

Concurrent Sessions and Workshops

Thursday, February 28, 2008

Th1

Thursday Session 1
9:15-10:10 a.m.

Foundations Roundtable

Room: Madison

Randy Asher and Matthew Mandery, Brooklyn Technical High School; Cheryl Lindeman, Central Virginia Governor's School; Heather Sondel, Thomas Jefferson High School for Science and Technology, VA
Foundation support is not always just financial contributions but also involves school culture and expectations. How can an alumni foundation or other non-profit partnership support your school? The presenters in this roundtable will provide examples of successful foundations and suggestions for getting a foundation off the ground.

Teaching Set-Based Category Theory to High School Students: Why and How

Room: Lone Star III

Marizza Bailey, Arkansas School of Mathematics, Sciences and the Arts

What sort of education would we be offering students if we restricted the material taught to only those ideas developed by the eighteenth century? This presentation will introduce you to axiomatic set theory which led to the idea of categories and created a link between mathematical fields which seemed previously unrelated.

Enhancing the Humanities in Schools Like Ours

Room: Waverly

Everett Brokaw, Illinois Mathematics and Science Academy; Jay Thomas, Aurora University

Using the perspectives of a Consortium school graduate, faculty, alumni interviews, and course surveys, this presentation demonstrates the importance of interdisciplinary perspectives and courses of study to engage and challenge students. Success in STEM careers necessitates skill in philosophy and communication by means of which students develop deep conceptual understanding of their academic and professional fields.

Science: An Essential Way of Knowing

Room: Lone Star I

Todd Crane, Bergen County Academies, NJ

This presentation will discuss aspects of a Theory of Knowledge science unit taught at Bergen County Academies designed to provide students with a deeper understanding of how science is done, what types of questions are relevant to science, and the limitations of scientific knowledge. Assessment of the roles that emotion, language, reason and perception play in a person's ability to make various knowledge claims is essential.

The Impact of a One-to-One Initiative on Student Readiness for Online Learning

Room: Presidente

Christopher Glenn, Illinois Mathematics and Science Academy

Find out more about research on how one-to-one computing initiatives have been shown to enhance student comfort in the use of technology and their ability to regulate their personal learning in preparation for online courses.

Connecting Career-Technical Education with the Math-Science Curriculum

Room: Rio Grande

Theodore Harder and Cynthia Bater, California Academy of Mathematics and Science

Project Lead the Way is a national pre-engineering curriculum that adds rigor and relevance to technology

education. We'll tell you how PLTW when used with our rigorous math-science curriculum bolsters our mission of producing more math and science graduates with strong participation from women and minorities.

Website Update - Connecting Consortium Professionals

Room: Vinoy

Cheryl Lindeman and Ron Laugen, NCSSSMST; Mark Ensign, Neumont University

NCSSSMST.COM is your link to the Consortium. Find out about our new section, Connecting Consortium Professionals, being developed with our affiliate Neumont University. You will be able interact with other professionals at member schools through the Forum. Use the Curriculum Center to share projects, labs, lessons, hints and tips. Also included are Professional Conference abstracts and presentations and a Photo Gallery. Bring your ideas!

Youth Policy Summit: A Partnership with Keystone Science School

Room: Riviere

Ellen Reid and Annmarie Fussell, Keystone Science School

Keystone Science School (KSS) has partnered with the NCSSSMST to conduct five successful Youth Policy Summits (YPS). These Summits addressed the topics of Sustainable Energy, Energy Efficiency, Nutrition, and Obesity and involved about 200 students from member schools. KSS will host two Summits in 2008 for 80 students. Come and learn more about the Youth Policy Summit and the partnership between KSS and NCSSSMST.

Your IRB: Monitoring Student Research and Safeguarding Students as Research Subjects

Room: Lone Star II

Judith Scheppler and Christopher Kolar, Illinois Mathematics and Science Academy

It is necessary to safeguard students as research subjects, but non-biomedical research has many confounding issues. Student investigations may also involve collecting and analyzing data obtained using human subjects. This session will discuss how IMSA's IRB, the Human and Animal Subjects Review Committee, monitors student investigations and protects students as research subjects.

