the Future - Exploring Engineering Design in the MSS

Eric Mann, Hope College; Susan Brown, Hope College; Lindsey Gryniewicz, Hope College; Katelyn Denouden, Hope College
Primary Subject: GS, IN
Interest Level: LE, MS
Location: Opal
After a brief introduction to the engineering design process, participate in a hands-on design challenge that you can take back to your classroom. Handouts will be provided.

Integrating Literacy Skills in Science Investigations ∨

Matt Moorman, Teachers' Curriculum Institute (TCI)
Primary Subject: AS, GS
Interest Level: EE, LE
Location: ExHall2
Join TCI for an interactive Bring Science Alive! investigation where we demonstrate how to implement strong literacy practices as you guide students in developing their science knowledge.

Sat 10:00 am-11:45am

Natural Resources, Thermal Energy, and the Life of the Stuff We Make: A Mi-STAR Unit

William Houston, Rebecca Stinson, Sheri Turner
Primary Subject: CH, ES
Interest Level: MS, HS
Location: Gold
Interact with materials from a Mi-STAR middle school NGSS-aligned unit. Classroom-tested activities will focus on product life cycles, natural resources, sustainability, thermal energy, and building insulation materials. Handouts provided.

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– SCECH Session
∨ – Vendor Session

10:00 a.m. - 11:45 a.m. *continued*

The Next M-STEP: Michigan's new MSS-aligned assessment

Wendy Johnson, Michigan State University; Tamara Smolek, Michigan Department of Education; Kristin Mayer, East Kentwood High School
Primary Subject: AS, GS
Interest Level: EE, LE, MS, HS
Location: Crystal Ballroom
Hear about the new MSS-aligned Michigan science assessment straight from an expert writing team! Review processes used for designing item clusters and how to use them to support your instruction.

Hands On Neuroscience Workshop: Invertebrate Spikes!

Greg Gage, Backyard Brains
Primary Subject: BI, CO
Interest Level: CO, MS, HS
Location: Bronze
In this workshop, you will be able to experiment on living invertebrate brains to record individual spikes from neurons, and understand electrophysiology through electrical manipulation.

Sat 11:00 am-11:45 am

10 Simple to set-up Chemistry Demonstrations

Scott Milam, Plymouth High School
Primary Subject: CH
Interest Level: HS
Location: Emerald
I will share 10 chemistry demonstrations that require 5 minutes or less to set up.

Innovative STEM: Students Become Wildlife Scientists

Tori Frailey, Bear Trust International; Melissa Reynolds-Hogland, Bear Trust International
Primary Subject: BI, EN
Interest Level: HS
Location: Pearl
Students use real data on wolves and bears to address timely conservation issues as part of Bear Trust International's STUDENT SCIENTIST SERIES: Population data, GPS, GIS tutorials, introductory videos, more.

Photosynthesis: Using Experimental Evidence to Construct Understanding

Brad Stevens, Zeeland Public Schools
Primary Subject: BI
Interest Level: MS, HS
Location: Moonstone
Engage students in making observations, designing experiments, and collecting evidence to identify the reactants in photosynthesis while confronting misconceptions that carbon dioxide, soil, water, and sunlight are food for plants.

Explaining Phenomena and Designing Solutions in BCAMSC Science Unit Kits

Nancy Karre, Battle Creek Area Mathematics and Science Center
Primary Subject: AS
Interest Level: EE, LE
Location: Sapphire
Use phenomena and designing solutions to drive student engagement and learning. Experience a lesson from the BCAMSC science unit kits that makes science knowledge relevant and purposeful.

Forensics For Free

Caitlin Johnson, Romulus High School
Primary Subject: GS
Interest Level: MS, HS
Location: Jade
Looking to teach forensic science or add more interest to topics in your basic science courses? Come learn free/cheap activities to integrate a forensic science curriculum!

Population Education: Curriculum for a Crowded Planet

Janet Vail, GVSU Annis Water Resources Institute (AWRI);
Primary Subject: EN, IS
Interest Level: MS, HS
Location: Ivory
Discover fun, thought-provoking ways to teach about carrying capacity, human population dynamics and environmental impacts in this hands-on session. Receive a CD-ROM of resources matched to Michigan Science Standards.

Read All About It!

Holly McGoran, Jenison Public Schools
Primary Subject: LT
Interest Level: EE, LE, MS
Location: Garnet
Are you looking for different ways to engage your students with scientific text? Come ready to read, share and learn new instructional strategies to use in your classroom next week!

