February 26-27, 2016

Duluth, MN

Preliminary Presentation Sessions

2016 Minnesota Conference on Science Education

Presentation Resources Shared Digitally after MnCOSE16 at www.mnsta.org

Session 1 — 8:00 - 8:45 AM

StormReady for Schools

Chris Franks, National Weather Service

Ballroom L

5-8

Earth Science

StormReady for schools is a project designed to help teachers and students get their school ready for severe weather and earn recognition from the National Weather Service. Students will engage in activities and discussion on weather watches and warnings, radar, storm shelters, and much more.

Decorating with Scientists or Making Scientists Human Through Research

Daniel Larson, Anoka High School

Ballroom O

preK-4; 5-8; 9-12

General

This is a research activity that can be used as an assignment or an extra credit project, individually or a small team. A poster is created and displayed to foster interest in science through the scientists' lives.

Let's Talk About Early Learners

Patty Born-Selly, Hamline University School of Education

DECC Registration Area

preK-4

Elementary

Young children (2nd grade and younger) have unique needs in the classroom. Effective teachers need to understand developmentally appropriate practices and approaches to teaching very young children. Learn how best to support the needs of early learners to maximize learning and engagement while reducing "challenging" classroom behavior

Assessing Students with Google Forms

Katie Melgaard, Marshall County Central High School

French River Room 1

5-8; 9-12

General

Here is a great way to save time grading and get students' scores into their hands quickly. Participants can take a Google Forms quiz, understand the power and limitations of this quiz program, and see how to create and grade quizzes. Bring your web-browsing device!

How to Use the Modeling Approach to Teach Chemistry

Elizabeth (Beth) Seibel-Hunt, St Paul Academy and Summit School

French River Room 2

5-8; 9-12

Chemistry

Learn the AMTA chemistry modeling approach interactively by unveiling four models that help deepen understanding of particle interactions, gas law reasoning, energy transfer and limiting stoichiometry reaction problems.

100 Favorite things from an "Ole" Biology Teacher

Roxanne Stensvad, Glencoe-Silver Lake High School

Gooseberry Falls Room 1

5-8; 9-12

Life Science

A list of Biology Toys, Movies, Labs, and more this biology teacher has collected over 37 years that she would love to share with you. Fast pace.

Dig into Science with Agriculture!

Sue Knott, Minnesota Agriculture in the Classroom

Gooseberry Falls Room 2

preK-4; 5-8; 9-12

Life Science

Discover the many connections between MN K-12 Science Standards and agriculture! Minnesota Agriculture in the Classroom (MAITC) staff will share FREE resources with connections to science and STEM. Veteran and beginning teachers will share their experiences with integrating agricultural plants, animals and food into their curricula. A taste test and standards-based, hands-on activities will be part of the fun!

Physics Strand Speaker:
Broadening Participation in STEM by Engaging Students Through Project-Based-Learning

Gooseberry Falls Room 3

Alison Hoxie, Asst. Professor, Mechanical and Industrial Engineering, University of Minnesota Duluth

Active learning has been shown to provide a more engaging learning environment. It also improves the retention of under represented groups.
This talk will present this compelling evidence and describe a senior level engineering course the was taught through project-based-learning. Finally, the talk will cover projects occurring at the University of Minnesota Duluth to engage students in renewable energy technologies.

Multiple Intelligences and Learning Styles - Their Conflation and Confusion.

Richard Lahti, Minnesota State University Moorhead
Amanda Murphy, Minnesota State University Moorhead

Split Rock Room 1
prek-4, 5-8, 9-12 & 13 and
General

Multiple intelligence and learning style theory inspired lessons abound, but what do teacher candidates know about these theories, and what harm lies in their confusion?

Flexible Pace, Flexible Space: Helping Students Take Control of Their Learning

Callie Bush, Fridley High School

Split Rock Room 2
5-8; 9-12
General

Building a culture where students are in control of their learning is possible with technology tools and creative use of space. See how easy it can be!