Research on the Teaching of Critical Thinking Skills

Room: Stanford

Heather Sondel, Thomas Jefferson High School for Science and Technology, VA

What difference does teaching make? Well, it makes a lot of difference to students. Teachers who incorporate critical thinking skills into the presentation of their curricula inspire students to reach higher, learn the content, and demonstrate the open-ended critical thinking skills that are increasingly important for success in academic and non-academic areas. A curriculum that incorporates direct instruction in critical thinking skills has been shown to improve students' content knowledge and critical thinking.

Using Rubrics and Student Choice to Elicit Excellence

Room: Alamo I-II

Linda Cauley, Shenandoah Valley Governor's School, VA

Do you despair of eliciting consistently high quality work from students who misunderstand or misinterpret instructions because of past success or are just getting by? Are your assignments engaging with a real product, focus and audience that shape students work? Learn about techniques that address these potential problems.

W1-2

Thursday Workshop 1-2
9:15-11:20 a.m.

Concurrent Sessions and Workshops

Th2

Thursday Session 2
10:25-11:20 a.m.

Playing the College Admission Game as an NCSSSMST Student

Room: Stanford

Diana Arms, Arkansas School for Mathematics, Sciences, and the Arts

How do you make an excellent student still seem excellent in a class full of high performing students? This session explores the unique challenges and concerns that NCSSSMST students encounter when applying to colleges. We will discuss the impact of school-wide high performance on individual students' records and on those who want to apply to highly selective colleges.

Affiliate Engineering Roundtable

Room: Rio Grande

Amy Campbell, Drexel University

What's happening in engineering programs among our affiliate members? Join this roundtable session to learn more about engineering admissions and programs among some major universities so you can share with colleagues and students.

Writing About Science for Younger Students: Ninth Graders Share Their Knowledge and Interests with Fifth Grade Students

Room: Waverly

Pam Curtis and Kate Lewis, Thomas Jefferson High School for Science and Technology, VA

Two English teachers explain how their ninth grade students researched and wrote pamphlets on scientific and technical topics to enhance the learning of fifth graders. This assignment gives students an authentic but unusual audience for their writing and offers opportunities for cross-age correspondence and, perhaps, a field trip.

Online Home Assignments in AP Physics

Room: Lone Star I

Emmanuel Galitskiy, Bergen County Academies, NJ

We have been successfully using WebAssign, a software program that randomizes problems assigned to the students, for the last 4 years. In this session, we will discuss the use of WebAssign as a tool for creating online home assignments in AP Physics and how to monitor students' progress and achievements.

Teaching Evolution - Facts, Fears and Fundamental Importance

Room: Lone Star II

Michael Grace, Florida Institute of Technology

Evolution is one of the single best-supported scientific disciplines, is fundamentally important to many issues in medicine, agriculture, and conservation, but is widely misunderstood. This presentation will focus on the mechanisms of evolution and the difficulties in effectively teaching evolutionary theory.

Consortium Connections Hub

Room: Vinoy

Laura Lake, Center for Applied Technologies, FL

Drop by the NCSSSMST Connections Hub to learn more about NCSSSMST activities and opportunities, to visit with a Board member, and to work with the new Connecting Consortium Professionals part of our website. Make connections with other professionals through the Forum. Check out the Curriculum Center and start sharing projects, labs, lessons, hints and tips.

Schools Like Ours – Starting Specialized High Schools

Room: Madison

Dennis Lundgren, Berrien County Mathematics and Science Center; Jay Thomas, Aurora University; Ron Laugen, NCSSSMST; Cheryl Lindeman, Central Virginia Governor's School

What is involved in starting a new specialized mathematics, science and technology school? This session highlights the topics in the upcoming Consortium publication, Schools Like Ours. Topics include issues such as governance, facilities, student selection, timelines, faculty concerns and much more. This will be especially helpful for new and emerging schools.

Teacher, So Now That I Have All This Data, What Do I Do With It?

