

**It's time for the 37th annual Minnesota  
Earth Science Teachers'  
Association conference!**

**Friday, February 2, 2024**



Get to know your fellow Earth science teachers from across the state at the Minnesota Earth Science Teachers' Association Annual Conference.

Concurrent breakout sessions feature master Earth science educators and noted geoscience professionals. *Classroom resources will be provided to all attendees, including the very popular and much-appreciated door prizes.*

This conference supports the teaching of the MN Earth and Space science benchmarks articulated in the MN Academic Standards in Science.

**5:30 pm Thursday, February 1  
Optional Social Gathering and Presentation  
Como Planetarium**

Located in Como Park Elementary School  
780 W Wheelock Pkwy #1315, St Paul  
*\$10 fee as noted on the registration form.  
Reserve and pay in advance.*

**Dinner**

*(Dinner at your expense.)*

*The location will be decided at a later date and will be noted in the conference confirmation letter you will receive in January.*

**Friday, February 2  
MESTA Conference**

**7:45am-3:00pm**

**District 287 Conference Center**  
1820 North Xenium Lane, Plymouth

Minnesota Earth Science  
Teachers' Association (MESTA)  
3149 Alexander Lane  
Mound, MN 55364

**HOTEL ACCOMMODATIONS**

These hotels are near the conference facility. Call for prices and to make your own arrangements:

Comfort Inn Plymouth: (763) 559-1222

Crown Plaza Minneapolis: (763) 559-6600

Ramada Plymouth: (763) 553-1600

**CLOCK HOURS AND TDE**

Re-licensure clock hours are available at this conference. Consider connecting your professional development/TDE goals to teaching techniques and knowledge gained at this conference.

**FOR MORE INFORMATION**

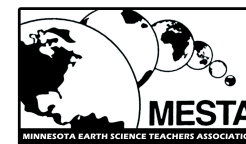
Conference event information:

Christian Waage

([cwaage@hastings.k12.mn.us](mailto:cwaage@hastings.k12.mn.us))

Conference registration questions:

Jess Strom ([jessica.strom@orono.k12.mn.us](mailto:jessica.strom@orono.k12.mn.us))



Minnesota Earth Science Teachers' Association  
3149 Alexander Lane  
Mound, MN 55364

<http://www.mnearthscience.org/>

## REGISTRATION FORM

Registration is non-refundable.  
Please print.

NAME: \_\_\_\_\_

EMAIL: \_\_\_\_\_

SCHOOL: \_\_\_\_\_

PREFERRED ADDRESS:  
\_\_\_\_\_

CITY, STATE, ZIP  
\_\_\_\_\_

PREFERRED PHONE: \_\_\_\_\_

### REGISTRATION OPTIONS

- \$120 Basic Conference Registration  
 \$70 Pre-service Teacher / Full Time College Student

### CONFERENCE REGISTRATION INCLUDING MnSTA MEMBERSHIP

- \$145 Basic Conference Registration  
 \$135 First Year Teacher / Retired Teacher  
 \$80 Pre-service Teacher / Full Time College Student

### COMPLIMENTARY BREAKFAST AND LUNCH

Note any dietary restrictions below. We will try to accommodate, if possible.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### OPTIONAL THURSDAY EVENING EVENT

- Add \$10 if you will be attending this event.

TOTAL AMOUNT \_\_\_\_\_

To register by mail with a check (payable to MESTA send this form to

**Jess Strom at 3149 Alexander Lane, Mound, MN 55364.**

To register online with a credit card, go to  
<http://www.mnearthscience.org/>

## KEYNOTE SPEAKER

### Earth and Sky: Connections to the Cosmos

*Travis Novitsky, Nature and Wildlife Photographer, Park Manager, Grand Portage State Park*

A proud citizen and lifelong resident of the Grand Portage Anishinaabe Nation, Travis has been photographing the woods and waters of the north shore of Lake Superior for over 25 years. He is a self-taught nature and wildlife photographer whose work focuses primarily on his native homelands located in northeast Minnesota. His favorite subject to photograph is the night sky. Mr. Novitsky loves to share his passion for making images after dark with others and he hopes that his images will inspire you and your students to spend more time outside to enjoy all the beauty that mother nature has to offer.

To see some of Mr. Novitsky's photos, visit his website at <https://www.travisnovitsky.com/>.

Mr. Novitsky is also a contributor to the PBS documentary, *Northern Lights, Starry Skies*, produced by Hamline University's Center for Global Environmental Education and PBS North. View the collection of resources at <https://tpt.pbslearningmedia.org/collection/northern-nights-starry-skies/>

## THURSDAY EVENING EVENT

**View a planetarium presentation and hear about the upcoming total solar eclipse.**

Join us at the Como Planetarium in Saint Paul, a classic Minnesota astronomy destination to learn about the solar eclipse that will occur this April. In addition to time in the planetarium, we will learn about various cultures and their relationship to the skies. Activities will be designed to support professional development for the implementation of the 2019 Minnesota State Science standards. This event starts Thursday night at 5:30. Registration will be limited to the first 55 participants.

Participants have the option of meeting colleagues for a social gathering, networking, and dinner at their own expense after the program. More detailed information will be sent to participants at a later date.

## CONCURRENT SESSIONS

### Tornado Box

*Leanna Bender, Ph.D. student at South Dakota School of Mines and Technology*

Participants will learn how to assemble and use a "Tornado Box," an enclosed, clear plastic box with a cool vapor mister and small desk fan, which generates a small tornado vortex. With this device, your students will be able to experiment with the strength of storm updrafts and wind shear. The Tornado Box has proven to be an engaging addition to classroom meteorology units.

### Minnesota Mining Past, Present, and Future: Looking Towards a Green Future

*Julie Lucas, Executive Director, Mining Minnesota*

Minnesota's Iron Range has a long and storied history of iron mining. Today, the region has the potential to provide critical raw materials needed for clean energy and infrastructure. This session will provide information regarding the history of mining and the mineral resources found in Minnesota. Perspectives regarding sustainable mining practices that balance the need for mining raw materials with responsible mining practices will be shared.

### Why Groundwater Matters

*Dr. Peter Kang, Associate Professor, Department of Earth and Environmental Sciences, University of Minnesota, Twin Cities*

Did you know that about 99% of global unfrozen freshwater is stored in groundwater systems? This presentation covers the basics of groundwater and why better understanding groundwater systems is necessary for addressing global water, energy, and climate change issues. In addition, information about a groundwater unit that may be used in your classroom will be shared.

### Weaving the Three Dimensions into Earth and Space Science Lessons

*Stephanie Erickson, Ph.D. Candidate in STEM education, University of Minnesota*

Earth science in Minnesota is experiencing a revolution. Heightened attention to Earth and Space science standards, especially in high school, requires teachers and districts to implement the three dimensions of learning in their classrooms using innovative teaching practices. This session will share a lesson that models how science and engineering practices, cross-cutting concepts, and disciplinary core ideas can be woven together to support student learning.