Mastering the Chemical Formula

Bill Cline, LAB-AIDS; Denis Baker, LAB-AIDS
Primary Subject: CH
Interest Level: HS
Location: Lab Aides Lab Demo Room, Exhibit Hall C
If a student does not fully understand the chemical formula, then moles, reactions, and stoichiometry are hopelessly confusing. Join us for intuitive lessons for all students to master the formula.

Introductory Engineering on a Dime

Patti Picard, Tawheed Center of Detroit School
Primary Subject: CO, IN
Interest Level: EE, LE
Location: Amethyst
Get your students actively involved with the new engineering standards without breaking the budget. Learn how to incorporate simple and thrifty engineering activities into your science curriculum.

Session Descriptions

Engaging through Inquiry

Susan Ransom, Robichaud High School/Westwood Schools
Primary Subject: GS
Interest Level: MS, HS
Location: Coral
Student-centered science inquiry using the 5E model. Geared toward NGSS alignment.

Conserving Giant Panda Populations: One Hormone Test at a Time! ∨

Tamica Stubbs, Bio-Rad Laboratories
Primary Subject: BI
Interest Level: MS, HS, CO
Location: ExHall3
Come and put your immunology and endocrine system knowledge basics to the test as you engineer a hormone detection system that can be utilized for Giant Panda Population Conservation efforts.

Testing Success for All

Judy-Gail Armstrong-Hall
Primary Subject: IN
Interest Level: EE, LE, MS, HS, CO
Location: Silver
This session covers three MSTA publications on testing. A comprehensive tracking system for study habits will be introduced so that teachers and parents have better communication.

LEGO Education-STEM-Simple Machines ∨

Ivery Toussant Jr., LEGO Education
Primary Subject: AS, EN
Interest Level: EE, LE, MS, HS
Location: ExHall5
The solutions allow students to predict, test, observe, measure, record and present their findings. Even the least science oriented educators will feel secure teaching these standards and concepts with LEGO®.

Sat 12:00 pm-1:00 pm

MESTA Rock Raffle ∨

Tabby Eldredge, MESTA
Primary Subject: ES
Interest Level: CO, EE, HS, LE, MS
Location:
Check out the extraordinary samples you could win in the famous MESTA Rock Raffle! Raffle Saturday @ noon.

MSTA Raffle

Crystal Brown, Downriver STEM @Weiss Elementary
Primary Subject: GS
Interest Level: CO, EE, HS, LE, MS
Location: General Exhibit Area
MSTA Raffle at noon at MSTA booths 104, 106
MUST BE PRESENT TO WIN!

Sat 1:00 pm-1:45 pm

Advanced Research: How Independent Student Research Projects Drive Curriculum

Julie Smith, Greenhills School
Primary Subject: GS
Interest Level: HS, CO
Location: Moonstone
A model of a successful Advanced Research Course will be presented where students complete high-level, independent STEM research and learn to professionally communicate their findings in a variety of formats.

Energy: Explained in terms of Michigan's Electrical Grid

Andrew Frisch, Farwell Area Schools
Primary Subject: GS, PH
Interest Level: MS, LE, HS
Location: Topaz
Our modern society is fueled by electricity, but how is our electrical grid fueled? Examples and demonstrations will explain how Michigan obeys the law of conservation of energy to power our state. Students of all levels will benefit from this simple and thought-provoking session.

An Elemental History of the Universe

E. Prasad Venugopal, University of Detroit Mercy; Mark Benvenuto, University of Detroit Mercy
Primary Subject: CH, IN
Interest Level: HS, CO
Location: Granite
This session will present results from student responses in two introductory science classes when they were assigned to write a socio-historical narrative from the perspective of a chemical element.

Session Key:

Primary Subject Levels:
AS – Assessment/Curriculum
CH – Chemistry
ES – Earth Science
GS – General Science
LT – Literacy
BI – Biology
EN – Environmental Education
IN – Instruction/Pedagogy
PH – Physics
AST – Astronomy

Interest Levels:
EE – Early Elementary
LE – Late Elementary
MS – Middle Level
HS – High School
CO – College

– SCECH Session
∨ – Vendor Session

Session Descriptions

1:00p.m. - 1:45 p.m. *continued*

Enhance your Classroom Experience with Animals 4 Kidz(Tadpoles & more!)