Room: Presidente

Rocco Mennella, Michael Samordic, Jane Hemelt; Eleanor Roosevelt High School, MD

This session is designed for teachers who guide student research projects and will help alleviate the whirlwind of activity that concludes long research projects. Projects will be used to illustrate mistakes such as errors in data presentation and analysis. Solutions to these problems will be discussed.

Strategies for Teaching Scientific and Technical Writing

Room: Riviere

Judith Sumner, Massachusetts Academy of Mathematics and Science, MA

Scientific and technical writing often differs in style from the prose written in English classes. We will examine teaching strategies and writing prompts for research papers, essays, professional correspondence, and nature writing, as well as various methods for editing and revision.

Working with the MAA to Improve the Mathematical Education of Advanced High School Students

Room: Lone Star III

Daniel Teague, North Carolina School of Science and Mathematics

The Mathematical Association of America (MAA) has a special interest group for teaching advanced high school mathematics (beyond precalculus). This presentation will inform Consortium members about the group and the activities it has sponsored. We will also discuss possible joint projects between Consortium members or schools and the group.

How To Get Students to Do Authentic Research Projects in High School

Room: Rio Grande

Jill Beach and Amanda Baskett, Rockdale Magnet School for Science and Technology, GA

This presentation will excite you about authentic student research projects and provide a framework for implementation. You will learn the benefits and pitfalls of student research projects as well as helpful strategies to incorporate research into any classroom.

Helping Them Open The Door

Room: Presidente

Jamie Brew and Emily Bond, Bayside High School, VA

Sometimes there is more than just black and white and we need to teach our students how to think in

Th3

Thursday Session 3
11:25 a.m. -12:20 p.m.

Concurrent Sessions and Workshops

that grey area. Dropping the information directly into their brains does not help students evolve their thought processes, so we need to teach them to hold the door open for themselves.

Using the Environment to Gather Authentic Data

Room: Lone Star I

Margaret Brosnan, Eleanor Roosevelt High School, MD

Many high schools do not have research facilities or universities available for students to do research. But schools often have a patch of woods or a stream that is accessible. This session will present several environmental programs developed to provide students with practical field opportunities to gather data.

Because Lines Don't Curve - Hooke's Law and Quadratic Euler's Method

Room: Lone Star III

Christopher Gann, North Carolina School of Science and Mathematics

This session will explore Euler's Method using spreadsheet software. We will illustrate a situation where Euler's Method accumulates a lot of error quickly, and then modify Euler's Method in such a way that the issue is resolved.

How to Become More Involved with NCSSMST

Room: Vinoy

Margaret Greff, John Jay Science & Engineering Academy, TX and Karen Pikula, Dearborn Center for Math, Science & Technology, MI

What are the benefits and opportunities in NCSSMST for teachers, students and schools? Current Board Members will discuss how you can get more from your Consortium.

Videoconferencing on a Shoestring Budget

Room: Alamo I-II

Donna Leonardi and Danny Jaye, Bergen County Academies, NJ

Videoconferencing technology is an interactive, instructional learning environment that has the potential to restructure the secondary school classroom into a globalized portal of learning. This session will explore the steps necessary to seek out national and international partners, the importance of pre-conference student preparation, immersion in the technology, and then debriefing.

Using Interdisciplinary Data in the Global History Classroom

Room: Waverly

Beth Malchiodi, Brooklyn Technical High School

How do you excite a math or science student about global history? Using the Neolithic Revolution as an example, this session focuses on how the "expert panel discussion" format can be utilized to introduce data from various disciplines into history instruction and facilitate analysis of conflicting interpretations of historical events.

Research Symposium and Other Affiliate Summer Programs

Room: Riviere

Judi Marino, Florida Institute of Technology

Find out more about the annual NCSSMST Research Symposium to be hosted by the Florida Institute of Technology June 11-14. Speak with other college representatives about their offerings for summer programs and other opportunities for your students.