The Raptor Lab: Online Science Inquiry Learning using raptors and environmental issues.

Gail Buhl, The Raptor Center
, The Raptor Center at the University of Minnesota

St Louis River Room
5-8
General

The Raptor Lab is a hybrid online teaching technology that creates an authentic learning experience to teach science investigation. Blending Adventure Learning, inquiry and experiential learning; the Raptor Lab uses videos and online media to transport students into the rehabilitation clinic of the world renowned Raptor Center at the University of Minnesota. During their experience, students engage with veterinarians and other scientists to apply the process of scientific investigation for the diagnosis, treatment, and rehabilitation of a bald eagle with lead poisoning. Students use their new skills to investigate the possible source of lead exposure. They write a model scientific research paper based on the analysis of real blood lead levels of bald eagles admitted to TRC. Throughout they are exposed to possible science careers and learn real world applications to science inquiry.

Session 1-2 — 8:00 - 9:50 AM

Inquiry and Self-Directed Learning

Angela Lawrence, Eastern Carver County Schools
Lori Mosser, Eastern Carver County Schools

Chester Creek Room
preK-4; 5-8
Elementary

Foster more questions and independent learning in your science classroom! Come explore 50 easy-to-use inquiry activities for students. Activities will be tied to MN state standards and can be used to propel your STEM lessons forward as well as connect NGSS cross-cutting concepts.

Session 2 — 9:05 - 9:50 AM

Earth Science Strand Speaker:
Accessing Minnesota's Geological Data Using ArcGIS On-Line

Jacqueline Hamilton, Minnesota Geological Survey

Ballroom L

Learn how to access Minnesota's geology, topographic data and a bit of history using ArcGIS OnLine over the web.

EXHIBITOR WORKSHOP
Hands On Activities for Your Classroom

Deb Newberry, Nano-Link: Center for Nanotechnology Education

Ballroom M-N
5-8; 9-12; 13 and beyond
General

Nano-Link is dedicated to helping teachers infuse nanoscience concepts into their current curriculum. Nano-Link has created a series of modules, written for the educator, that are topic specific and center around a hands on activity. You will do several of these hands on activities as Nano-Link staff teach you the science behind what is happening. NGSS alignment will be discussed, as well as what goes into a module.

2016 Minnesota Conference on Science Education

Presentation Resources Shared Digitally after MnCOSE16 at www.mnsta.org

Authentic STEM Projects, Real Learning

Kelli Ellickson, Cedar Park Elementary STEM School

Carole Velasquez, Cedar Park Elementary STEM School

DECC Registration Area

preK-4

Elementary

It's easier than you think to engage students in meaningful, project-based learning. Take away integration strategies to help students become questioners, investigators, makers and communicators.

Searching for Spielberg

Jayme Fast, Mountain Lake High School

Amanda Meyer, Springfield High School

French River Room 1

5-8; 9-12

General

Providing examples from physical and life science, as well as using multiple types of devices and apps, Amanda and Jayme will share their favorite uses for student-created video and provide some tips on getting started in your own classroom.

MUST SEE - The New PocketLab!

Carolyn Fruin, Digital Science Consulting

French River Room 2

5-8; 9-12

Chemistry

Are you looking for easy, wireless data collection? Wondering how to utilize student smart phones in lab? Working with a minimal budget? Check out how the PocketLab can streamline your inquiry labs and keep kids individually engaged. Fun, cheap and user friendly, a must see for all physical sciences.

Nature or Nurture?: Phenotypic plasticity in insects as a springboard for authentic inquiry in science

Emily Mohl, St. Olaf College

Jennifer Zisette, St. Olaf College

Gooseberry Falls Room 1

5-8; 9-12; 13 and beyond

Life Science

In this interactive session, work through parts of a lab with aphids to investigate how both nature and nurture can influence major traits, like wings. Discuss how to prompt students to think like scientists.

