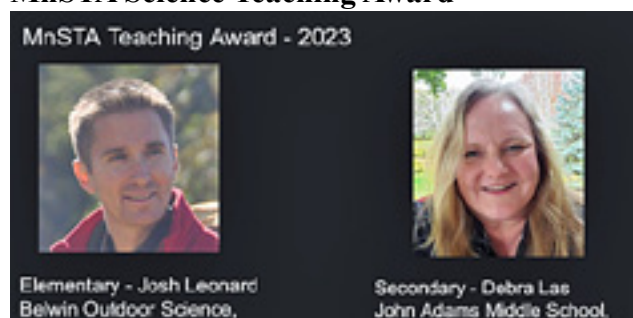


MnSTA

Newsletter

Volume 67 No. 2 A Quarterly Publication of the Minnesota Science Teachers Association Inc. Winter 2024

Josh Leonard and Debra Las Recipients of MnSTA Science Teaching Award



The MnSTA Science Teaching Award is presented each year to honor exemplary teachers at two levels: elementary and secondary. To demonstrate their qualifications for the award, the applicants must provide a description of their teaching practice, a listing of their teaching and professional activities, and a proposal for use of the funds. Each awardee receives a fund of \$1000 for a project that benefits their students, plus free registration for MnCOSE. Recipients of the award are expected to share the results of their projects with other teachers. The judges for the award are members of the MnSTA board of directors.

The teaching award for the elementary teacher goes to Josh Leonard. Josh is the education director and lead instructor at Belwin Outdoor Science, an outdoor education program of the Saint Paul Public Schools situated in Afton, MN. Josh received the Minnesota Environmental Educator of the Year Award in 2016 from the Minnesota Association for Environmental Education.

The Belwin program serves over 1000 students per year, including every third and fifth grade student in St. Paul. Many of these students have never

been in natural settings and one of the goals is to make them comfortable in nature. The approaches of culturally responsive teaching have been a strong influence on his work with students. Josh also works to make teachers confident in teaching outdoors and has been active statewide in outdoor and environmental education efforts.

Josh will use his award funds to expand a Tulip Josh Leonard.....continued on page 5

The Teaching Award for the secondary teacher goes to Debra Las who teaches eighth grade science at John Adams Middle School in Rochester. Her teaching assignment includes physical science for multiple language learners and physical science for highly gifted students. She also leads a STEM mentoring lab as a program through community education. She was a recipient of the Presidential Award for Mathematics and Science Teaching in 2006.

Debra cites her values in teaching as significant, security, and satisfaction. Students should know that they matter and they can feel safe expressing ideas and asking questions without the worry of what others may think. To establish satisfaction, she creates opportunities for independent research and engineering projects. Many of her students enter projects in the science fair and/or e-Cybervision. She established the STEM Mentoring program called Oraculi which matches students with community mentors. The program is now operating in four middle schools and there is an e-mentoring program at all three high schools.

Debra will use the award money to create a middle school version of a science marketroom where students can check out materials for independent science projects. This will support students who have fewer resources to work on their projects.

See photo of Debra accepting the award on page 5

President's Message-Jill Jensen



Greetings MnSTA!

It is the last day of January as I write this, which means we have just gotten through the ten darkest weeks of the year! I've already noticed the sun setting later as we creep toward spring - a positive change, at least in my opinion. As the school year continues to move forward I also noticed that the changes I'm making in my classroom to support the new standards are having positive effects on students. I've also noticed that I talk less and students are talking more, their conversations include content ideas, terms, and they are having thoughtful conversations. I've noticed deeper questions and a lot of 'buy-in' of each unit. Pausing to reflect on the success that you as a teacher and that your students are having can help remind you of the journey we are on. It is easy to get caught up in what went wrong, but taking a step back and reminding yourself where you and your students started can be a valuable process.

While I am seeing these positive changes, it doesn't always mean that it's easy. I had a recent phone call with Haley Kalina, our president-elect, and shared how I'm getting close to the end of my current unit and that I was struggling with finding the energy to keep going and see it through to the end. Haley shared that she's had similar conversations with colleagues in her district and succinctly named it for me - teacher stamina. As a teacher, I'm pretty skilled at recognizing when classes need to change gears and do something different. But I realized I'm not always good at recognizing that need in myself. Haley's comment helped me realize the amount of effort that I, and all of you, are putting forth to

transition into three dimensional learning. Her comment also helped remind me that it's ok to take a break sometimes. Pausing the curriculum helped me reengage and gave my brain a break enough that I was able to refocus and be more thoughtful in my next several lessons. I was able to ensure that I'm really framing learning in a way that supports student understanding of our phenomenon. I realize everyone is in different stages of implementation, but I'd encourage you to pay attention to your stamina, give yourself some grace, pause if you need to and know you are doing good work.

If you are looking for some encouragement or just a way to connect with other educators, please consider joining us for one of our virtual discussions. MnSTA is hosting free, virtual, monthly conversations centered on teaching practices. You can find out more and register for the next event here: https://www.mnsta.org/cgi/page.cgi/Making_Sense_of_SCIENCE_23-24.html

On a different note, have you started making plans for the eclipse? The eclipse will take place Monday, April 8th and will be a partial solar eclipse for us in Minnesota. While I'll be taking a personal day to travel to Indianapolis to be in the path of totality, I'm working on arranging a class set of eclipse goggles so my students can witness this event as well. The next total solar eclipse in North America won't happen until 2044 - I encourage you to make use of the rare phenomenon!



President-elect Haley Kalina. A full biography will appear in our spring newsletter



Osprey Wilds

Environmental Learning Center

Osprey Wilds is an accredited Outdoor School in Sandstone, Minnesota. We provide K-12 residential and day-use learning experiences, including environmental, adventure, and team-building classes!