Early College HS and T-STEM Chat

Room: Madison

Brenda Wojnowski and Alma Garcia, Texas High School Project; Lisa Jasumback, Academy for Math, Engineering, and Science, UT

Early College High School (ECHS) projects and a variety of Science-Technology-Engineering-Math (STEM) initiatives are underway across the US. Join this panel chat session to find out what's happening in Texas and Utah.

Student-Centered Investigations in Astronomy and Oceanography

Room: Lone Star II

Lisa Wu and Lee Ann Hennig, Thomas Jefferson High School for Science and Technology, VA

Join us on a trip from the Earth's oceans to the edge of the Universe. Our students investigate classic as well as cutting edge topics in a discovery-based research program. Their projects reflect collaborative work with teachers and professionals in confronting problems, testing hypotheses, and formulating analyses of their investigations.

Novelty as Normalcy: Integrating Motivators in the Classroom

Room: Presidente

Debra Blenis, Florida Institute of Technology

This high-energy presentation will provide effective techniques for using a variety of pedagogical skills that will enhance teaching and facilitate student learning. We will explore ways to motivate your students - almost as much as the latest video game!

Snake Eyes: A Model for Multidisciplinary Teaching and Student Research

Room: Lone Star II

Michael Grace, Florida Institute of Technology

How do we effectively teach and learn science when new work is generated from so many highly specialized areas? Find out about a multi-disciplinary science education course at Florida Tech that combines the neuroscience, animal behavior, evolution and biophysics of snake infrared-imaging sensors.

Integration of Technology to Enhance Biology Field Studies

Room: Lone Star I

John LaFever, Dennis McFaden and Kate Lewis, Thomas Jefferson High School for Science and Technology, VA

Discover how students can use microcontroller technology and basic programming to gather migration data to study an environmental problem, with ties to our Biology and English curricula.

Current Issues – Real Science

Room: Stanford

Ron Laugen and Cheryl Lindeman, NCSSSMST; Janet Hugo, Arkansas School for Mathematics, Sciences, and the Arts

The Marian Koshland Science Museum of the National Academy of Sciences in Washington DC and NCSSSMST plan to collaborate in producing quality educational materials for secondary science students during the 2008-2009 academic school year. The Koshland will develop materials about its current exhibits, including *Global Warming: Facts and Our Future* and *Infectious Disease: Evolving Challenges to Human Health*. Teachers at NCSSSMST member schools will be invited to provide their expertise by field-testing the materials in their classrooms across the country. Find out more in this session.

Th4

Thursday Session 4
2:15-3:10 p.m.

Concurrent Sessions and Workshops

A (Radical) New Story, Map, and Landscape of Learning and Schooling - by Design

Room: Riviere

Stephanie Pace Marshall, Illinois Mathematics and Science Academy

Decades of restructuring schools have not fundamentally transformed our system of schooling or the nature and quality of our children's thinking. Rather, reform has fostered the creation of false proxies for learning and eroded the potentially vibrant intellectual life of our children and our schools. Now is our time to create generative learning communities - by design. Such communities have their roots in meaning not memory; engagement not transmission; inquiry not compliance; exploration not acquisition; personalization not uniformity; interdependence not individualism; collaboration not competition; and trust not fear. This session will be a conversation around these ideas as discussed in Dr. Marshall's book: *The Power to Transform; Leadership that Brings Learning and Schooling to Life*. A book signing will follow.

The Anywhere Language Lab: Moving Your World Language Program out into the World

Room: Waverly

Julia Nasrani-Wildfong, Massachusetts Academy of Math and Science

Find out how I use the Blackboard® course management system to integrate technology into my foreign language classroom to dramatically increase students' oral proficiency and listening comprehension.

Consortium Connections Hub

Room: Vinoy

Karen Pikula, Dearborn Center for Math, Science & Technology

Drop by the NCSSSMST Connections Hub to learn more about NCSSSMST activities and opportunities, to visit with a Board member, and to work with the new Connecting Consortium Professionals part of our website. Make connections with other professionals through the Forum. Check out the Curriculum Center and start sharing projects, labs, lessons, hints and tips.