NASA IPAC Teacher Archive Research Program

Robert Palmer, Willmar Senior High

Gooseberry Falls Room 3

9-12

Physics

NASA supports a program through CalTech under the acronym NITARP. I will share my experiences being a NITARP teacher this past year.

Using Technology-Based Formative Assessments

Diana Fenton, College of St. Benedict/St. John's University

Split Rock Room 1

5-8; 9-12

General

This session will showcase technology-based formative assessments that can be used in science education or across the curriculum.

Preparing for the Minnesota Science Standards Review in 2017

Paulson Doug, Minnesota Department of Education

Split Rock Room 2

preK-4, 5-8; 9-12

In the session we will start with a survey to collect input on how the current standards are being implemented. We will then share the process for the review of the MN Science Standards beginning in 2017. Participants will then discuss in small groups issues with current implementation. Finally we will explore current research from "Framework for K-12 Science Education" and allow the participants to engage in a learning activity with M&Ms and varying temperature water to better understand science and engineering practices and cross cutting concepts. Participants will consider how those ideas might influence future standards and current instruction.

Jelly Belly Dissection!

Denise Black, Bemidji Middle School

St Louis River Room

preK-4; 5-8

General

Come hypothesize and dissect while using a dichotomous key and scalpel to find your favorite flavor of Jelly Belly jelly beans!

2016 Minnesota Conference on Science Education

Presentation Resources Shared Digitally after MnCOSE16 at www.mnsta.org

Session 2-3 — 9:05 - 10:55 AM

NGSS and Climate Change for Middle School
Jenna Totz, Climate Generation

Ballroom O
5-8
General

Are you a middle school science teacher in a district adopting NGSS? Are you looking curricula resources to help? Next Generation Climate will help you incorporate middle school climate change performance standards.

NEXT Generation Robotics (Made Simple)
Bradley Blue, Design & InnoVation Lab

Gooseberry Falls Room 2
5-8; 9-12
Physics

TETRIX is a revolutionary new robotics building system that is designed to teach a variety of STEM concepts through Project Based Learning without the construction complexities inherent to other building systems. TETRIX is engineered to be simple and intuitive, enabling students to bring their creations to life quickly and easily with an R/C setup. And TETRIX robots can be controlled by a variety of devices such as LEGO MINDSTORMS EV3 or NXT, myRio, Arduino, Raspberry Pi, and more.
This presentation is for the curious (new to robotics) and for the geeks!

Session 3 — 10:10 - 10:55 AM

Creating an Augmented Reality Sandbox in your Classroom
Peter Johnson, Pine Island Middle School

Ballroom L
5-8; 9-12
Earth Science

How you could make an augmented reality sandbox with free NSF software, an xBox Kinect, and a computer. Watch color-coded elevation change in real time, make landforms and have simulated "water" slosh between it all (if you have a decent graphics card).

EXHIBITOR WORKSHOP
iPad Games That Engage Students in Difficult STEM Subjects
Adam Gordon, Andamio Games

Ballroom M-N
9-12
General

Learning games can provide an immersive opportunity for unlocking complex STEM subjects, giving students the motivation and confidence to persist in mastering the most challenging concepts.

In this workshop we will:
- Play iNeuron Version 2, with a focus on collaborative problem solving
- Demonstrate our new Teacher Dashboard, which monitors student progress in real-time
- Preview WBB (Wires, Bulbs, & Batteries), our new app that teaches the basics of electricity
- Gather input & feedback for the development of CytoAssist, our NSF-funded photosynthesis game

iPads will be provided for the workshop.

Elementary Strand Speaker:
Developing Disciplinary Literacy Within the Elementary Classroom
Michele Koomen, Gustavus Adolphus College

DECC Registration Area

This session will build an understanding of how reading, writing, and talk can be used as tools to learn and understand the discipline of science at the elementary level.