Chara Watts, Animals 4 Kidz
Primary Subject: ES, GS
Interest Level: EE, LE
Location: Garnet
Animals 4 Kidz is enhancing classrooms across Michigan with our Tadpole Experience and Watch me Grow indoor gardening programs. Enjoy hands-on activities,handouts and a taste of our science experience!

Leveraging Scientific Literacy Practices to Support Students in Sense-making

Jessica Ashley, Oakland Schools; Steve Tighe, Lake Orion High School; Jill Jessen
Primary Subject: LT, IN
Interest Level: MS, HS
Location: Coral
Explore how to overlay Science and Engineering Practice #8 and the Common Core Literacy Practices. Support students in "sense-making" by using informational text.

Green Chemistry Connections - Inspiring Students with Innovations

Kathe Blue-Hetter, Skyline High School; Erika Futura, Pentwater High School
Primary Subject: CH
Interest Level: HS
Location: Emerald
An hands-on set of lessons that highlight green chemistry innovation and align with the new Michigan Science Standards. Mushrooms the new plastic, how sharks influence chemistry, safer pigments. Free samples!

Introduction to MEECS Online Learning Portal

Amanda Syers, Grand Valley State University
Primary Subject: AS, EN
Interest Level: LE, MS
Location: Copper
MEECS Online! MEECS workshops have been offered to Michigan's in education since 2006. MEECS is now adding online courses to supplement the workshop training.

MESTA's Free and Inexpensive Earth Materials

Judith Ruddock, Michigan Earth Science Teachers Association;
Primary Subject: ES
Interest Level: CO, EE, HS, LE, MS
Location: Jade
This is it!. Our Famous FREE AND INEXPENSIVE rock and mineral sale sponsored by the Michigan Earth Science Teachers Association. Classroom samples, teaching kits and answers to your Earth questions.

The Science of Storytelling

Cheryl Matas, retired
Primary Subject: IN
Interest Level: EE, LE, MS
Location: Opal
In this participatory session, learn how to incorporate stories using visual, audio, kinesthetic and emotional anchors, which will engage your students to the fullest and result in learning that sticks.

Upstream Downstream--You Make a Difference

Lea Sevigny, Forest Hills Central Middle School
Primary Subject: EN, IS
Interest Level: MS
Location: Ruby
Starting in our local watershed with the Leaf Pack Network, macroinvertebrate species inspire a mindset of environmental stewardship for the Great Lakes Basin.
Handouts provided in this hands-on activity.

A Middle School Wind Turbine Project for Math-Science Integration

Susan Beamish, Greenhills School; Brandon Groff, Greenhills School; Damian Khan; Charles Dershimer
Primary Subject: GS
Interest Level: MS
Location: Sapphire
This wind turbine project has our students using sensors in science class to collect voltage and current data and analyzing the data in their math class. Handouts will be available.

Sat 1:00 pm-2:45 pm

STEM to STERN Essential Elements

Mary Hillebrand, Calvary Baptist Academy
Primary Subject: CH, IS
Interest Level: EE, LE, MS
Location: Pearl
Hands-On Science for grades K - 8 using items from the Dollar Store or your kitchen. Fifty-five or more FREE resources given to all participants. Instill a LOVE of science!

Physics Make and Take

Steve Dickie, Divine Child High School; James Gell, Plymouth High School
Primary Subject: PH
Interest Level: MS, HS
Location: Crystal Ballroom
Participants will have the opportunity to construct several apparatuses for classroom demonstrations of physics phenomena. These apparatuses will be constructed of inexpensive and easily-obtainable materials. Sponsored by the MIAAPT.

Arbor Scientific: Cool Tools for Force & Motion

Don Pata
Primary Subject: GS, PH
Interest Level: MS, HS, CO
Location: Amethyst
Learn to identify interactions between objects either by direct contact (e.g., pushes or pulls, friction) or at a distance (e.g., gravity, electromagnetism) and use forces to describe interactions between objects.

Rube Goldberg, a Metacognitive Activity

Rachel Badanowski, Wayne State University
Primary Subject: GS
Interest Level: LE, MS, HS, CO
Location: Ivory
Create a Rube Goldberg device in this hands-on session that will stretch the limits of your imagination.