Learning Lessons of Advocacy to Build Support

Room: Madison

Julia Link Roberts, The Gatton Academy of Mathematics and Science, KY

Advocacy is a necessary part of strong support for specialized schools. Advocacy needs to be ongoing, is most effective when done with others, and goes hand in hand with building positive public relations. Hear about the lessons learned in establishing our school in Kentucky.

How to Integrate Technology in Mathematics to Improve Student Achievement

Room: Lone Star III

Nathalie Smalls and Debra Arnold, Rockdale Magnet School for Science and Technology, GA

This session will share technologies that teachers can use in class including: Geometers Sketchpad Software, Interwrite, online simulations/manipulatives, iFlash and stand-alone PowerPoint presentations. A CD with the resources will be provided to all who attend.

Funding and Fun with Prototypes, Patents, and Pizzas: Our Lemelson-MIT InvenTeams Experience

Room: Rio Grande

Yau-Jong Twu, Eleanor Roosevelt High School, MD

Our high school student team brainstormed for invention ideas, wrote proposals, and won a Lemelson-MIT InvenTeams grant last year. We describe our InvenTeams experience and how we've gotten more funding to continue our school's culture of invention.

Affiliates Roundtable: Chat with University Admission Officers

Room: Alamo I-II

Judi Marino, NCSSSMST Board

Join us anytime during this double session to discuss issues affecting college/university admissions - NCSSSMST student acceptances, challenges in recruiting minorities and women, AP vs. IB in admissions, marketing NCSSSMST grads, etc.

W4-5

**Thursday Workshop 4-5
2:15-4:20 p.m.**

Math You Can See - Connecting Math to Engineering

Room: Lone Star III

Rosemary Aguilar, Southern Methodist University

"How can I make math real?" Make math fun and exciting by linking high school math concepts to engineering. You will preview a technology curriculum that gives students the opportunity to think and act like an engineer and to design engineering solutions for real-world problems.

Th5

**Thursday Session 5
3:25-4:20 p.m.**

Research Literacy

Room: Lone Star II

Susan Brauerman and Zach Lynn, The Bronx High School of Science, NY

Learn about a freshman curriculum designed to teach the scientific method, experimental design and critical thinking. Students are taught how to present and analyze data, including use of statistics to evaluate data validity.

Alternative Teaching Methodology in a High Tech Classroom

Room: Presidente

Adam Kemp and John LaFever, Thomas Jefferson High School for Science and Technology, VA

Find out how our students in the Systems Engineering course work in direct collaboration with industry to accomplish a large-scale high-tech project without the confines of standard teaching practices.

New STEM School Development Chat Session

Room: Riviere

Dennis Lundgren, Berrien County Mathematics & Science Center, MI; Debra Blenis, Florida Institute of Technology; Tim Gott, The Gatton Academy of Mathematics and Science, KY

Join with others interested in what's happening with new STEM schools. Panelists will present their perspectives on schools in Florida and Kentucky. Be prepared to share your questions, views and experiences.

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Moodling in the Classroom: Time to Investigate

Room: Rio Grande

Mary Jo Parker, Academy for Science & Health, TX

Learn about pilot projects within language arts and math/science settings using a MOODLE environment to support learner understanding and a constructivist approach.

Stem Cell Research as a Paradigm for Teaching Biology

Room: Lone Star I

Robert Pergolizzi, Bergen County Academies, NJ

Using biology as a model, we are attempting to teach basic concepts by having students perform individualized stem cell research projects in state-of-the-art laboratories within our school, run by teachers who were professional researchers. We believe this program will lead to increased achievement in high school and throughout their careers.

Administrator Chat Session

Room: Madison

Heather Sondel, Thomas Jefferson High School for Science and Technology, VA

Join with others in the Administration strand in a moderated chat session to discuss topics of mutual interest. Topics include: How can we be of service to educators in the new part of our website: Connecting Consortium Professionals? How can the Forum and Project sections be used to enhance your professional performance and growth? What else can the Consortium be doing to make a difference for you?