How Will You Know What Your Students Know? (SBG Assessment Strategies)
Mark Peterson, Benilde-St. Margaret's School
Amanda Meyer, Springfield MN Public Schools

French River Room 1
9-12
General

You understand the philosophy behind Standards-Based Learning, but now what? Effective assessments are one key to a successful standards-based environment. Explore different options for formative and summative assessments that support continuous student learning in a science classroom.

Let's Talk Labs - How and Why?
Carolyn Fruin, Digital Science Consulting

French River Room 2
5-8; 9-12
Chemistry

Investigations as authentic learning is crucial to students, including simulations and write-ups but how do we fit it all in? Learn how to use simulations to promote inquiry as well as how to use peer grading to promote scientific literacy.

Human Impact: Species Extinction and Saving Species
Dawn Norton, HHMI/Biointeractive

Gooseberry Falls Room 1
9-12
Life Science

This session will showcase how to use HHMI Biointeractive resources to teach students in grades 9-12 about human impact on species extinction and saving species.

Video Analysis & Spreadsheets with Air Cannons
Paul Anderson, Buffalo High School

Gooseberry Falls Room 3
9-12
Physics

Nerf darts can be launched with simple air cannons made from PVC pipes and data can be collected with videos. By using software like Logger Pro or Tracker, students can analysis the motion and program a spreadsheet to predict the motion of the dart.

No Answer Key! Becoming a Mentor-Scholar with the NGSS Science Practices
Mary Colson, National Science Teachers Association

Split Rock Room 1
5-8; 9-12
General

To engage students in the NGSS science practices, we teachers must charge into the unknown “like scientists” without an answer key. Join me in discussing how to transform traditional inquiry labs into open-ended scientific research experiences.

Tips and Tricks for First Year Science Educators
Rachel Streich, New London-Spicer Middle School

Split Rock Room 2
5-8; 9-12
General

This presentation is for first year science teachers or those about to enter the profession. Come learn about how use the state standards to their full potential in the classroom and gain some tips that others had to figure out "the hard way".

Mapping In Science
Richard Smith, Glencoe - Silver Lake High School

St Louis River Room
9-12; 13 and beyond
General

This presentation will give the participant an introduction to ArcGIS Online mapping. This session will have examples of students work as well as time to experience AGO first hand.

Session 4 1:30 - 2:15 PM

Bringing Climate Change to Life through COP 21, the International Climate Negotiations • What Happened at the UN Conference on Climate Change in Paris?
Kristen Poppleton, Climate Generation: A Will Steger Legacy
Peter Johnson, Pine Island Middle School

Ballroom L
5-8; 9-12; 13 and beyond
Earth Science

Recognizing that educators are critical messengers of climate and energy literacy for hundreds of students each year, Climate Generation selected a delegation of 10 Education Ambassadors to bring to the UNFCCC 21st Conference of the Parties in Paris, France December 6-December 11, 2015 through the Window into Paris program. Kristen Poppleton, the delegation leader, and Peter Johnson, one of the Ambassadors will present their experiences and how it was integrated into a science classroom.

2016 Minnesota Conference on Science Education

Presentation Resources Shared Digitally after MnCOSE16 at www.mnsta.org

EXHIBITOR WORKSHOP
Making Science Accessible to All Students
Steven Weniger, Achieve3000

Ballroom M-N

General

You asked for it...you got it! Learn how to meet the needs of all learners and provide differentiated, grade-appropriate content to each student, every time, while still providing meaningful, rigorous science content! Content aligned to standards, instruction rich in inquiry, experiences tied to science practices and STEM...all differentiated to meet the individual needs of every student. Now you can.

Engage Your Students with Nobel Laureates...Come Learn About the Annual Nobel Curriculum Development Program at Gustavus Adolphus College
Eric Koser, Mankato West High School
Robert Shoemaker, Gustavus Adolphus College

Ballroom O

5-8; 9-12; 13 and beyond
General

Come join us and learn how to participate in the Annual Nobel Conference at Gustavus Adolphus College online through our teacher developed curriculum and/or in person at the event. Our program is an opportunity for you and your students to attend the annual "Citizen Science Symposium" on campus. Gain valuable professional development, make your students a part of an international discussion on a scientific topic, and learn how to access "best practice/standards based" activities and digital presentations you can use anytime within your curriculum.