OUTDOOR SCHOOL TRIPS

Overnight

- 3 days, 2 nights
- 6 two-hour classes
- 2 evening classes
- 7 meals

Day Program options available by request



CLASS SUBJECTS

Ecology
Wildlife
Stewardship
Culture & History
Adventure Education
Naturalist Evening Programs
& more!



SCHOLARSHIPS AVAILABLE!

Funding for K-12 scholarships is provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR).

Learn more
online at
OspreyWilds.org/schools



Contact us

schools@ospreywilds.org
320-245-2648



54165 Audubon Drive, Sandstone, MN 55072 | 320-245-2648

Our featured teacher for this edition of our newsletter is Linsey Strand. Linsey grew up in Blackduck, Minnesota but now resides in Cass Lake where she teaches 7th Grade Life Science at Cass Lake-Bena Middle School in Cass Lake, MN. This is her 12th year at CLBMS. She is an Assistant High School Robotics Coach for the Cass Lake-Bena Robotics Teams. She states, “The teachers are exceptional, and the students and families are wonderful.” She also taught for one year at East Central High School in Sandstone, MN. where she taught 8th – 12th Grade Science.

Her favorite activity is the “Contain Those Crawlers” mini-unit she does in the fall. She discusses invasive species and students’ knowledge on earthworms and invasive species in our area. Then, her students learn about how earthworms affect hardwood forests and why they are an invasive species. Students then conduct a field study outside in the school forest where they investigate if there are earthworms using a method from Great Lakes Worm Watch. They analyze the data and compare it to past years of students. Students go from knowing almost nothing about earthworms to really being interested and continually wanting to know more. She states, “This is a great introduction to Life Science investigation for the start of the year.”

When asked to give a flavor of her teaching style, She says, “I try to treat students with ‘compassionate accountability.’ I treat students with respect and try to model what empathetic and curious listening looks like and feels like. Also, I know that it is important that if you say something, you need to mean it – if you let the class know that the expectation for a lab is that they are only talking about the assignment and you overhear a group in an off-task conversation, they get a warning at first with a discussion on why that is an expectation and brainstorm when they can have this conversation, then if they continue they may be separated that day in class, a logical consequence. I try to think of the kind of teacher I would want for myself as a child or for my children and I try to be that as much as possible. I try to continually improve each year and try to give myself grace if lessons are not perfect. Progress over perfection!”

Linsey has always known she wanted to become a teacher. She knows teaching has a huge impact on people’s lives and helping students understand science and developing critical thinking skills is a vital life-long skill. It is also where she feels most “in the

zone”- like her true self. As a stutterer she has had some professors tell her that she should not become a teacher, but she worked through it and her students are understanding of it. She chose teaching because it is a difficult challenge every day, but a challenge worth doing.

She enjoys traveling, art, and spending time in the woods. She has it as a goal to visit all the National Parks. She has been to 38 so far. She loves to dabble in stained glass and mosaics. Lastly, She enjoys foraging and looking for wild edibles and living a seasonal lifestyle. Linsey, her husband, and dog enjoy hunting for various mushrooms, berries, and other edible foods in nature. They also love fishing.



Students exploring Body Systems

Do you know a teacher deserving to be featured in Teacher Feature?

Contact Jerry Wenzel jerrywenzel@brainerd.net
Send name and email address.



Finalist for the Presidential Teaching Award:
Lainey Bristow, Jill Jensen, Beth Robelia

Josh Leonard continued from page 1
Test Garden project to 15 school sites in St. Paul. Students will plant tulips in the fall and make observations of their emergence in the spring. They will compare their school sites with the Belwin site. The data will be shared with the Journey North Project, which maps the blooming of tulips across North America.



MnSTA president Jill Jensen presenting Josh Leonard the MnSTA Science Teaching Award



MnSTA president Jill Jensen presenting Debra Las the MnSTA Science Teaching Award

MnCOSE23 in Rochester Minnesota was a gathering of over 350 stakeholders in science education! A total of 78 different sessions were available over the event across a variety of topics. The most popular session tracks were Learning and Instructional Resources followed by Three Dimensional Education.

The 2019 Minnesota Science Standards continue to be the forefront of our work at MnCOSE as teachers are working out just how to shift our instruction to phenomenon-based and three-dimensional.

A new feature of MnCOSE was a set of “Practicing the Practices” workshops focused around the local Karst Geology and Nitrates in Minnesota water. Karst terrain is created from the dissolution of soluble rocks, principally limestone and dolomite. Karst areas are characterized by distinctive landforms (like springs, caves, sinkholes) and a unique hydrogeology that results in aquifers that are highly productive but extremely vulnerable to contamination. We welcomed an expert panel of local speakers mid morning on Friday to share their experiences with us and help the workshop participants develop storylines around safe water. As a participant shared, “the material covered [in the workshop] deserves this time to better understand the changes in the standards and updated practices.”