Consortium Connections Hub

Room: Vinoy

John Stormberg, Liberal Arts and Science Academy of Austin, TX

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FW

Friday Workshops
10:00-11:30 a.m.

The New Texas Instruments Technology

Room: Alamo I-II

Jacklyn Bonneau, Massachusetts Academy of Math and Science

Come and see the new TI NSpire and decide for yourself how it will impact your math or science classroom in the future. This will be a hands-on session so you will be able to actually use the new technology.

Diversity Initiatives - Models for Impact

Room: Riviere

Hungsin Chin, Alabama School of Fine Arts - Russell Math and Science Center; Jay Thomas, Aurora University; Letita Mason and Mike Reidy, The North Carolina School of Science and Mathematics; Brenda Earhart, Kalamazoo Area Mathematics & Science Center; Melissa Schoeplein, Thomas Jefferson High School for Science and Technology

Join this workshop to hear about diversity initiatives at several member schools. Topics include: recruiting under-represented populations, holding summer programs for potential students, creating a welcoming environment, and developing strategies for success and retention.

Forming STEM Consortium Collaboration

Room: Madison

Michelle Kolar, Tracy Miller, Josie Wallmuth, David Devol, Jane Seidel, Max McGee, and Purva Rushi, Illinois Mathematics and Science Academy

This round-table is targeted at and facilitated by teachers, outreach professionals and administrators interested in developing collaborative programs. The focus is collaborations with Consortium schools to address how we can strategically affect STEM education by sharing resources.

Website Update - Connecting Consortium Professionals

Room: Vinoy

Cheryl Lindeman and Ron Laugen, NCSSSMST; Mark Ensign, Neumont University

NCSSSMST.COM is your link to the Consortium. Find out about our new section: Connecting Consortium Professionals. You will be able interact with other professionals at member schools through the Forum. Use the Curriculum Center to start share projects, labs, lessons, hints and tips. Also included are a Professional Conference abstracts and presentations and a Photo Gallery. During this workshop there will be time to organize Forum Topics and Moderators. Also, what would YOU like to share or find in the Curriculum Center?

Animation and the Graphing Calculator

Room: Lone Star III

Karen Pikula and Jennifer Gorsline, Dearborn Center for Math, Science & Technology

Bring your TI 83/84 Graphing Calculator and get it to move! This will be a hands-on session where you will begin to program your calculator to animate a shape. Includes the use of transformation geometry, matrix arithmetic, programming, story telling and presentation skills. Begin with a dot-to-dot picture. Place the coordinates into a matrix and use matrix arithmetic to move the shape with slides, flips, turns and size changes. Utilize some draw features. If you teach math or computer science you will enjoy this session and bring back something ready to be added to your class syllabus.

Modeling Data Using a Motion Sensor and a Graphing Calculator to Enhance the Algebra 2 Honors Curriculum

Room: Lone Star I-II

Carol Rychlik, Thomas Jefferson High School for Science and Technology, VA

You will use a motion sensor, a graphing calculator, and toys to collect data for modeling in three different activities. You will explore quadratics, trigonometry, and series and sequences, and will receive a copy of each activity. Other mathematics teachers may find ways to modify the activities to fit their curricula.

Active Learning and 3D Visualization in Physics and Astronomy

Room: Presidente

Niescja Turner, Florida Institute of Technology

In this workshop we will model and discuss active learning techniques, including peer instruction, for physics and astronomy classes. We will also include FIT research on 3D visualization and how it is best utilized to facilitate learning of three-dimensional concepts.

Concurrent Sessions and Workshops

F6

Friday Session 6

1:15-2:10 p.m.

Chemistry Educators Guide to Molecular Modeling

Room: Lone Star I

Robert Gotwals, North Carolina School of Science and Mathematics

Learn how to integrate computational chemistry (molecular modeling) into your existing chemistry classes using free research-grade computing resources.

Astronomy-Based Science Research Education

Room: Lone Star II

Pete Guastella and Diann Flanagan, Manhasset High School, NY

Find out more about the RBSE program, designed to help educators become master science teachers in research-based science education. It provides opportunities for your students to then do authentic astronomical research.