ECOTIME: Integrating Environmental Education
David Grack, Jeffers Foundation

Chester Creek Room

preK-4; 5-8
Elementary

This interactive session presents a sample of quick, easy, environmentally themed, multidisciplinary lessons that are aligned with state academic standards. Leave with the 150 Ecotime activities that fit within your morning meetings format and engage students with science focused greetings, activities, and lessons suitable for news and announcements.

Room for Robotics
Jill Jensen, Glacier Hills Elementary School of Arts and Science
Gretchen Lansing, Glacier Hills Elementary School of Arts and Science

DECC Registration Area

preK-4; 5-8
Elementary

Learn how Glacier Hills Elementary School of Arts and Science is using new technology like Ozobots, Spheros, Cubelets, Littlebits and Dash and Dot to teach our students programming and coding. We will share how these tools are used, curriculum connections and benefits of these technologies. Leave with tips on how to create room in your day for robotics.

Developing Creative Attitudes in Science
Carolyn Hayes, NSTA President 2015-16

French River Room 1

preK-4; 5-8; 9-12; 13 and
General

Encouraging our students to think creatively by asking questions and pursing varied strategies is a valuable component of learning science as a process. Participate in developing a creative culture in your classroom with sample lessons.

Flipped Classroom: It's More Than Just Videos
Lisa Kaufman, South St. Paul Secondary
Katie Ellis, South St. Paul Secondary

French River Room 2

9-12
Chemistry

We will provide examples of how to engage your students in a flipped learning environment. Examples to include class structure, learning activities, and formative assessments.

Nature in the Classroom: Sit Spot and Experiential Learning
Jim Lane, Mahtomedi High School
Kate Rosok, South High School

Gooseberry Falls Room 1

5-8; 9-12; 13 and beyond
Life Science

Sit Spot engages students in the content of your course within the context of the natural world. We will explore how Sit Spot can be used in any setting to enhance observation, literacy and collaboration in your students.

Model Making and Model Breaking Using Direct Measurement Video

Peter Bohacek, Henry Sibley High School /Direct Measurement Video Project

Gooseberry Falls Room 2

9-12; 13 and beyond

Physics

Over 1000 viewers per day are using our free physics teaching resources. We'll have an overview of the new developments:
• Preview of our new 'Pivot Player' with more browser-based tools for analyzing Direct Measurement Videos
• Data from our recent study of 160 university students indicates that DMV-based instruction effectively teaches advanced lab skills such as making and testing models.
• Lots of new videos
Bring a laptop or iPad for this interactive session.

Math/Science Integration for Earth's Sake

Joan Kwako, University of Minnesota - Duluth

Split Rock Room 1

5-8

General

Combine your math and science lessons with these engaging, hands-on activities that build computational and measurement skills while teaching about ecosystems and our ecological footprints.

Water, Food, Energy! Oh My! PLTW Environmental Engineering (aka Environmental Sustainability)-Build a Water Filter

Jennifer Klecatsky, Brainerd High School

Split Rock Room 2

9-12

General

Project Lead the Way is a project-based STEM curriculum that creates 21st century thinkers! The new course, Environmental Sustainability, examines important global issues including clean water, food sustainability, and sustainable energy. Come to this session, build a water filter out of recyclable materials, and learn about this exciting new course!

Learning from Writing

Cathy Kindem, Rosemount-Apple Valley-Eagan Public Schools
Carole Velasquez, Cedar Park Elementary STEM School/ISD 196

St Louis River Room

preK-4; 5-8

General

Writing in the sciences offers students a unique opportunity to uncover and refine learning. Come and explore various tools for writing and learning in science.

