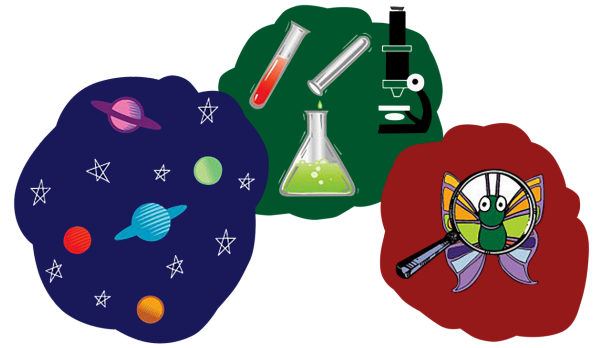


SWWC Service Cooperative presents the 31st Annual

SCIENCE & NATURE CONFERENCE



May 13, 2025 | For all students in grades K-8

Held at Southwest Minnesota State University, Marshall, MN

Science gives an investigative way to find answers to questions we had as a kid, so let's help our kids nurture their inner scientist. The Science & Nature Conference provides inspiration for kids to develop skills needed to understand the world around them. These hands-on learning and demonstration sessions give students a chance to explore science in a way they may not have seen before.

REGISTRATION

Who can register:

- School teachers register groups of students and their chaperones.
- Parents register their students and themselves.

Online Registration Deadline:

April 8, 2025, at midnight.



www.swwc.org/sn



SWWC
STUDENT ENRICHMENT

Contact: Andrea Anderson,
Student Enrichment Coordinator

 507-537-2257

 www.swwc.org/sn

 andrea.anderson@swwc.org

CONFERENCE INFORMATION

General Registration

- Available to students in grades K-8
- Register Online: www.swwc.org/sn
- All attending adults must be registered online.
- There is no student/adult ratio at this time.
- Not required but prefer contact person be an attending adult.

School Participants

- Schools attending are responsible for collecting and entering registrations. Payments can be made online or see billing option below.
- If your school is unable to attend, direct parents to the website for access to conference information, giving them the chance to attend on their own.
- Please make sure parents sending students with the school are aware of the cancellation policy.
- School district funding may be available to support teacher and student participation in SWWC enrichment programs through MINNESOTA GIFTED AND TALENTED REVENUE MN Statute § 126C.10 2(b).

Parent Participants

- Parents do not have to attend with their school. They may attend on their own as a family.
- An adult must be registered along with students.
- If a parent misses the school registration deadline, they can still register and attend on their own.
- Check with your school to see if they are participating as a school group.

Registration Fees and Deadlines

Registration Deadline: **April 8, 2025, at midnight**

- \$40/per student
- \$10/per adult

Payments

- Parent payments are made at the time of registration with Credit Card. Payments go through WePay.
- Schools can pay with Credit Card.
- Or a school can be billed after the event if they would like. Contact us prior to registering for a billing code.

Lunch

- Bring your own lunch – refrigeration not available.
- Campus cafeteria is closed for the school year.
- Check with your school about the sack lunch program.
- Place lunches in containers or coolers and label with school/parent name.

Supplies

- Supplies are provided for students at the conference, unless otherwise mentioned in the session description.

Sessions

- The conference features an opening keynote and three, one hr. hands-on learning sessions for students.
- Students choose six session options (**grade appropriate**) and are later scheduled into three sessions that fit their schedule.
- Select sessions in the order of preference.
- Choices selected by student **DOES NOT** represent their final schedule.
- The student's final schedule is based on session demand & session sizes; therefore, **we cannot guarantee students will be assigned all requested topics.** We do our best to give them as many of their choices as we can.
- We retain the right to limit the number of students per district in a specific session.
- A session may be canceled due to the number of students registered. Or a session may be added if needed.

Conference Details

- Conference information is on www.swwc.org/sn
- A few days before the event, or as soon as it is ready, the **final schedule** and other information will be emailed to the person's email on the registration.
- Please share information with chaperones/parents.
- Chaperones/parents are responsible for educating themselves on the Conference information and the cancellation policy.
- Contact person will need to check in and pick up group packet the morning of the conference.