Make Decisions Regarding Michigan's Changing Ecosystems: A Mi-STAR Unit

Tony Matthys, Michigan Technological University; Bar McIntyre; Denise Bujalski, Midland PS
Primary Subject: BI, EN
Interest Level: MS
Location: Gold
Interact with three-dimensional activities from a classroom-tested, integrated science unit on ecosystem change, patterns of species interactions, resource availability and evaluating solutions. Aligns with MS-LS2-1, MS-LS2-2, MS-LS2-4, MS-ETS1-2. Handouts provided.

Hands On Neuroscience Workshop: Human Electrophysiology

Greg Gage, Backyard Brains
Primary Subject: BI, PH
Interest Level: HS, MS, CO
Location: Bronze
Understand the electrical signals in the human body: muscles (EMG), Brain (EEG) and more. We will do hands-on experiments to record signals and use them to create fun brain-machine interfaces.

Field Trip to MSU Extension Tollgate Education Center and Farm

Primary Subject: EN, IS
Interest Level: EE, LE, MS, HS
Location:
Carpool 4 miles to MSU's Tollgate Farm to learn how MSU Extension Outreach Programs can support your educational goals with experiential, educational programs and field trips for your students that connect to the curriculum in your classroom. You will tour the growing school gardens & greenhouse, the sugar shack where the students and volunteers make maple syrup, and learn about youth development programs, community food systems education, and agriculture and natural resources. Using research-based curriculum and methods, Tollgate promotes food system awareness through exploring the sustainable, nutritional, and cultural aspects of agriculture. The field trip takes place on both Friday (3-hour session) and Saturday (2-hour session), so you can choose the day that works best for you. Cost is $10 and requires registration. We suggest that you wear farm appropriate footwear if possible. Meet at the seating area in the lobby across from the Sapphire ballroom at 1:00 pm.

Sat 2:00 pm-2:45 pm

Treading the Transition Tightrope - MSS Activities for ESS

Cris DeWolf, Chippewa Hills High School
Primary Subject: ES, AST
Interest Level: HS
Location: Emerald
Michigan's new science standards (MSS) are driving change. Applying mathematics to planetary motion (Kepler's Laws) is one change. Come plot with us!

Using Children's Books to Engage Young Scientists & Engineers

Holly McGoran, Jenison Public Schools
Primary Subject: LT
Interest Level: EE, LE
Location: Garnet
Many books provide the opportunity for students to identify with characters engaging in the science & engineering practices. Come ready to read, share, & learn more about these brilliant books!

What's in the Middle?

Michele Svoboda, retired
Primary Subject: ES
Interest Level: LE, MS, HS
Location: Granite
Make a slice of the earth's interior that shows the layers, and boundaries. Slices can be put together to make a complete scale model of the Earth. Handouts provided.

Session Key:

Primary Subject Levels:
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– SCECH Session
V – Vendor Session

Session Descriptions

2:00 p.m. - 2:45 a.m. *continued*

Animal Needs: Building Literacy through Science

Vic Bell, Diane Miller, Detroit Zoological Society
Primary Subject: LT, IS
Interest Level: EE
Location: Moonstone
The core concept of animal needs is explored through hands-on activities that simultaneously build literacy skills in kindergartners at the Detroit Zoo. Ready-to-teach lesson plans and activities will be provided.

Do You Have a "STEM Personality"?

Patti Picard, Tawheed Center of Detroit School
Primary Subject: GS, IN
Interest Level: EE, LE, MS
Location: Opal
What character traits make successful STEM students? By partnering conscientious character education into focused STEM activities, we can improve the overall achievement of our students. Hands-on with handouts provided.

Shake, Rattle and Roll: Earthquake Proof Towers

Christie Gayheart, Jefferson Middle School-Midland Public Schools; Jennifer Lehman, Jefferson Middle School-Midland Public Schools
Primary Subject: GS, IN
Interest Level: MS
Location: Coral
The purpose of this activity was to have students build an earthquake proof tower given a set of constraints and criteria using the engineering design model.

Your Reading Toolbox: Strategies for Building Strong Readers in Science

Susan Tate, Whitehall Middle School
Primary Subject: GS, LT
Interest Level: LE, MS, HS
Location: Copper
Are you frustrated with the struggles that your students have when it comes to reading and comprehending informational text? Learn new reading strategies to help your kids be successful!

NGSS Yourself

Walter Charuba, Brownell Middle School
Primary Subject: ES, AST
Interest Level: MS
Location: Ruby
Experience how to incorporate and develop older lessons around the Next Generation Science Standards . There will be seven earth and astronomy lessons to take home and use immediately.