Session 4-5 — 1:30 - 3:20 PM

Fictitious Forces

Steven Heilig, St. Paul Academy and Summit School

Gooseberry Falls Room 3

9-12

Physics

Why do you feel something invisible is pushing you back when a car accelerates forward? You will see ways to demonstrate common fictitious forces (linear, centrifugal, and Coriolis) in the classroom, leading up to the most surprising fictitious force of all: gravity!

Session 5 — 2:35 - 3:20 PM

Giving your students MEGA choice with an open-ended menu project

Peter Johnson, Pine Island Middle School

Ballroom L

5-8; 9-12

Earth Science

Get students invested in showing their knowledge and showing off their strengths by giving them a self-differentiated, open-ended menu project. Steal the 70+ project ideas I have already listed and see what they can do with it!

2016 Minnesota Conference on Science Education

Presentation Resources Shared Digitally after MnCOSE16 at www.mnsta.org

EXHIBITOR WORKSHOP
Bringing STEM to Light
Colette DeHarpporte, Laser Classroom

Ballroom M-N
preK-4; 5-8
Elementary

Light is a fascinating and familiar topic for young kids. It's also rich and complex, which is great if you are teaching a graduate level course in Quantum Mechanics. But how do you lay the foundation for this exciting topic? What do you teach to the youngest would-be scientists?

This workshop focuses on how to make LIGHT (vision, color, reflection and refraction) accessible and engaging for a young audience.

Calendar in the Classroom
David Grack, Jeffers Foundation

Chester Creek Room
preK-4; 5-8
Elementary

The Jeffers Foundation and local elementary teachers have prepared a series of lessons for grades K-5 that integrate the use of the Minnesota Weatherguide Environment Calendar into standards sensitive lessons. Published by the Freshwater Society, the calendar contains data that is incorporated into lessons on: astronomy, gardening, phenology, water, and weather. Join in to experience a sampling of lessons and receive a 2016 calendar and the K -5 curriculum.

Leveraging the Power of Student Talk in Science Classrooms
Derek Barto, Anoka-Hennepin

DECC Registration Area
preK-4; 5-8
Elementary

In this session we will explore strategies that teachers use to increase the quantity and quality of student talk in science classrooms.

Student Centered Questioning
Mark Peterson, Benilde-St. Margaret's School

French River Room 1
5-8; 9-12
General

Get students asking questions that drive their curiosity and instruction. Using techniques from the Right Question Institute, students gain ownership for their learning. What could be better than having a science classroom full of questions that need to be answered?

Potpourri of Chemistry Engagement Strategies
Heather Johnson, Apollo High School
Chris Ann Johnson, Apollo High School

French River Room 2
9-12
Chemistry

Participants will engage in an enthalpy mini-lab, a vocabulary strategy, a naming compounds introductory activity as well as formative assessment strategies.

Biology Strand Speaker
The Power of Scientist Partnerships
Catrina Adams, Education Director, The Botanical Society of America

Gooseberry Falls Room 1

How working with scientists (in-person or virtually) can improve student motivation, break down negative stereotypes, and model scientific thinking.

Science and SAMR: Redefining Science Education with Technology
Casey Rutherford, Shakopee High School

Split Rock Room 1
5-8; 9-12
General

1:1 initiatives are becoming the norm in education, often tied closely with models such as SAMR for implementation. This session will explore how technology can 'redefine' science education through helping students to learn science by doing science.

Teaching Physics Through Junk Box Wars
Emily Zinck, Lewiston-Altura High School
Bruce Clark, Lewiston-Altura High School

Split Rock Room 2
5-8; 9-12
Physics

Looking for more hands-on projects? Attendees will actually attempt their own Junk Box War challenge and learn a variety of applications

Incorporating Native American Perspectives on Science, Engineering and NGSS
Kevin Zak, Department of Education, University of Minnesota Duluth

St Louis River Room
preK-4; 5-8
General

Through a sample activity, learn how to utilize a Native American context to help all students learn about the nature of science and engineering. Connections to Minnesota and Next Generation Science Standards will also be made.