Book Fair - Commuter Lounge (BA Bldg.)

- Paper Pie will run a book fair all day.

Students with Special Needs

- The SWWC Service Cooperative, in accordance with the Americans with Disabilities ACT (ADA), is dedicated to making conference activities accessible to all students. Please contact Andrea for special accommodations by **April 8, 2025.**

Cancellation and Refund Policy

- Cancellation requests must be received by the final registration deadline for a refund, less a \$10/student service charge.
- After the deadline, no refunds will be processed.
- If a student is unable to attend, try to send someone in their place and notify us of the change.



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www.swwc.org/sn

AGENDA AND KEYNOTE

AGENDA

8:00 am - 9:00 am	Check-In, Refreshments
9:00 am - 9:15 am	Welcome
9:15 am - 9:45 am	Keynote
10:00 am - 11:00 am	Session I
11:00 am - 11:45 am	Lunch
11:45 am - 12:45 pm	Session II
1:00 pm - 2:00 pm	Session III
9:00 am - 2:00 pm	Book Fair (in BA Lobby)

KEYNOTE SPEAKER



Dr. Tyronne Carter America's Fun Science

Dr. Tyronne Carter, "Dr. Fun," is the Director of Marketing and Curriculum Design for America's Fun Science, which presents hands-on science enrichment activities and STEAM programs to schools, nonprofits, libraries, preschools, community education, scouting organizations and parents throughout the Twin Cities and surrounding areas. Tyronne is a licensed, experienced K-8 science teacher, licensed K-12 principal, certified STEM instructor, and a member of both the National Science Teaching Association and American Society for Engineering Education. He is also a published children's book author and member of the Minnetonka Rotary. America's Fun Science programs, which include utilization of the engineering design process, help promote team building, leadership, self-confidence, creativity and joy...and make science FUN!
www.americasfunscience.com

SESSION DESCRIPTIONS

Select sessions appropriate for student's grade level K-2, 3-5 or 6-8

A. Geo-caching with GPS

Gr. 3-5 & 6-8

It's treasure hunt time! However, your only clues to finding the loot are a bunch of numbers. What's a treasure-hunter to do? Learn how to plug those numbers into a Global Positioning System (GPS) and follow it to the cache! You will learn to perform basic GPS functions and then put that knowledge to the test and see if YOU can find the hidden treasure!

***Chloe Bauler, Prairie Ecology Bus Center**

B. Greenhouses and Gardens

Gr. K-2, 3-5 & 6-8

Learning how to grow your own plants. This session will introduce students to a jungle of plants! It will include a tour of the university greenhouse, where a wide variety of plants both native and tropical are grown. Students will be able to see, smell, and touch some of these plants while learning about the amazing abilities and uses plants have around the world. Students will then have the opportunity to create and plant a mini garden to take home and watch grow! ***Kirsten Brichler, SMSU**

C. Nursing 411 & Health Careers

Gr. K-2, 3-5 & 6-8

Learn about all the positions that help the big doctors, dentists, surgeons, & pharmacists. Get hands on with positions like nursing, surgical technicians, dental assistants, lab technicians, x-ray technicians and more. We can show you options, so higher education doesn't have to be for 8 or more years. See what you can do that is exciting in the health care field.

***Toni Brouillet, MN West**

D. Junior Crime Scene Investigator

Gr. 6-8

Do you enjoy CSI or forensic investigation shows? In this session you will learn how police use forensic science to bolster their investigations and solve crimes. Students will have the opportunity to collect DNA and latent print evidence. ***Jason Buysse, Marshall Police Department**

E. Balloon Rocket Car Fun

Gr. 3-5

America's Fun Science and Dr. Fun presents an introduction to basic rocket theory, wheel and axle design and construction in a fun, hands-on setting. Learn about Newton's Third Law and its application to balloon rocket car design as you assemble your own colorful rocket car and race to the finish! Then take your Balloon Rocket Car home to impress friends and family. Plus, one copy of our new children's book "Girls Know STEM Too, Tyronne" will be raffled off in each class! Our programs help promote team building, leadership, self-confidence, creativity and joy. We make science FUN! ***Dr. Tyronne Carter, America's Fun Science**