You Can't Make Them Care...Or CAN You???

Chris Blackstock, self-employed
Primary Subject: IN
Interest Level: EE, LE, MS, HS
Location: Sapphire
Low test scores?? Too many discipline write-ups?? Students not engaged?? Come learn strategies to increase student motivation that can be used at ANY level and in ANY subject.

Speaker Index

Speaker Index

Interest Levels

Early Elementary

Later Elementary

Interest Levels

Middle School

Interest Levels

Middle School *continued*

High School

Interest Levels

College Level

MTSA Region Directors

Region 1 Director - Donna Hertel
Portage Northern High School
1000 Idaho
Portage, MI 49024
dhertel@portageps.org

Region 2 Director - Rachel Badanowski
47818 West Huron River Dr.
Belleville, MI 48111
ae5379@wayne.edu

Region 3 Director - Linda Bradlin
Benjamin Carson High School
3645 Haverhill Street
Detroit, MI 48224
linda.bradlin@detroitk12.org

Region 4 Director - Susan Tate
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susantate@whitehallschools.net

Region 5 Director - Conni Crittenden
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Region 8 Director - David Brown
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brownd@bcreek.org

Region 9 Director - Jennifer Richmond
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jlzrichmond@gmail.com

Region 10 Director - Carolyn Mammen
10878 Woodview Ter
Traverse City, MI 49686
cmammen@charter.net

Region 11 Director
Position currently vacant

Region 12 Director - Jackie Huntoon
MI Technological University
503 A. Admin. Bldg., 1400 Townsend Drive
Houghton, MI 49931
jeh@mtu.edu

Region 13 Director - Chris Standerford
Northern Michigan University
401 Presque Isle, West Science 2805
Marquette, MI 49855
cstander@nmu.edu

Region 14 Director - Lynn Thomas
8949 Stagecoach Q.5 Ave.
Gladstone, MI 49837
lynnthomas@eskymos.com

Award Winners

NOTE: This is only a list of the last five years of award winners. For a full list of the award winners since 1974, contact the MSTA office.

2013

Elementary Science Teacher of the Year	Diane Krzyaniak
Middle School Science Teacher of the Year	Monica Harvey
High School Science Teacher of the Year	Erika Fature
College Science Teacher of the Year	Dr. James McDonald
Informal Science Educator	Gerald Pahl
Distinguished Service Award	Roberta Cramer
Dan Wolz Clean Water Education Grant	Dave Chapman

2014

Elementary Science Teacher of the Year	Julee Cowher
Middle School Science Teacher of the Year	Mark Koschmann
High School Science Teacher of the Year	Richard Eberly
College Science Teacher of the Year	Dr. Mary Brown
Informal Science Educator	Paula Gangopadhay
Distinguished Service Award	David McCloy
Distinguished Service Award	Mike Klein
The George G. Mallinson Award	Joseph Krajcik
Dan Wolz Clean Water Education Grant	Donald Hammond/Tammy Coleman