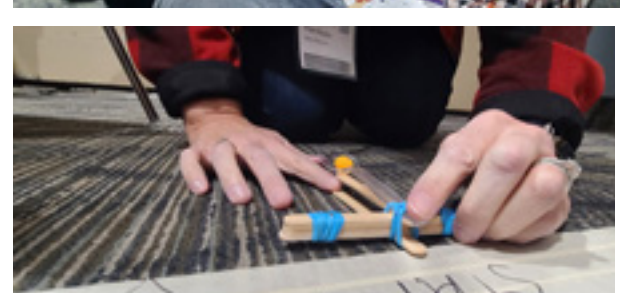
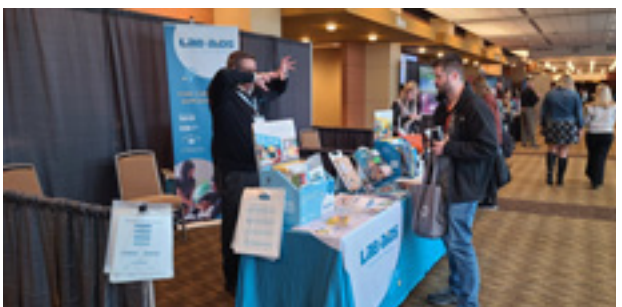
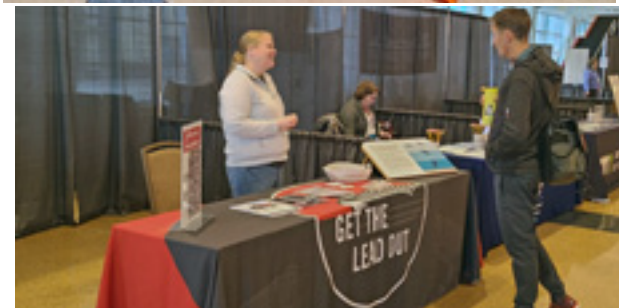
Sessions continued all day Friday across all content areas as well as grade ranges. More than a quarter of our sessions focused on science education in grades preK - 4, while more than half of the sessions addressed grades 5-8 and/or 9-12.

We greatly appreciate the six sponsors and a total of 47 exhibitors at MnCOSE23 who interacted with participants throughout the day. Mayo Clinic welcomed many of our participants for an in depth tour of many of their clinical facilities. On Saturday morning, MnCOSE23 workshops included GO4ST8 Physics, a fourth Practicing the Practices Workshop, and tours at Quarry Hill Nature Center and the Mayo High School Planetarium.

According to an attendee, MnCOSE was “well organized, easy to navigate, communication was great and the venue worked really well! We met some great people. The food was awesome!”

We are happy to announce that we’ll shift to the Saint Cloud State University campus for MnCOSE24 which will be held on Friday, Nov 1st and Saturday, Nov 2nd. Watch our website and social media for opportunities to be involved, share presentations, and get registered!

Eric Koser, Conference Coordinator
e: ekphys@gmail.com



MnSTA Board of Directors



Angela Kolonich, Science Education Specialist
angela.kolonich@state.mn.us

Boozhoo*/Greetings Minnesota Science Teachers!

We were lucky to have long fall this year, but Bi-boon/Winter is finally here! This season, I would like to share one of my favorite winter phenomena with you – the rare and beautiful parhelion! **Parhelion, or sundogs**, appear sometimes during biboon as bright spots on either side of Giizis/The Sun. The very first time I saw parhelion myself, I was visiting my sister in Fargo. It was -30, and we had just left the store. Over the parking lot, as the sun was setting, I noticed something in the sky – parhelion! It was wonderful to observe such a stunning and rare phenomenon. In fact, parhelion recently appeared over Minnesota during our most recent cold snap! Did you get a chance to see it?

The term parhelion originates from a Greek word, and means “beside the sun”. The term “Sundogs” is thought to refer to the way parhelion follow Giizis. I wondered if there is an Ojibwe term for parhelion, and consulted The Ojibwe Peoples Dictionary: **Wawaabishe’o** is the Ojibwe word for parhelion! This word includes word-parts that reference the sun having “bright ears”, which makes a lot of sense. Over the years, I’ve noticed that very bright and clear parhelion include rainbow colors. I’ve read that red is always closest to the sun, and blue/purple color is on the outermost edge – I wonder why that is? One of the things that I love about wawaabishe’o is that

explaining why we see them requires drawing from multiple science disciplines. Wawaabishe’o are just one of many atmospheric optical phenomena, and we are lucky to live in a place where we have the opportunity to observe them. I hope that you are staying warm, and are able to take some time to appreciate cold-weather phenomenon this season!

* You can learn more about Ojibwe language and access audio files of word pronunciation at [The Ojibwe Peoples Dictionary](#) – established by faculty at The University of Minnesota.

Minnesota Academic Standards in Science 2023 Legislative Session Updates:

The 2023 Minnesota Legislative session resulted in historic legislation being passed with regard to education – including changes to state statutes that directly impact K-12 science education. Listed below are legislative updates relevant to science education.

- Graduation Requirements: Minnesota Statutes 2022, section 120B.024, subdivision 1, has been amended by [Laws of Minnesota 2023, chapter 55, article 2, section 7](#).
- Academic Standards: Minnesota Statutes 2022, section 120B.021, subdivision 1 has been amended by [Laws of Minnesota 2023, chapter 55, article 2, section 4](#).

MDE released a guidance document focused on the legislative impacts on Minnesota Science Education, available on our [Academic Standards, Science page](#).

New Resource Available:

The [MDE Office of American Indian Education Canvas Course](#) – “Key Concepts and Terms” is now available for FREE! Additional courses are also in development.

- Educators who complete the course can receive one continuing education unit (CEU). This course is endorsed by the Professional Educator Licensing and Standards Board (PELSB) to count toward the cultural competency license renewal condition.

New Resource Available:

The National Academies of Science, Engineering and Medicine released a FREE practitioner guide: [Rise and Thrive with Science: Teaching PK-5 Science and Engineering](#). You can download a free PDF using your email.

MDE shares updates for all content areas in the Education Edition Newsletter - a monthly newsletter sent electronically by MDE with important Academic Standards information, research, and legislative

updates. [Subscribe to the Educator Edition Bulletin/Newsletter.](#)

MCA Science Assessment update

New questions have been added to the Minnesota Questions Tool for science! You can access the [Minnesota Questions Tool](#), and other helpful resources on our [Testing 1,2,3 website](#).

