

Science & Nature Conference Payment Coupon

Please duplicate as necessary.

All registrations must be placed online. This is for payment purposes only.

Please write "Science & Nature Conference" and your student's name on your check before attaching this payment coupon to receive proper credit.

Name of Student _____

District _____ School _____

Grade: ___(3-4)___(5-6) School Contact _____

Name of Parent/Guardian _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Please send payment coupon and check payable to:

South Central Service Cooperative
Attn: Mary Hillmann
2075 Lookout Drive
North Mankato, MN 56003

Registration Fee (Oct. 12 or when filled): \$27. Late Registration Fee (Oct. 13-19): \$37.

Science & Nature Conference

Tuesday, October 23, 2018

Gustavus Adolphus College, St. Peter

Registration Fee (By Oct. 12 or when filled): \$27

Late Registration Fee (Oct. 13-19): \$37.

Students and Chaperones Must Register Online: www.mnscsc.org.

Click "EVENTS & REGISTRATION"

Students: Select "Science & Nature
STUDENT Registration"

Chaperones: Select "Science & Nature
CHAPERONE Registration"

Payment options: Online when you register
or by check.

Adults attend free. Seating may not be
available in all sessions.

The planning form below will help students to list session choices before going **online to register**. If you do not see your session listed online, it is full. Please choose another session. Be sure to keep your e-mail confirmation listing your conference schedule. If you experience a problem with registration or **do not receive a registration confirmation** within 24 hours of registration, please email mhillmann@mnscsc.org. Please note: You may need to check your spam or junk folder for your confirmation email.

Online Registration Planning Form

1st choice session #: _____ Title: _____

2nd choice session #: _____ Title: _____

3rd choice session #: _____ Title: _____

4th choice session #: _____ Title: _____

5th choice session #: _____ Title: _____

*This is not a valid registration.
You must register online.*

SCSC reserves the right to add/change sessions or substitute presenters as necessary.



SCSC SCIENCE & NATURE CONFERENCE
OCTOBER 23, 2018
GUSTAVUS ADOLPHUS COLLEGE, ST. PETER, MN

Science & Nature Conference
Oct. 23, 2018
Grades 3–6

Grade 3–4 Conference Schedule

8 a.m.–8:50 a.m.	Check-in (<i>Alumni Hall</i>)
9 a.m.–9:55 a.m.	Session 1: Opening Program
10:05 a.m.–11 a.m.	Session 2
11 a.m.–11:30 a.m.	Lunch (<i>Alumni Hall</i>)
11:35 a.m.–12:30 p.m.	Session 3
12:40 p.m.–1:35 p.m.	Session 4

Grade 5–6 Conference Schedule

8 a.m.–8:50 a.m.	Check-in (<i>Alumni Hall</i>)
9 a.m.–9:55 a.m.	Session 1
10:05 a.m.–11 a.m.	Session 2
11 a.m.–11:30 a.m.	Lunch (<i>Alumni Hall</i>)
11:35 a.m.–12:30 p.m.	Session 3
12:40 p.m.–1:35 p.m.	Session 4

All students in grades 3–4 attend an opening session and then proceed to their three selected sessions. **Students in grades 5–6 will select four sessions** to attend throughout the day (no opening program). Sessions are handicap accessible. Please contact us at mhillmann@mncsc.org to indicate any special requirements.

Please note: Some sessions may contain latex.

Grades 3–4 Opening Program with Mike Lynch Backyard Astronomy: Make the Stars Your Old Friends

Get to know all about the solar system, galaxy and universe and learn how to explore it all from your backyard! Learn how to use star maps and get to know the constellations and all the adventures that launched them into the sky. Have a chance to use a large telescope for daytime stargazing and make the stars your old friends!