2015

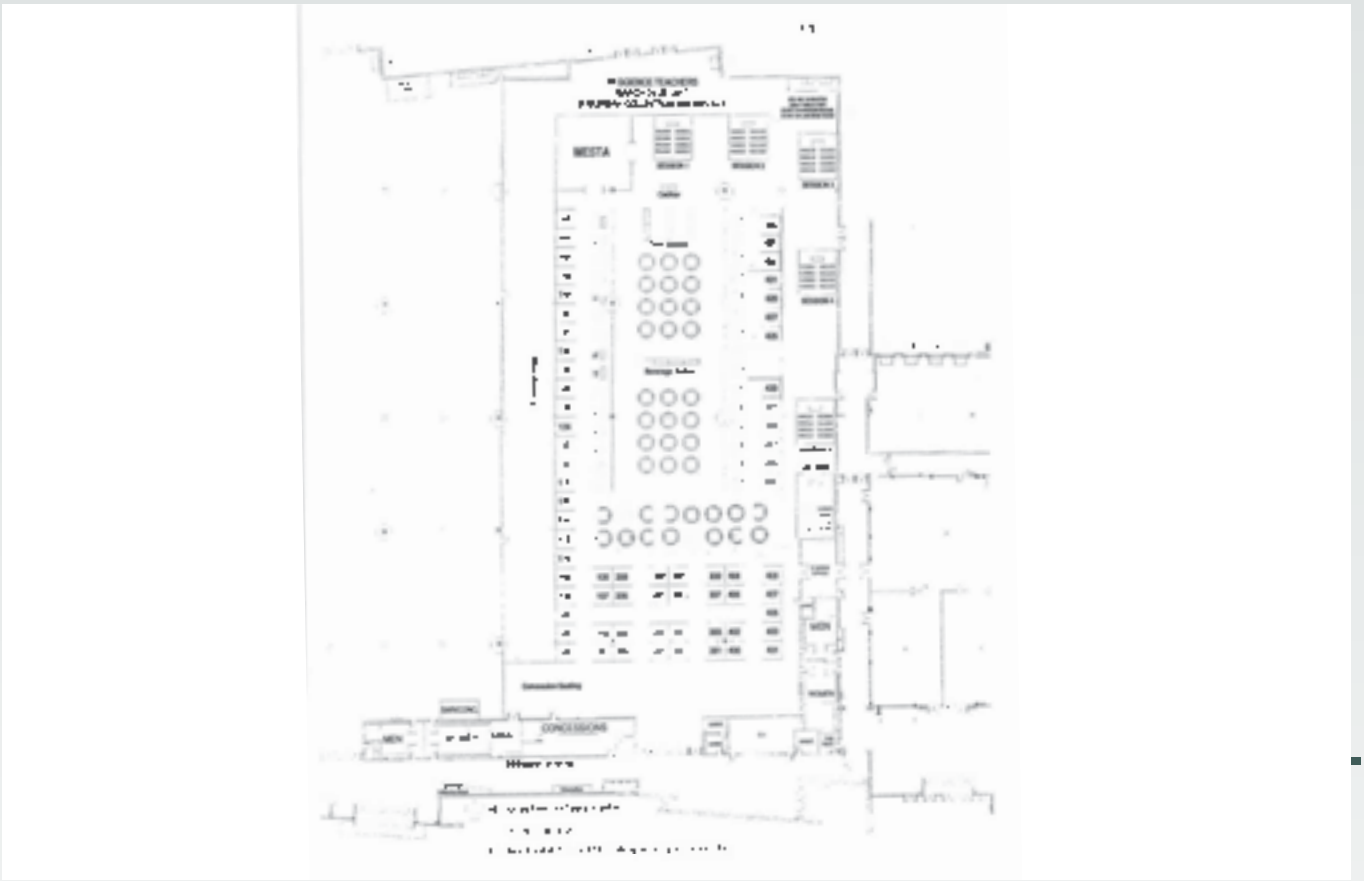
Teacher of Promise	Ashley Meyer
Elementary Science Teacher of the Year	Patricia McNinch
Middle School Science Teacher of the Year	Holly McGoran
High School Science Teacher of the Year	Deanna Cullens
College Science Teacher of the Year	Dr. Bradley Ambrose
Administrator of the Year	Greg Johnson
Informal Science Educator	Stephen Stewart
Distinguished Service Award	Betty Crowder
The George G. Mallinson Award	David Bydlowski
Dan Wolz Clean Water Education Grant	John Travis/Josh Nichols

2016

Teacher of Promise	Dakota Bahlau
Teacher of Promise	Paula Gentile
Elementary Science Teacher of the Year	Sherri Hane
Middle School Science Teacher of the Year	Colleen Polydoras
High School Science Teacher of the Year	Joshua Barclay
College Science Teacher of the Year	Dr. Mark Francek
Informal Science Educator	Janet Vail
MSTA Special Award	Stephen Best
Distinguished Service Award	Cheryl Hach
Dan Wolz Clean Water Education Grant	Lea Sevigny/Connie Atkisson
The George G. Mallison Award	George G. and Jacqueline Mallison

Exhibitor Information

Exhibitor Map



309 — Accelerate Learning
5177 Richmond Ave. #1025
Houston, TX 77056

118 — Activate Learning
765 Manor Hill Place
Sugar Grove, IL 60554

T18 — AgroLiquid Iqhub
3055 M-21
St. Johns, MI 48879
(989) 227-3847

T23 — Alma College
614 W Superior St.
Alma, MI 48880
(989) 463-7299

T1 — Ann Arbor Hands on Museum
220 E Ann St.
Ann Arbor, MI 48104
(734) 995-5439

407, 409 — Arbor Scientific
1556 Woodland Drive
Saline, MI 48176

T3 — AWWA and MWEA - Youth Ed. Committee
12649 Richfield Ct.
Livonia, MI 48150
(734) 469-5610