Applications Now Open for the National Youth Science Camp

Applications are now being accepted from high school juniors and seniors in the classes of 2024 and 2025 to represent Minnesota at the 2024 National Youth Science Camp (NYSCamp). Two students from each state, Washington, D.C., and select countries will attend the all-expenses-paid program, which will be held from June 29 through July 20, 2024 in West Virginia and Washington D.C. For more information about the program, please see <http://www.nyscamp.org>. Applications must be submitted online at <http://apply.nyscamp.org> by 11:59 PM ET on February 29, 2024

Contact Information

Angela Kolonich, Science Education Specialist | angela.kolonich@state.mn.us

Free resources for teaching how science works

[Decoding Science](#) is a free interactive resource from the National Academies of Sciences, Engineering and medicine. It’s all vetted by experts and ready to use in your classroom.

A 90-second video on how science works
Clear answers to challenging questions
Stories from real-life scientists
And more...

PLT “Explore Your Environment” K-8 Activity Guide Released

Project Learning Tree (PLT) released a new curriculum guide to engage kindergarten through grade 8 students in exploring their environment. Fifty field-tested, hands-on activities integrate investigations of nature with science, math, English language arts, and social studies.

Educators can obtain a copy of PLT’s Explore Your Environment: K-8 [Activity Guide](#) directly from [PLT’s Shop](#), from Amazon and other places where books are sold, or by attending a local PLT professional development workshop conducted by PLT’s 50-state network of 75 coordinators and 1,000 facilitators across the country. [Minnesota PLT site](#)

. Student Programs, Awards and

Competitions

Science and Engineering Competitions

- [Science Bowl](#) – middle and high school
- [Minnesota Science Olympiad](#) – middle and high school
- [Science and Engineering Fair](#) – middle and high school
- [FIRST Lego League](#), [FIRST Tech Challenge](#), [FIRST Robotics](#)- All grades
- [Supermileage Challenge](#) - High school
- [Real World Design Challenge](#) - High school
- [Toshiba/NSTA ExploraVision](#) - Classroom based for all grades
- [NSTA Angela Award](#) – girls grades 5 – 8
- [MN Scholars of Distinction](#) – high school
- [National Youth Science Camp](#) – two high school seniors are selected as MN delegates

Minnesota Programs and Competitions

Many competitions, out-of-school programs and field trip opportunities are listed in the [Reach for the Stars Catalog of Programs and Activities](#).

MDE Science Contacts:

Angela Kolonich, Science Content Specialist
angela.kolonich@state.mn.us

Jim Wood, Science Assessment Specialist
jim.wood@state.mn.us

Judi Iverson, Science Assessment Specialist
judi.iverson@state.mn.us

Sarah Carter, STEM and Computer Science Specialist
sarah.carter@state.mn.us

Send submissions for the Science Update to Angela Kolonich angela.kolonich@state.mn.us

Other Minnesota Links:

Minn. Dept. of Education [Science Page](#)

Minn. Science Teachers Association mnsta.org
[Frameworks](#) for MN Science and Mathematics Standards

Get – [STEM](#) Connections between schools and businesses

Mn-STEM STEM programs and [resources](#) for families, schools and communitySharing Environmental Education Knowledge environmental education [resources](#)

[Minnesota Academy of Science](#): Science Fair, Science Bowl and other competitions Mn DNR Education website: [Curriculum](#), [professional development](#), [posters](#), etc.

[Youth Eco Solutions](#) (YES!) – Statewide, youth-led program for hands-on eco related projects

M-ASCEND High School Teachers Cancer Curriculum Summer Program

The goal of this program is to support MN public high school teachers in the development of curriculum components about cancer biology, local health disparities, and STEM careers.

- Spend two weeks on the UMN East Bank campus (June 24 - 28 and July 8-12--participants must be able to attend both weeks) learning from researchers at the Masonic Cancer Center and Program for Health Disparities Research, touring facilities, shadowing researchers, gaining teaching resources, and trying out lab investigations for your students.
- Participants receive a \$3000 stipend (half at the start, half upon completion of the work).
- Teachers from outside the metro area can receive on-campus room and board for the program dates.

- Additional [information](#) and a [link to the application](#).

- The application closes on February 26, 2024.
- Contact Program Coordinator, Cathleen Drilling (cdrilling@umn.edu) with questions.

For anyone looking for more resources for teaching about cancer biology in their classes, [check out our education resources page](#).

Atomic Absorbtion Spectrometer Looking For New Home

The University of Minnesota has an atomic absorption spectrometer they are hoping to find a home for.

- It is a Varian SpectrAA 55B Atomic Absorption spectrometer (pictured above).
- The item has been in storage for 5 years but was in working order before then. No guarantee is made as to the current functionality of the unit.
- Click here to see the item: <https://mnexchange.org/#/listing/485035>

If you want to see what else is available, go to <https://mnexchange.org/#/listing>, create an account if you don’t already have one, and learn more details about how to get it. There may more than just those items you can use!

Please do not contact me about this. I have no experience getting equipment from this site but was contacted by the U of M to see if any educators could use this equipment.

Thanks for all the work you do to mentor the next generation of scientists and engineers!

Jennifer Hadley, Director of Operations

Squishy Science Sunday

Hosted by: Minnesota Science Teachers Association

When: Sunday, March 2, 2024 from 11am to 3pm

Where: TBD

Description: Squishy Science Sunday will entail an afternoon of hands-on activities, demonstrations, short talks, and opportunities to meet and talk to physicists one-on-one. The [March meeting](#) is the largest meeting organized by the APS. Squishy Science Sunday will invite families, students of all ages, educators, and the public to our meeting venue, a place usually inaccessible to them, to showcase and demystify Science at the research frontiers. If you would like to help put on this event (be a presenter or volunteer) please contact me (Jason Hall) and I can give you the additional information.