Session 5-6 2:35 - 4:25 PM

The Science of Speed
Bradley Blue, Design & InnoVation Lab

Gooseberry Falls Room 2
5-8; 9-12
Physics

The Science of Speed is an engaging, challenging, and competitive CO2 dragster activity sure to get students excited as they design, build, and modify their cars while also learning about aerodynamics, aesthetics, thrust, drag, Newton's laws, and other concepts associated with math, science, physics, and engineering.

Session 6 3:40 - 4:25 PM

Take Flight: Birds of Minnesota
Kandy Noles Stevens, Southwest Minnesota State University
Emily Safar & Emily Streich , SMSU
Kristi Roth & Claire Macki , SMSU

Chester Creek Room
preK-4
Elementary

Inspire student learning by utilizing QR codes and outdoor classroom ideas for Minnesota?s birds. Bring your own device, creativity and sense of adventure!

STEMify your teaching, using best practices of STEM Education in your classroom.
Thomas Meagher, Owatonna Public Schools

DECC Registration Area
preK-4; 5-8
Elementary

In this session you will practice specific strategies that can move lessons from any content area toward a STEM approach. Bring your creativity and lesson ideas to find how integrating your curriculum can engage all students in STEM learning.

Chemistry Strand Speaker:
Gender Equitable Teaching and Learning in Our Classrooms.
Barb Billington, Science Education Lecturer, University of Minnesota

French River Room 2

While girls and women have increased their representation in STEM fields as a whole in the past quarter century, these advances are still not keeping pace with the rising demand for skilled workers in STEM fields. Why are so few females pursuing the physical sciences and engineering? What can we do as teachers to promote gender equitable teaching and learning in our classrooms?

Reconstructing Student Conceptions of Climate Change; an Inquiry Approach
J McClelland, Maple Lake High School

Gooseberry Falls Room 1
9-12
Life Science

A summary of key findings from classroom research on students' attitudes and conceptions of global climate change over the course of an 8-week inquiry-based unit.

2016 Minnesota Conference on Science Education

Presentation Resources Shared Digitally after MnCOSE16 at www.mnsta.org

Build an Electric Generator

Thomas Tomashek, Minnetonka High School

Gooseberry Falls Room 3

9-12

Physics

Michael Faraday and Joseph Henry both discovered electromagnetic induction about the same time. Electromagnetic induction is the principle behind electrical generators. During this session we will investigate the science behind the principle of EMI then build a simple electric generator. An excellent demonstration or hands activity for your students.

From Monday Quotes to Friday Questions: How to Help Students Feel Comfortable with Science

Jennifer Aakre, TrekNorth Jr. & Sr. High School

Split Rock Room 1

5-8; 9-12

General

Building relationships with students is important in all disciplines, but may be more so in science. Learn some ways to connect with your students, and how this can help them succeed in your classes.

Twitter for Teachers 101

Emily Koehler, Glencoe-Silver Lake High School

Split Rock Room 2

preK-4; 5-8; 9-12; 13 and

General

An introduction to Twitter for Teachers. Basics of how to use Twitter will be discussed, as well as how Twitter can be used as a personalized professional development platform.

Exploring Inquiry Assessment -- PRESENTED via VIDEO Conference

Charity Staudenraus, Inq-ITS

Janice Gobert, Rutgers University

Sarah Haavind,

St Louis River Room

5-8

General

Inq-ITS makes it possible to assess student inquiry skills in real time using revolutionary technology (patent pending). This session will include a brief exploration of the Inq-ITS assessment model. Access to a device with wifi capabilities is highly encouraged. Participants will work through the process of identifying independent and dependent variables applied to virtual labs in Life, Physical, and Earth Science. Seeking educators to pilot.