T2 — Battle Creek Outdoor Education Center - Clear Lake Camp
10160 S M-37 Hwy.
Dowling, MI 49050
(269) 721-8161

T4 — BaySail - Appledore Tall Ships
107 Fifth Street, Upper Floor
Bay City, MI 48708
(989) 895-5193

Exhibitor Information

T8 — Bear Trust International
PO Box 4006
Missoula, MT 59806

415 — Bedford, Freeman & Worth High School Publishers
300 American Metro Blvd, Suite 140
Hamilton, NJ 08619

201, 203 — Benz Microscope Optics Center, Inc.
3980 Varsity Dr.
Ann Arbor, MI 48108

122 — BES Solutions
15101 Cleat Street
Plymouth, MI 48170

100 — Bio-Rad Laboratories
3720 Flowerfield Road
Charlotte, NC 28210
(704) 491-2107

120 — Carolina Biological Supply
2700 York Road
Burlington, NC 27215-3398
(800) 334-5551

T27 — CMU - Biological Station
Central Michigan University ET 200
Mt. Pleasant, MI 48859
(989) 774-4400

405 — Consumers Energy
4000 Clay Ave. SW
Grand Rapids, MI 49548

303 — Corporate Travel Service
23420 Ford Road
Dearborn Heights, MI 48127
(313) 565-8888

306, 308 — Delta Education/Foss
80 Northwest Blvd
Nashua NH 03063
(603) 579-3467

T30 — DEQ
525 W. Allegan St.
Lansing, MI 48933
(517) 284-6867

423 — Earth Force
PO Box 12228
Denver, CO 80201
(313) 808-0062

T9 — Ecology Center
339 E. Liberty St., Suite 300
Ann Arbor, MI 48104

209 — ExploreLearning
110 Avon Street, Suite 300
Charlottesville, VA 22902
(610) 471-0433

406,408 — Flinn Scientific, Inc.
770 N. Raddant Road
Batavia, IL 60510

TBD — Frey Scientific | CPO Science
PO Box 1017
Appleton, WI

402 — Houghton Mifflin Harcourt
1731 Chesapeake Lane, Apt 3
Schaumburg, IL 60193

T5 — Inland Seas Education Association
P.O. Box 218, 100 Dame St.
Suttons Bay, MI 49682

T22 — Integrated Science Program
C-1-120 Mackinac Hall
Allendale, MI 49401
(616) 331-2515

417 — It's About Time
333 North Bedford
Mount Kisco, NY 10549
(914) 273-2233

413 — KEVA Planks Education
6719 Rocky Bar Road
Elkton, VA 22827

LAB-AIDS room/Exh Hall — Lab-Aids
1036 Ranch Road
Bluffton, IN 46714

Exhibitor Information

107 — Learning A-Z
1840 E River Rd, #320
Tucson, AZ 85718

200, 202 — LEGO Education
501 Boylston Street, Suite 4103
Boston, MA 02116

T12 — Library of Michigan
702 W. Kalamazoo St.
Lansing, MI 48915

T21 — Longway Planetarium
1310 E. Kearsley St.
Flint, MI 48503

T7 — MAEOE
Box 271
Lansing, MI 48912

206,208 — McGraw-Hill Education
8787 Orion Place
Columbus, OH 43240

T15 — MDNR Outdoor Adventure Center
1801 Atwater
Detroit, MI 48207
(313) 396-6876

403 — Meemic
1685 N Opdyke Rd.
Auburn Hills, MI 48326

114 — Metropolitan Detroit Science Teachers Association
21610 Kenosha Street
Oak Park, MI 48237
(248) 542-1781

130,132 — MI Dept. of Natural Resources
525 West Allegan Street
Lansing, MI 48933

T26 — Michigan Antibiotic Resistance Reduction Coalition
49632 Nautical Dr.
Chesterfield Twp, MI 48047

T11 — Michigan Chemistry Council
326 W Ottawa St.
Lansing, MI 48933
(517) 372-8898

T20 — Michigan Department of Health and Human Services
333 S. Grand Ave.
Lansing, MI 48909

140,142,144,146 — Michigan Farm Bureau
7373 W. Saginaw
Lansing, MI 48917

421 — Michigan Math and Science Centers
1390 Eisenhower Place
Ann Arbor, MI 48108
(734) 418-1479