Go4St8 Physics Meeting

Hosted by: Go4St8

When: Saturday, March 9, 2024 from 9am to 12pm

Where: At Minnetonka High School and on Zoom

Description: Go4St8 is a free organization of physics teachers discussing topics for the classroom. They meet four times a year at Minnetonka High School and they also broadcast the meeting on Zoom. For March they will be going over Quantum for All curriculum which is incorporating quantum mechanics for your physics course.

MNAAPT Annual Meeting

Hosted by: MN chapter for AAPT

When: Saturday, April 27, 2024, 8:30am to 3pm

Where: University of St. Thomas, Frey Science and Engineering Center

Description: A one day conference where high school and college physics teachers can get together and share ideas. More information to come. Please visit <https://sites.google.com/view/mnaapt-info/home> for the latest updates.

If you know of any other great opportunities for physics, please don’t hesitate to email me I would like to share as much as possible.

Jason Hall

MnSTA Physics Representative

jhall@ahastars.org

Opportunities

Understand Native Minnesota Campaign

The Shakopee Mdewakanton Sioux Community, through its Understand Native Minnesota campaign, is hosting two free Educator Academy events on February 21 and March 14, from 8:30 a.m.-4:00 p.m. These one-day events offer professional development workshops to introduce K-12 educators to a variety of ways to teach Native American topics in classroom settings. They are intended for educators in Minnesota and will feature Native American authors, artists, and education experts. Continuing Education credits for teachers and administrators will be offered.

These events will be held at Mystic Lake Center in Prior Lake, Minnesota. Attendance is free of charge and meals (breakfast and lunch) will be provided. Each event is limited to 300 participants. These are the final Educator Academy events to be offered by the SMSC's Understand Native Minnesota campaign.

Please complete the form below to [register](#). Select one date as the content will be similar for each event. Please register only if you can commit to attending. You will receive more information about the day's agenda, presenters, and logistics by email.

2024 National Youth Science Camp.

Hosted in Monongahela National Forest in West Virginia since 1963, the National Youth Science Camp (NYSCamp) is a residential science, technology, engineering, arts, and mathematics (STEAM) program designed to honor and challenge some of the nation's rising leaders and provide them with opportunities to engage with STEAM professionals and participate in exciting outdoor activities.

The deadline to submit the [application](#) is 11:59 PM ET/8:59 PT on February 29, 2024.

Mini Monarch Essentials Course

Instructors: Monarch Joint Venture staff

Course Fee: \$50

Description: Mini Monarch Essentials is a 2-hour, self-paced online course that provides introductory knowledge of monarch butterfly biology, threats, and the effective conservation actions that you can take to help protect this iconic species and support thriving pollinator ecosystems.

[Register](#)





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Contact Us Today!

Opportunities-ESTEP

ESTEP Summer

Boot Camps for 6th Grade Teachers

SUMMER 2024 Boot Camps

Bemidji (June 17 - 21)

North Metro (July 8 - 12)

Rochester Area (July 22 - 26)

Register Here!

<http://bit.ly/47MQ8zD>

ESTEP Summer

Boot Camps for High School Earth Science Teachers

SUMMER 2024 Boot Camps

Physical Geology/Systems at Fond du Lac Tribal and Community College (June 17 - 21)

Meteorology and Climate at St.

Cloud State University (June 24 - 28)

Hydrology (Rocks and Waters) at

MSU Mankato (July 15 - 19)

NEW! Earth Systems at TBD


METRO AREA (July 22 - 26)

Register Here!

<https://bit.ly/3StJfih>



Funding for this project was provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR).




The Minnesota Science Teachers Association

Professional Learning Opportunities '23-'24

MnSTA is excited to announce our professional learning opportunities for members this school year. Highlights include:

- Monthly virtual offerings
- Tools to support NGSS
- Free for members
- CEU's available
- Come to all or any that fit your schedule

MAKING SENSE OF SCIENCE



Registration can be found at: [Mnsta.org](https://mnsta.org)

Once you are registered, you will be sent the zoom link for that meeting


Stay tuned In Depth, Content Specific Conversation Dates coming soon!

Questions: contact us at: jill.jensen@charter.net

Date and Time	Topic
September 14th 4:00 PM	How can I foster curiosity and learning in my classroom? Through talk!
October 12th 3:45 PM	How can I get my students to learn science by productively talking with each other?
November 16th 7:00 PM	How can I promote equitable sensemaking by setting expectations for multiple perspectives?
December 14th 4:00 PM	Practices should not stand alone: How to sequence practices in a cascade to support student investigations
January 11th 4:00 PM	Prompts for Integrating Crosscutting Concepts Into Assessment and Instruction
February 15th 7:00 PM	Engaging students in computational thinking during science investigations
March 14th 6:30 PM	Using Nature Journaling to identify meaningful local phenomena and support the infinite range of student sensemaking
April 11th 6:30 PM	Beyond "misconceptions": How to recognize and build on Facets of student thinking
May 9th 6:30 PM	Year-end wrap up, conversation with MnSTA leadership

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MnSTA Newsletter



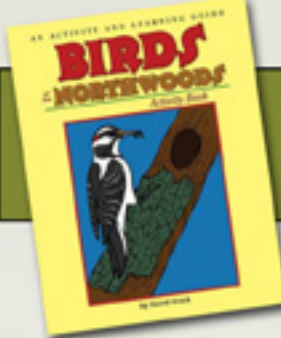
BIRDING INSTITUTE

Make science teaching and learning soar through local bird study

Kids young and old are fascinated by birds. Use birds to engage students in science content using 3-dimensional teaching as suggested by state and national standards throughout the year to develop students' ability to observe, investigate, and make claims from evidence, while learning outdoors!