Things to Remember:

- **All registrations must be made online.** Register early for the sessions of your choice — sessions will be filled and confirmed on a “first come, first serve” basis.
- Registration deadline: Oct. 12 or when filled. Cost: \$27/student.
- Late registration: Oct. 13–19. Cost: \$37/student. Please note, online registration will close Oct. 19. Walk-in registration may be available on Oct. 23 at the conference with limited session availability.
- Schools/families must provide and register their own chaperones. All adult leaders participate in the conference free of charge. Seating may not be available in all sessions. Chaperones may attend sessions as space allows.
- The sessions are located in various buildings on the Gustavus Adolphus Campus. Please dress according to the weather as you will need to travel to different buildings throughout the day.
- Everyone is responsible for bringing their own lunch and beverage. Lunch will not be provided and will not be available for purchase.
- Please write “Science & Nature” and your student’s name on your check to receive proper credit. Mail it with the payment coupon on this brochure to: South Central Service Cooperative, Attn: Mary Hillmann, 2075 Lookout Drive, North Mankato, MN 56003.
- **No refunds for absence.** Schools may send a replacement. Please notify SCSC of changes in advance if possible. Refunds will be issued for cancellations made by Oct. 19. No refunds will be issued after this date. Refunds for online payments will be charged a processing fee.
- For information on session presenters, directions to Gustavus Adolphus College and/or parking on campus, please visit www.mncsc.org/science-nature.
- **For registration assistance,** please contact Mary Hillmann: 507-389-2509 or mhillmann@mncsc.org.
- As a participant in the Science & Nature Conference, you grant SCSC permission to publish your photos and/or name for promotional purposes.
- By registering, you release, absolve, and hold harmless South Central Service Cooperative, its employees, and agents from any damage resulting from injury incurred while participating in the Science & Nature Conference. You understand South Central Service Cooperative assumes no responsibility before, during or after the program.

Sessions for Grades 3-4 (Select three sessions)

1. The Remarkable Reptiles

View 13 species of live reptiles, including all three of Minnesota's threatened species. This fast-paced, lively program includes turtles, lizards, snakes and more!
James E. Gerholdt, Remarkable Reptiles

2. Mysteries of the Minnesota River Valley

Freshwater lamprey? Mooneye fish? What's your dish?! We'll have specimens, artifacts, historical items and stories galore to share the "secrets" of some of the critters common to, but often unnoticed, in the Minnesota River sandbars and mudflats. Hear about the discovery of a woolly mammoth femur right here in the Minnesota River Valley!
Art and Barb Straub, Retired Educators and Master Naturalists

3. Skull Science

Herbivores, omnivores, carnivores, insectivores! How can you tell from a skull? Learn about the main types of teeth animals have and how they use them to survive. We will examine skulls of animals and through the process of deduction be able to conclude which "vore" group the animal belongs to. We will then meet a live animal that corresponds to each group.
Minnesota Zoomobile Naturalist

4. Sound and Light Fun

America's Fun Science and Dr. Fun demonstrate how both light and sound are waves that travel in a straight line until they are absorbed, redirected, reflected or allowed to pass through an object. Join us for fun, hands-on activities and take home a special project to do with family and friends. Plus, one copy of the children's book "Tyronne Carter Kid Scientist" will be raffled off in each class!
Tyronne Carter, America's Fun Science

5. Seeds for the Seasons

Oh, the power of prairie! Join us for hands-on fun with seed-saving, systems thinking and an environmentally friendly engineering design challenge. We'll adventure and ask: Is a seed alive? What are the needs of living things? How can I create habitat?
Heidi Ferris, Growing Green Hearts, LLC

6. 10,000 Lakes Drop-by-Drop

Creativity counts as we use nature play and take-part-art to learn about caring for Minnesota's 10,000+ lakes. Practice leadership and eSTEM with hands-on engineering design challenges about water. From glacial ice of the past to water chemistry of today, you will experience your watershed in the silliest way ever!
Petra Johnson, Growing Green Hearts, LLC

7. Get Popping!

Who's ready to munch on some tasty popcorn? But wait, how does popcorn pop? Join us for a delicious and fun look into how popcorn is grown and explore the phenomenon of how popcorn pops.
Sue Knott, Minnesota Agriculture in the Classroom

8. On the Ball: The Science of Sports

Think like a materials engineer while you conduct experiments, create designs and imagine your own innovations to make the sports we play fun, safe and exciting for the players and the audience!
The Bakken Museum

9. Animals Nobody Loves

It's slimy! It's gross! It's dirty! Some Minnesota animals have reputations they do not deserve. We will investigate why some animals are considered "unlovable" including snakes, spiders, skunks, porcupines and owls – oh my! Live animals will join us for this presentation.
Bob Ebsen, Wildlife Science Center

10. Being a Birdbrain Rocks!

Use your birdbrain and your imagination to design and name a bird. Learn about birds by creating one.
Al Batt, Writer, Speaker, Storyteller and Humorist