T29 — Michigan Science Center
5020 John R. Street
Detroit, MI 48202
(313) 577- 8400 x482

T6 — Michigan Sea Grant
520 E Liberty St. Suite 310
Ann Arbor, MI 48104

307 — Michigan Technological University
840 Dow Bldg, 1400 Townsend Drive
Houghton, MI 49931
(502) 528-7736

T19 — Michigan United Conservation Clubs
2101 Wood
St.Lansing, MI 48912
(517) 371-1506

116 — Michigan Virtual University
3101 TECHNOLOGY BLVD STE G, G
Lansing, MI 48910

104,106 – MSTA
1390 Eisenhower Place
Ann Arbor, MI 48108
(734) 973-0433

Exhibitor Information

108 — MSTA Book Store
1390 Eisenhower Place
Ann Arbor, MI 48108
(734) 973-0433

T13 — MSU College of Osteopathic Medicine Office of Admissions
965 Fee Road, A136 East Fee Hall
East Lansing, MI 48824
(517) 353-7740

T10 — MSU Kellogg Biological Station
3700 East Gull Lake Dr.H
Hickory Corners, MI 49060
(269) 671-2360

400 — Nasco Education
901 Janesville Avenue
Fort Atkinson, WI 53538
(800) 558-9595

301 — National Geographic Learning | Cengage
11834 Magnolia Falls Drive
Jacksonville, FL 32258

110 — NSTA
1840 Wilson Blvd.
Arlington, VA 22201
(703) 243-7100

112 — NSTA Press
7676 W Harbor Hwy, P O Box 649
Glen Arbor, MI 49636

T28 — Organization for Bat Conservation
39221 Woodward Ave
Bloomfield Hills, MI 48303

102 — PASCO Scientific
10101 Foothills Blvd
Roseville, CA 95747

101,103 — PEARSON
1900 E Lake Avenue
Glenview, IL 60025
(847) 486-2817

419 — Potter Park
1301 S. Pennsylvania Ave.
Lansing, MI 48912
(517) 342-2713

124 — Scholastic Library Publishing

126,128 — Square One Education Network
26100 American Dr.
Southfield, MI 48034
(248) 736-7537

T17 — Tamarack Camps
4361 Perryville Road
Ortonville, MI 48462
(248) 627-2821

300,302 — TCI
2440 W. El Camino Real, Suite 400
Mountain View, CA 94040
(650) 390-6600

431 — Texas Instruments
13532 N. Central Expressway MS 3817
Dallas, TX 75243
(469) 323-6385

109 — The INQUISITIVE PIONEER
7430 Plainfield
Dearborn Heights, MI 48127
(313) 561-5261

T25 — The Mallinson Institute for Science Education
3241 Wood Hall, MS 5444,
1903 W. Michigan Ave.
Kalamazoo, MI 49008-5444
(269) 387-5398

401 — The Markerboard People
1611 N. Grand River Ave.
Lansing, MI 48906
(800) 379-3727

T16 — University of Michigan - Dearborn
19000 Hubbard Drive FCS 261
Dearborn, MI 48126
(313) 593-5133

Exhibitor Information

T24 — Van Andel Education Institute
1350 Sundance Court
Holland, MI 49424

207 — Vernier Software & Technology
13979 SW Millikan Way
Beaverton, OR 97005
(888) 837-6437

138 – Wayne State University — College of Education
5425 Gullen Mall
Detroit, MI 48202
(313) 577-1620

136 – Wayne State University — College of Liberal Arts & Sciences
4841 Cass Ave
Detroit, MI 48201
(313) 577-2515

134 — Wayne State University-School of Medicine
540 E. Canfield St.,
Dept. of Physiology,
Wayne State University
Detroit, MI 48201

T14 — YMCA Hayo-Went-Ha Camps, State YMCA of Michigan
919 N East Torch Lake Dr.
Central Lake, MI 49322
(231) 544-5915

Suburban Collection Showplace
Facility Map

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For more information, call **248.204.2227**
or email **extremescience@ltu.edu**

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Whether it's a biomedical breakthrough or an archaeological discovery, students and professors in Wayne State University's College of Liberal Arts and Sciences work side by side to change our understanding of the world. WSU gives undergraduates the chance to learn across disciplines, combining the personal experience of a small college with the global advantages of a major research university.

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WAYNE STATE

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