Who: Teacher Institute for K-12 educators - Limit 15
What: FREE professional development by David Grack, Ed.D. Sponsored by Jeffers Foundation
When: Saturdays, April 13 & 20, 2024 8:00am - 4:00pm. Both dates - Lunch included
Where: McColl Pond ELC, Savage, MN
Registration/CEU's: Register at JeffersFoundation.org through April 5. Cancellations after April 7 are not refundable. Earn 20 CEU's. Option for additional CEUs discussed on April 13. Registration requires a \$25 deposit. Your fee will be returned upon completion.


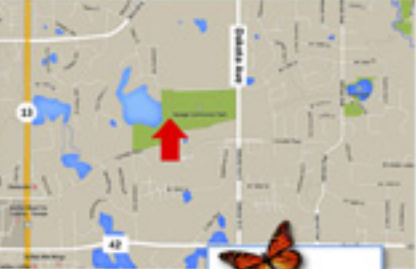
Ornithology, the scientific study of birds, provides real world science applications for teachers and students. Observation and investigation skills learned during bird study enhance student motivation to experience science both indoors and outdoors and apply science concepts to the natural world. Participants will strengthen their knowledge of local birds, connect science curriculum to ornithology content, examine tools and technology to be used with their students, and develop ideas to use both indoor and outdoor spaces to lead bird lessons throughout the year connected to grade-level science curriculum.



Participants receive a copy of *Birds of the Northwoods Activity Book* (Grack, 2007)

McColl Pond, ELC
Savage Community Park
13550 Dakota Avenue South
Savage, MN 55378

Questions - Contact:
david.grack@jeffersfoundation.org



Environmental Stewardship Through Education JeffersFoundation.org

Winter 2024

13



ATTENTION: SCIENCE TEACHERS GRADES 4–12!

Student scholarship opportunity for outdoor learning on the North Shore.

Thanks to funding partners, Wolf Ridge Environmental Learning Center, located in Finland, Minnesota, is offering scholarships to schools.

DOES YOUR SCHOOL QUALIFY?

Your school may qualify for scholarships at either the school-wide or individual student level. Scholarships can be used for tuition, lodging, and meals for 3 days/2 nights or 5 days/4 nights for students in grades 4–12, for groups from 15 to 350 people. School year and summer programming is available.

ABOUT WOLF RIDGE

Wolf Ridge is an accredited residential environmental school located on the North Shore featuring a nationally recognized curriculum that aligns with state academic standards, Common Core, and Next Generation Science Standards. Instructors involve students in the direct observation, inquiry, and exploration of wild forests, wetlands, lakes, and streams.

Features include:

- 2,000-acre classroom on the North Shore
- 68-acre field station on Lake Superior
- 18 miles of hiking and ski trails
- Multiple lakes and streams
- Dining hall with produce from our organic farm
- Indoor rock-climbing walls and outdoor ropes courses



INTERESTED?

Please reach out to Wolf Ridge K–12 Program Coordinator Emily Pavlisich (scheduling@wolf-ridge.org or 218-353-7414, ext. 107) with questions or to find out if your school is eligible for scholarships. Learn more at wolf-ridge.org/programs/educators/k-12-class-trips.



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LOOKING FOR SUPPORT FOR ELEMENTARY SCIENCE?

Minnesota Science Teachers
Association has an offer for you.



MNSTA IS OFFERING
A \$75 BUILDING
MEMBERSHIP TO
COVER ALL
TEACHERS IN YOUR
BUILDING

All teachers receive access to the monthly
newsletter and online resources as well as
member rate for the annual conference.

TO LEARN MORE:

Metro:
Lee.Filipek@district196.org

Out-state
kandy.nolesstevens@smsu.edu



The Minnesota Science
Teachers Association

It is our mission to:
stimulate, coordinate, and
improve science teaching
and learning for all.

Why Join MnSTA?

- Keep up with the latest
developments in science education



- Network with peers from around
the state

- Help us advocate for science
education at the district and state
level



Join at mnsta.org



Keep Your MnSTA Profile Up-To-Date


MnSTA does its best to keep you abreast of everything happening in science education in Minnesota. We do this via several outlets including:

- ❑ MnSTA Website www.mnsta.org
- ❑ Instagram @mnscienceteachers
- ❑ MnSTA Facebook and Twitter pages (@MnSTA1)
- ❑ Weekly Digest of postings (sent via email)
- ❑ Updates from MDE Science Specialist Angela Kolonich (newsletter)
- ❑ Quarterly Newsletter (availability announced via email)
- ❑ Occasional email messages to all members


The best way to make sure you are receiving email notices and all of the above information, please make sure that MnSTA has your correct email address, mailing address, and your permission to send this information to you. Your profile also contains information about your school, disciplines you teach, and the grade levels you work with. These can all be updated at any time.

You can update your MnSTA profile by going to the MnSTA website (www.mnsta.org) and logging in. Click on the My Profile link. You will then see links to Update Profile, Update Addresses, Update Photo, and Change Password. If you have any questions about this, please feel free to contact MnSTA.


MnSTA, Inc. is an IRS 501 (c) (3) Charitable Educational Corporation, incorporated as a tax exempt, non-profit organization with the Minnesota Secretary of State. Donations and dues are tax deductible charitable contributions for itemized deductions on IRS form 1040 Schedule A. The newsletter is an exempt program service provided to the membership. A membership form is found on the last page