F. Un-Mixing Colors

Gr. 3-5

Everybody knows how to mix colors, but can you UN-mix them? We'll use art markers, filter papers, and dihydrogen monoxide to see how many colors are mixed in markers using a process called chromatography. It's both science and art! ***Chemistry Club, SMSU**

G. Virtual Cadaver Anatomy Exploration

Gr. 6-8

We will use the virtual cadaver to explore the human body, see systems in action, and also explore anatomy of a monkey! ***Kris Cleveland, SMSU**

H. Growing Plants on Mars

Gr. K-2, 3-5 & 6-8

While no "soil" samples have been returned to Earth, information gathered by Martian rovers have given scientists a good idea of what the characteristics are of what the ground cover is like. Come learn more about the challenges of feeding humans on Mars and set up your own science experiment to find out how the regolith, which is the name of the ground cover that is on Mars, will or will not support plants to grow food.

***Stephanie Dejaeghere, Lyon County Environmental Dep.**

I. Invent an Ecosystem

Gr. 3-5 & 6-8

Students will create miniature dioramas of aquatic ecosystems, while learning about the species that inhabit Minnesota's lakes and rivers. Preserved specimens from the museum will provide a way for students to interact with native wildlife, while understanding the importance of scientific data collection. ***Hugh Gabriel & Megan Raschka, Bell Museum**

J. Batteries, Bulbs and Wires

Gr. K-2 & 3-5

After a simple primer on circuits, students get a giant pile of—you guessed it—batteries, light bulbs, wires and fun gadgets. The challenge? To build anything and everything from the simplest of circuits to complex creations. Easily scalable for any level, this is the perfect blend of circuitry and inquiry to leave students wired for discovery. Please note, this workshop focuses more on exploration and less on explanation, so the educator will spend more time working with small groups than presenting content.

Bakken Museum Educator

K. Moving Right Along

Gr. 2, 3-5 & 6-8

Nothing stays in one place in space and that includes our planet, Earth! Students will learn how Earth is constantly spinning and revolving around the Sun, how this changes life on Earth through the year, how it changes our view of the stars through the year, and what constellations are currently visible. ***Kylie Holdorf, Prairie Ecology Bus Center**

L. Wonder of Wind Power

Gr. 3-5 & 6-8

Discover the power of the wind in this hands-on Wonder of Wind Power session! Kids will explore how wind turbines generate electricity and then build and test their own mini wind turbine to see renewable energy in action. ***Sam Jens, Minnesota 4-H**

M. Oil, Water and Art

Gr. K-2, 3-5 & 6-8

What happens to oil when mixed with water? Science & Art! We will explore the properties of oil and water. Then we will see how they mix as we create a work of art using oil pastels and watercolor paints.

***Stacy Johnson, Redwood County 4-H**

N. Who Eats What?

Gr. K-2, 3-5 & 6-8

Join the Sioux Falls Zoo and Aquarium to explore what wild animals like to eat. We will investigate with both live animals and animal artifacts to find out where they fit into the food web. Herbivores, omnivores, and carnivores will be our special guests as we explore the levels of eating in an ecosystem.

***Jackson Kasprzak, Sioux Falls Zoo & Aquarium**



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SESSION DESCRIPTIONS CONT.

Select sessions appropriate for student's grade level K-2, 3-5 or 6-8

O. Let's Play in the Sandbox

Gr. 3-5 & 6-8

We will break down the materials used in our Highways by using a virtual Augmented Reality (AR) Sandbox. You will have augmented micro-reality at your fingertips. Learn topography, geography, natural sciences, watershed, and computer sciences. *Jeff Madsen - MN DOT

P. Plant Journals

Gr. K-2, 3-5 & 6-8

Get ready to draw scientific sketches on what you see in this class about plants! We will discuss the different parts of plants and how to identify them, while learning some quick drawing and textural art skills!