11. The Bug Show: Close Encounters with Insects and Their Relatives

Participate in this unique, hands-on program where you can examine an assortment of live and preserved arthropods. Use as many of your senses as you feel comfortable to learn about the mysterious world of bugs! See some of the weirdest, wackiest bugs ever! Hear funny stories about bugs and learn about the many unique (and comical) ways insects protect themselves. Hold some amazing bugs to see how they feel. Give them a sniff, to see how differently roaches smell from millipedes. A special bug snack will be available...if you're willing to use your sense of taste!
Dr. Bruce Giebink, aka Bruce the Bug Guy, The Bug Zone, LLC

12. Laboratory Cellfies

What's your type? Investigate blood typing using slide methods under the microscope, a true Cellfie! Come investigate the art of phlebotomy with us!
Sheila Stevensen, Mayo Clinic

13. It's What's for Lunch: Food, Soil and Solar Energy

We will visit the Gustavus extended season greenhouse and compost facility to learn how food, soil and renewable energy are all connected. Your registration grants permission to be transported to and from the greenhouse via campus vans.
James H Dontje, Johnson Center for Environmental Innovation, Gustavus Adolphus College

14. All About Bees

What is happening with bees and other pollinators? Why does it matter? Safely observe a working honey bee colony, try on beekeeping suits, sample honey. Learn more about bees, why they are important, what is going on with them and what we can do to help. Pollinate Minnesota will guide you in this interactive program all about a tiny insect and the food we eat.
Erin Rupp, Pollinate Minnesota

15. High-Tech Farmers

Can a robot help farm your food? Take on the roles of farmers and engineers while using robotics kits, recycled materials and your imaginations to tackle the tough tasks on the farm that must be done to grow crops and raise livestock.
Children's Museum of Southern Minnesota

16. Insect Investigations: Water Bugs!

Ever catch a water bug and wonder what it was? Freshwater macroinvertebrates (organisms without a backbone that can be seen with the naked eye) are abundant in Minnesota. They can live in rivers, lakes, wetlands and other bodies of water. Because of their unique role in the freshwater ecosystem, macroinvertebrates are important to study. Come learn more about these cool critters and their place in the environment!
Katie Chapman, Shetek Lutheran Ministeries

17. Life with an Elephant Trunk

Did you know there are two species of elephants? Find out where they live, how to tell them apart, how big they are, what they eat and the work they do. And, what is with that trunk anyway? Go home with your own trunk.
Lee Ann Landstrom, Author and Interpretive Naturalist

Sessions for Grades 3-4 (Continued)

18. Super Structures

Build human-scale structures of great height and strength. Explore the strengths of different shapes made with dowels and rubber bands and use investigation and geometry to build strong towers or bridges that can withstand a load of up to 8 pounds. Have fun while you apply engineering principles to build a super structure!

Science Museum of Minnesota

19. Motor Power

What's inside a motor and how does it work? Use magnets and electricity as you build and experiment with "The World's Simplest Motor." Make a crazy wigglebot to take home.

Works Museum

20. Phun Physics

Physics demonstrations that inform and wow will show the wonder of the everyday world in the areas of light, sound, heat and energy.

Jessie Petricka and Gustavus Adolphus physics students

21. Chemical Clue

Students will work in teams to solve a mock crime using different techniques including fingerprinting, chromatography, fabric and DNA analyses.

Rebecca Moen and Minnesota State University, Mankato Biochemistry Students

22. Science of Toys

Discover the science behind some of your favorite toys in this fun-packed program! You aren't the only ones with the energy to play; your toys are packed with it, too! Experiment with a vector table walker, a gravity defying magnetic gyro wheel and more. Take home a Mad Science yo-yo that uses linear and angular momentum at the same time!

Mad Science of Minnesota

23. Grossology

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 "ewww's" and "aaackk's" to "oooh's" and "aaahh's."

Alisha Paplow, Prairie Ecology Bus Center

24. Nature's Nightlife

While we're tucked away in bed, the outdoor nightlife is just kicking into high gear! In the safety of darkness and coolness of night, critters of all kinds venture out to find lunch, look for mates, search out new territory and explore the neighborhood. Humans might go "bump" in the night, but not the nocturnal animals! Learn how nighttime animals are specially adapted for seeing, hearing, smelling and feeling their way through the darkness. Being outside after the sun goes down might seem spooky but take this class and find out why it's quite spectacular!