Elizabeth
Cakebread
Region 1&2:
North West




Nikki
Ojanen
Region 3:
North East




Harrison
Aakre
Region 4:
West Central




Miranda
Graceffa
Region 5:
North Central




Amy
Blom
Region 6&8:
South Central
South West




Gwen
Isaacson
Region 9:
South




Missie
Olson
Region 7:
East Central




Mila
Velimirovich-
Holts
Region 11:
Metro



Kyle
Schwarting
Region 11:
Metro

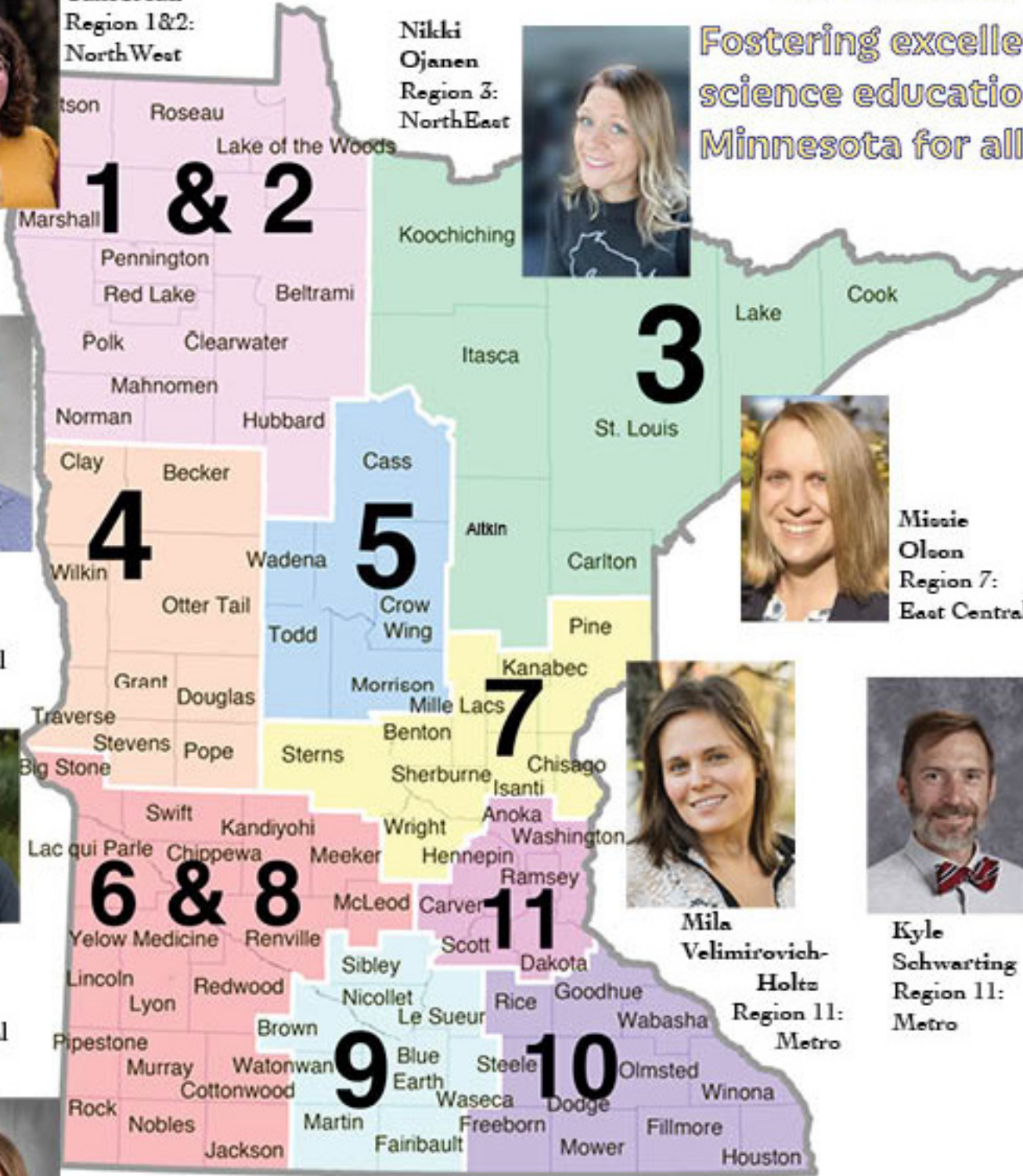


Kyle
Casper
Region 10:
South East



MnSTA
Minnesota Science Teachers Association

Fostering excellent
science education in
Minnesota for all!



MnSTA Board Directory

Below, you will find information about your MnSTA Board Members. The listing includes the board member’s school (or organization), mailing address, work phone, FAX number, and e-mail address. The board wishes to make itself as accessible as possible for our members. Please feel free to contact your discipline representative, regional representative, or executive board members if you have ideas, concerns, or wish to help with the mission or operation of MnSTA. We are always looking for members who wish to serve MnSTA as Board Members, Non-Board Service Chairs or Members, and as Committee Chairs or Members.

Executive Board:

Exec. Secretary	Karen Maier	St. Cloud Area School Dist. 472	1000 44th Ave N. St. Cloud MN 56303
	320-370-7958	karen.maier@isd742.org	
President-Elect	Haley Kalina	Alexandria Public Schools	510 McKay Ave N. Alexandria, MN 56308
	320-762-7900	haleykalina@gmail.com	
President	Jill Jensen	Scott Highlands Middle School	14011 Pilot Knob Rd. Apple Valley, MN 55124
	952-423-7581	president@mnsta.org	
Treasurer	John Olson	Metropolitan State Univ.	700 E. 7th St. St. Paul, MN 55107
		treasurer@mnsta.org.	
DOE Science Specialist	Angela Kolonich	angela.kolonich@state.mn.us	

Discipline Directors:

Biology	Michelle Housenga	Minneapolis Washburn HS	201 West 49th St. Minneapolis, MN 55419
	612-720-5705	Michelle.housenga@mpls.k12.mn.us	
Earth Science	Dana Smith	Bemidji Middle School	1910 Middle School Ave. NW Bemidji, MN 56601
	218-333-3215	dana_smith@isd31.net	
Chemistry	Shelly Munoz	Pierz Healy HS	112 Kamnic St. Pierz, Mn 56364
	320-468-6485	ShellyMunoz316@gmail.com	
Elementary/Greater MN	Robin Knutson	Forestview Middle School	12149 Knollwood Dr. Baxter, MN 56425
	218-454-6123	robin.knutson@isd181.org	
Elementary/Metro	Kelli Ellickson	Cedar Park Elementary STEM School	7500 Whitney Dr. Apple Valley MN55124
Higher Ed	Vacant		
Informal Ed	Caitlin Potter	Cedar Creek Ecosystem Science Reserve	2660 Fawn Lake Dr. NE E. Bethel 55005
		caitlin@umn.edu	
Alternative Ed.	Jess Paulson	Sciences Academy	8008 83rd St. NW Maple Lake, Mn 55358
	952-852-0129	jpaulson@jgesa.org	
Physics	Jason Hall	Academy of Holy Angels	6600 Nicollet Ave. Richfield, MN 55423
		jhall@ahastars.org	
Indigenous Science	Hillary Barron	Bemidji State University	1500 Birchmont Dr. Bemidji, 56601
	218-428-2689	hilliary.barron@bemidjistate.edu	
Private Schools	Open		

Region Representatives:

Region 1&2: North	Elizabeth Cakebread	Ada-Borup-West School	604 W. Thorup Ave. Ada, MN 56510
	218-784-5300	elizabethc@ada.k12.mn.us	
Region 3: Northeast	Nikki Ojanen	Cloquet Middle School	2001 Washington Ave. Cloquet, MN 55720
	218-879-3328	nojanen@isd94.org	
Region 4: Westcentral	Harrison Aakre	Alexandria Area High School	4300 Pioneer Rd. Alexandria, MN 56308
	haakre@alexschools.org		
Region 5: Northcentral	Miranda Graceffa	Crosslake Community School	36972 Cty Rd 66 Crosslake, MN 56442
	218-330-6154	mgraceffa@crosslakekids.org	
Region 6&8 Southcent	Amy Blom	Edgerton Public	423 1st Ave. W. Edgerton, MN 56128
	507-442-7881	ablom@edgertonpublic.com	

MnSTA Board Directory

Region 7: Eastcentral	Missie Olson	Becker High School	12000 Hancock St. Becker, MN 55308
	320-274-3341	molson@isd726.org	
Region 9: South	Gwen Isaacson	Loyola Catholic School	145 Good Counsel Dr. Mankato, MN 56001
		gisaacson@loyolacatholicschool.org	
Region 10: Southeast	Kyle Casper	Rochester Public Schools	615 7th St. SW Rochester MN 55902
Region 11: Metro	Vacant		
Region 11: Metro	Kyle Schwarting	ISD 196	3455 153rd St. W Rosemount, MN 55068
	651-423-7740	kyle.schwarting@district196.org	

Ancillary Positions:

Database	Mark Lex	marklex@umn.edu	
Webmaster	Eric Koser	Mankato West H.S.	1351 S. Riverfront Dr. Mankato, MN 56001
	W: 507-387-3461 x 322	F: 507-345-1502	webmaster@mnsta.org
Newsletter	Jerry Wenzel	jerrywenzel@brainerd.net	
Social Media Coord.	Dan Voss	dcvoss1@gmail.com	

NSTA Dist. IX Director	Angela Osuji	Washburn High School	201 W 49th St. Minneapolis, Mn 55419
	612-668-3400	Angela.Osuji@gmail.com	
Conference Coordinator	Eric Koser	Mankato West H.S.	1351 S. Riverfront Dr. Mankato, MN 56001
	W: 507-387-3461 x 322	F: 507-345-1502	e: ekphys@gmail.com

Events Calendar

If you have events you want placed on the calendar, send them to the editor - see page 2 for deadlines, address, etc.

Conferences / Workshops

MnCOSE ‘24: Nov 1-2, 2024 St. Cloud

MnSTA Membership Application Form

Join the Minnesota Science Teachers Association (MnSTA), the professional organization whose primary goal is the advancement of science education. Mail this form along with your check to:
MnSTA Treasurer, 24405 Iceland Path, Lakeville, MN 55044

Home

Name (First, MI, Last)

Address

City

State

Zip code

Phone number

Preferred email address

Second email address

School/Organization

Name

Address

City

State

Zip code

Phone number

School district #
(enter "P" if Private, "A" if Alternative, "C" if Charter)

Rates

- ☐ Basic Membership\$25
- ☐ First Year Teacher\$15
- ☐ Retired Teacher\$15
- ☐ Pre-service Student.....\$10
- ☐ Elementary School Building\$75
Includes all teachers in the building
- ☐ Life Membership: to age 35\$400
- age 36-50\$300
- over 50\$200

☐ New Member ☐ Renewing/Past Member

A joint MnSTA - NSTA membership is available through NSTA (<https://www.nsta.org>)

Discipline and Grade Level

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Biology <input type="checkbox"/> Chemistry <input type="checkbox"/> Earth Science <input type="checkbox"/> Environmental Sci <input type="checkbox"/> Life Science <input type="checkbox"/> Physical Science <input type="checkbox"/> Physics | <ul style="list-style-type: none"> <input type="checkbox"/> Elementary (PreK-2) <input type="checkbox"/> Elementary (3-6) <input type="checkbox"/> Middle/Jr. High School (6-9) <input type="checkbox"/> High School (9-12) <input type="checkbox"/> College/University <input type="checkbox"/> Informal Ed |
|--|--|

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Privacy Information

Who can view your School/Organization Profile? ☐ Members ☐ Administration only

MnSTA keeps you informed about the events and issues impacting science education in Minnesota through its website and an email Digest of those website postings, and periodic informational emails.

Do you consent to receive email communications from us? ☐ Yes ☐ No

Teacher Leadership

☐ Please contact me regarding additional involvement and/or potential leadership opportunities with MnSTA