*SammyJo Miller

Q. Build a Bridge

Gr. 3-5 & 6-8

Can you build a bridge that will hold you? Students will work in teams to build a 6-foot-long truss bridge. Each team will have people acting in different roles, just like in a real construction project. You'll build the bridge, test it, crawl through it, and dismantle it! Learn about the different force's engineers must design for, and how they play out in a real bridge that carries traffic (you!). *Licensed Engineer, MnDOT

R. Raptors of Minnesota

Gr. K-2, 3-5 & 6-8

Come and meet live raptors from the University of Minnesota Raptor Center and learn about what makes a bird a raptor, the importance of raptors in our environment and what you can do to help these beautiful birds. Out of respect for our birds we will not be touching the birds, but by touching and feeling feathers, wings and feet you can ignite your sensory exploration.

*Judy Moran, University of MN Raptor Center

S. Who Gives a Hoot?

Gr. 3-5 & 6-8

From silent flight to night vision, owls have amazed humans for centuries with their unique abilities. You will have the opportunity to take a closer look at the diet of owls through a hands-on owl pellet dissection. Get ready to shed some light on our favorite nighttime hunters with the Blue Mounds State Park naturalists.

*Tiffany Muellner, Blue Mounds State Park

T. Searching for Planets Around Other Stars

Gr. 3-5 & 6-8

This session will take students on a journey into space to explore planets orbiting distant stars. How many might there be? What are these distant worlds like? We will answer some of the most pressing questions surrounding "exoplanet" systems in our galaxy using the immersive technologies of the planetarium.

*Ken Murphy & Pascal Sawad, SMSU Planetarium

U. Cryogenics

Gr. K-2, 3-5 & 6-8

The Amazing Science of the Ultracold! We will use extremely low temperatures to explore the behavior of solids, liquids, and gases. Observe the unusual behavior of common materials and objects when exposed to a very cold environment.

*Jeff Payne & Chuck Stanley, 3M Visiting Wizards

V. LEGO Robotics

Gr. 3-5

Come build and experiment with engineering! Together in teams, we will construct LEGO models and program them to move. We will learn more about the building blocks of STEM!

*Crystal Reith, Cottonwood Cty 4-H

W. Heartbeat Detective

Gr. 3-5 & 6-8

Journey Inside the Human Body! The heart is a super important organ that helps our body get the oxygen and nutrients it needs. It also helps get rid of waste, like carbon dioxide. In this session, you'll learn all about how the heart works and how to measure your heart rate and blood pressure. Plus, you'll get to create and test your very own experiment with what you've learned! *Jordana Runck & Heidi Tarus, MN West College

X. Slimey Slime Time

Gr. K-2, 3-5 & 6-8

Slime is so much more than a messy toy. Polymers are everywhere in our lives, in work and in play! Using simple and safe ingredients found in every home, we will explore how polymers work all while experimenting with unique slime recipes to make and take home!

*Melanie Schmidt, Mankato Community Ed/Rec

Y. Sunny Circuits

Gr. 5 & 6-8

Come learn about solar power and participate in putting together your own solar circuit! You will measure volts and amps utilizing a multimeter. Finally, you will learn about the jobs solar energy creates in Minnesota!

*Logan Schrader, MN State Energy Center

Z. Say Cheese!

Gr. K-2, 3-5 & 6-8

The How and the Why of Cheesemaking! Ever wonder how cheese is made? How one of the greatest staples of modern cooking went from transforming goats' milk in the desert to its modern form? Then come experience the science of cheesemaking where you'll learn what it takes to transform milk into cheese! *Ben Swanson, AURI

AA. Grossology

Gr. K-2, 3-5 & 6-8

Sometimes the most interesting pieces of nature can also be termed "gross!" You'll discover cool things such as how that awful skunk smell is an amazing defense tool and the slime used by slugs is fascinating transportation! Plus, by getting the scoop on poop, you will learn that scat is where it's at! And finally, a grossology course just wouldn't be complete without a little blood and bugs. By the time you're done, we will hopefully have changed your "ewwww's" and "aaackk's" to "oooh's" and "aaahh's."

Alisha Paplow, Prairie Ecology Bus Center



Photos, Videos, & Media

By participating in this event, you are giving SWWC permission to use any audio/video recordings and photographs that are taken during the event.