Livi Martin, Prairie Ecology Bus Center

25. A Slimy Good Time!

It's ooey, a little bit gooey, somewhat messy and a fun experiment that allows young scientists to create a recipe that is a real hit around Halloween! Participants will make their own slime to take home. The recipe is easy and fun and one that can be duplicated over and over!

Melanie M. Schmidt, Mankato Area Community Education

Sessions for Grades 5-6 (Select four sessions)

26. It's Not Magic, It's Science

Join wacky professor Jerry Wenzel as he demonstrates science concepts in a fun and easy to understand way. You will be amazed at what appears to be magic, but is really science. This will be an unforgettable science learning experience that will have you asking for more. Who knows, he may even shrink wrap you!

Jerry Wenzel, Science Magic Programs

27. Skull Science

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Minnesota Zoomobile Naturalist

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Al Batt, Writer, Speaker, Storyteller and Humorist

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Think like a materials engineer while you conduct experiments, create designs and imagine your own innovations to make the sports we play fun, safe and exciting for the players and the audience!

The Bakken Museum

31. Backyard Astronomy: Make the Stars Your Old Friends

Get to know all about our solar system, galaxy and universe and learn how to explore it all from your backyard! Learn how to use star maps and get to know the constellations and all the adventures that launched them into the sky. Have a chance to use a large telescope for daytime stargazing and make the stars your old friends!

Mike Lynch, WCCO Meteorologist and Astronomy/Starwatching Educator

32. Using the Little GPS in Our Heads

Learning how to navigate using maps, whether through a forest, park, city, or even malls and airports, teaches us so much more than just how to get from where we are to where we want to go. We learn how to make quick decisions, solve problems and trust our knowledge and judgement. The power of these skills and the confidence we gain are useful in all areas of life. Come and learn through games how to confidently navigate your way without using electronic tools like a GPS or smartphone.

Andrea Schneider, I Know My Way, LLC, Orienteering USA

33. Stream Flow Fun

Come learn all about how streams move and change! Experience the hands-on learning of a stream table to investigate how stream channels and watershed landscape changes affect stream flow. We will also talk about stream pollution and effects of flow and pollutants on stream biology.

Breeanna Bateman, Minnesota Pollution Control Agency

Sessions for Grades 5-6 (Continued)

34. Animals Nobody Loves

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Bob Ebsen, Wildlife Science Center

35. It's What's for Lunch: Food, Soil and Solar Energy

We will visit the Gustavus extended season greenhouse and compost facility to learn how food, soil and renewable energy are all connected. Your registration grants permission to be transported to and from the greenhouse via campus vans.
James Dontje, Johnson Center for Environmental Innovation, Gustavus Adolphus College

36. All About Bees

What is happening with bees and other pollinators? Why does it matter? Safely observe a working honey bee colony, try on beekeeping suits, sample honey. Learn more about bees, why they are important, what is going on with them and what we can do to help. Pollinate Minnesota will guide you in this interactive program all about a tiny insect and the food we eat.
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Alisha Paplow, Prairie Ecology Bus Center

40. Geocaching

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 enter those numbers into a Global Positioning System and follow it to the cache! Learn to perform basic GPS functions and then put that knowledge to the test and see if you can find the hidden treasure!
Jessie Hendrix, Prairie Ecology Bus Center

41. Oh Knots!

We may not like knots in our kite strings or shoelaces, but some knots are very handy to have! Maybe you'll do a little fishing this winter or some canoeing next spring. Perhaps you'll sit around the campfire or do some camping. There are special knots you can use for all these activities that you won't want to be without! Learn handy knots and dazzle your friends and family with clever rope tying skills! You'll even get a knot kit to take home!
Stephene Studer, Prairie Ecology Bus Center

42. Laboratory Cellfies

What's your type? Investigate blood typing using slide methods under the microscope, a true Cellfie! Come investigate the art of phlebotomy with us!
Sheila Stevensen, Mayo Clinic

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Dr. Bruce Giebink, aka Bruce the Bug Guy, The Bug Zone, LLC

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Katie Chapman, Shetek Lutheran Ministries

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Mad Science of Minnesota

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What's inside a motor and how does it work? Use magnets and electricity as you build and experiment with "The World's Simplest Motor." Make a crazy wigglerbot to take home.
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Livi Martin, Prairie Ecology Bus Center

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James E. Gerholdt, Remarkable Reptiles