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MEET YOUR PRESENTERS

Chloe Bauler

Chloe has recently joined the Ecology Bus as a naturalist. She enjoys teaching about nature and showing how to incorporate the use of technology into learning and enjoying the outdoors. www.ecologybus.org

Kirsten Brichler

Kirsten is the greenhouse manager and agronomy professor at SMSU. Whether it's planting and caring for a variety of native and tropical greenhouse plants or teaching students about growing crop plants, most days she deals with many plants! Kirsten also has a variety of plants at home and tries to grow a vegetable and herb garden every summer.

Toni Brouillet

I am the health careers navigator for Minnesota West community & Technical College. I help with educating all age groups about the different health care fields that we offer. I have been with MN West for over a year and was a presenter last year at this event and had a ton of fun. <https://www.mnwest.edu/>

Jason Buysse

Detective Sergeant Jason Buysse has worked for the Marshall Police Department since 1998 and has worked in the Detective Division since 2014. Sgt. Buysse has successfully completed the Minnesota Bureau of Criminal Apprehension's Investigative Certificate Program which included the crime scene course and is experienced in processing crime scenes for physical evidence.

Dr. Tyrone Carter, "Dr. Fun,"

See keynote page. www.americasfunscience.com

Chemistry Club, SMSU

The SMSU Chemistry Club has historically done a lot of outreaches. We perform demonstration shows & make ice cream using liquid nitrogen. We also work with smaller groups that come to campus doing a variety of hands-on activities. Occasionally, we take our show on the road & travel to area schools for reaction shows & hands-on activities. We enjoy sharing our enthusiasm for science & trying to inspire future scientists!

Kris Cleveland

Dr. Kris Cleveland, Professor Exercise Science, Doctor of Physical Therapy.

Stephanie DeJaeghere

Stephanie is an Environmental Technician/Education Coordinator who has been a Master Gardener for over 30 years.

Hugh Gabriel & Megan Raschka

Bell Museum Statewide Educators, Hugh and Megan, lead virtual trips, and astronomy shows inside the ExploraDome, the traveling planetarium. They are nature enthusiasts whose interests range from prairies, frogs in Madagascar and hiking at all of the national parks. Sign up to catch this dynamic duo in action!

<https://www.bellmuseum.umn.edu/statewide-engagement/>

Bakken Museum Educator

The Bakken Museum's education programs provide a supportive environment for kids to learn science, technology, engineering, and math concepts, try out tools, and unleash their inner innovators. In each session, expert educators and volunteers provide guidance and room to fail to foster a growth mindset in all participants. <https://thebakken.org/group-programs>

Kylie Holdorf

Kylie has been a naturalist with the Ecology Bus Center for three years and enjoys teaching about the outdoors. One of her favorite topics is the night sky and the constellations you can find.

www.ecologybus.org

Sam Jens

I have worked in youth development leading 4H in Lyon County since 2016. I work with youth to discover the world of STEM and natural sciences through 4H and community ED programs.

<https://extension.umn.edu/local/lyon>

Stacy Johnson

I work in Redwood County with our 4-H members, schools, and community groups. I LOVE science and exploring everything science can do.

<https://extension.umn.edu/local/redwood>

Jeff Madsen

Jeff is an engineer for MnDOT who plans, builds, operates, and maintains a safe, accessible, efficient, and reliable multimodal transportation system that connects people to destinations and markets throughout the state, regionally, and around the world. <https://dot.state.mn.us/>

Jackson Kasprzak

Jackson Kasprzak got his start in Interpretation working as a Naturalist Intern at Adams Homestead and Nature Preserve State Park in South Dakota in 2022. He began his position working with the Great Plains Zoo as an Education Specialist in the fall of 2024. He enjoys hiking, exploring national parks and canyon drives. Specialists travel around the tri-state area providing educational programs to people of all ages. We travel with reptiles, mammals, birds and even amphibians to help people learn more about animals and the natural world. www.greatzoo.org

MN DOT Engineer

The Minnesota Department of Transportation recognizes the need to develop a diverse and talented workforce to fulfill our vision of creating a safe, efficient and sustainable transportation system for the future. Our goal is to provide high quality activities and initiatives to help promote science, technology, engineering and mathematics from kindergarten through 12th grade. <https://dot.state.mn.us/>

SammyJo Miller

SammyJo is an artist who works all over the state of Minnesota. She has experience collaborating with biologists to develop scientific plant catalogs and enjoys painting plants for fun! For more information about Miller's art visit: www.sjmillierarts.com

Judy Moran

In my role as Interpretive Naturalist at The Raptor Center I enjoy connecting people to the natural world through the beautiful birds known as raptors. In my spare time I enjoy spending time with family, hiking and camping. theraptorcenter.org

Tiffany Muellner

I am the naturalist at Blue Mounds State Park. I lead the prairie and bison tour operation as well as all the other programs at the park. I am a huge nature nerd and enjoy traveling to new places to go hiking and birding.



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MEET YOUR PRESENTERS

Ken Murphy

Ken Murphy is a professor of physics and the planetarium director at SMSU. One of his hobbies is learning astronomy and doing night sky observations. He also enjoys computer modeling and animation.

www.smsu.edu/planetarium

Jeff Payne & Chuck Stanley

Jeff & Chuck have been doing 3M Visiting Wizards demonstrations for over 15 years and have collectively presented to over 100,000 students and adults. Jeff is a retired analytical chemist; Chuck is a retired mechanical engineer. https://www.3m.com/3M/en_US/company-us/visitingwizards/

Crystal Reith

Crystal Reith has served as the Cottonwood County 4-H Extension Educator for the past 18 years. She enjoys programming that involves hands-on application and exploration. She has a passion for photography, livestock and baking.

Jordana Runck & Heidi Tarus

Jordana Runck and Heidi Tarus are biology instructors at Minnesota West Community & Technical College. Together they have 30 years of biology teaching experience. <https://www.mnwest.edu/>

Melanie Schmidt

Melanie is the Enrichment Coordinator with MAPS Community Education. She is involved in a variety of youth initiatives sponsored by the Minnesota Service Cooperatives.

Logan Schrader

Logan has a background in higher education, student development, and communications, serving in various roles since 2014. He came to the Energy Center in March of 2022 with his primary role including social media, website management, communications, and outreach. He is also currently helping educators bring Energy into their classrooms. <https://www.energycareersminnesota.org/>

Ben Swanson

Ben is in charge of AURI's Meat Lab and Food Product Evaluation and Sensory Laboratory where he offers technical support to clients to help commercialize their products as well as works on larger, stakeholder driven initiatives to add value back to Minnesota agricultural products. auri.org

Alisha Paplow

Alisha has been with the Prairie Ecology Bus Center for 17 years. She enjoys sharing nature with other and teaching them that things aren't as gross as they may seem. www.ecologybus.org



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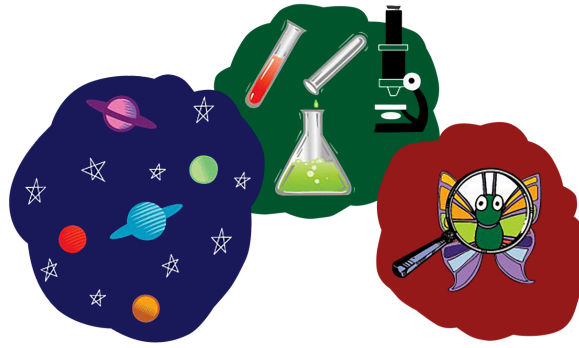


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SWWC SERVICE COOPERATIVE



OUR PARTNERS

ADM

**Southwest Minnesota Arts Council
Southwest Initiative Foundation
Carr Family Foundation
United Way of Southwest Minnesota**

Schwan's Company

**Southwest Minnesota Workforce
Development Board
Monogram Foods Loves Kids Foundation**

For the full list of partners go to www.swwc.org/foundation



www.swwc.org/sn



Changes Needed?

Please notify us of any changes in your contact info or if you need to be removed from our contact list.

SWWC
STUDENT ENRICHMENT

Contact: **Andrea Anderson,**
Student Enrichment Coordinator

 507-537-2257

 www.swwc.org/sn

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