How Advisories Can Help Support a STEM Program

Room: Stanford

John Haigh, The Science, Mathematics, and Technology Academy at Montgomery Blair High School, MD

This presentation will detail how our STEM program uses an advisory structure to meet our core goals of enriching academic programs with career oriented activities, advising students within a specific career pathway, monitoring student academic progress and supporting student achievement.

To Calculator or Not to Calculator...the Question for Math Classes

Room: Lone Star III

Cecilia Knoll, Florida Institute of Technology

Learn about some recent research, listen to some anecdotal comments from the presenter (a college math professor), and discuss whether and when the use of calculators should be allowed/permitted/encouraged in secondary mathematics classes.

Chat with Keynote - Dr. Vonder Embse

Room: Vinoy

Laura Lake, Center for Applied Technologies, FL

Bring your questions and comments about Dr. Vonder Embse's lunch keynote presentation to this Chat Session. Interact with him and other teachers about using technology in mathematics education.

College-Level Classes, College-Level Research, and College Library Access?

Room: Riviere

Alaine Martaus, Arkansas School for Mathematics, Sciences, and the Arts

This session will explore how NCSSSMST schools support student research goals through their school libraries. How can consortium school libraries contribute to student research through access to advanced reference materials, college-level circulating materials, online databases, and college or university libraries?

The IPOD: Revolutionizing the Notion of Homework

Room: Rio Grande

Mary Jo Parker and Cynthia McMahan, Academy for Science & Health, TX

Find out how science classroom PowerPoint presentations can be Podcast and web-posted for access by all students for use as content review and for local test and assessment preparations.

Recruiting Qualified Students

Room: Madison

MaryAnn Suddeth, Rockdale Magnet School for Science and Technology, GA

Encouraging students to enroll in schools with higher expectations and requirements and to take rigorous courses is often difficult. Share creative ways to recruit qualified students to schools like ours. Ideas on how to identify areas of weakness related to recruitment will lead into a discussion of possible solutions that have worked at RMSST.

Dealing with 1 to 1 - The Perspective of a Humanities Teacher on the Basic Logistics and Goals of Tablet Computing

Room: Waverly

James Victory, Illinois Mathematics and Science Academy

Supposedly the debate over computers in the classroom ended a decade ago. This presentation will focus on the hard-won lessons of running a tablet-based humanities course that was specifically designed to augment and reinforce work being done in IMSA's math and science programs.

Are You Too Old for Facebook and Other Web 2.0 Technologies?

Room: Presidente

John Wenrich, Institute for Connecting Science Research to the Classroom at VA Tech

As the Internet becomes a social network, Internet safety must be an integral part of what we are teaching students at all levels. Find out about what the new emerging technologies can do and how your students are already interacting with Web 2.0. Learn about curriculum initiatives to safeguard all your students online.

Hum a Perfect Sinusoid

Room: Alamo I-II

Peg Alofs Becker, Kalamazoo Area Math and Science Center, MI

Participants will be introduced to the TI-Navigator and then each will hum into a Vernier microphone attached to a CBL2 and TI-84. The sinusoids will be analyzed using the statistics functions in the TI-84's. Other Vernier equipment may also be demonstrated.

W6-7

Friday Workshop 6-7

1:15-3:20 p.m.

Undergraduate Research Chat Session

Room: Riviere

Lou Hegyes, University of the Sciences in Philadelphia

Come to this session to discuss undergraduate research opportunities with representatives of affiliate members. Find out what your students can expect.

F7

Friday Session 7

2:25-3:20 p.m.

What's Going On With STEM?

Room: Stanford

Janet Hugo, Arkansas School for Mathematics, Sciences, and the Arts

The country is in panic mode over the decrease in college students electing majors in the STEM areas. Universities have seen the number of students interested in the computer science and engineering fields plummet over the last three years. Where will we get our research scientists of the future?

Concurrent Sessions and Workshops

What is being done at the national and state levels to counter these trends? Hear about national initiatives awaiting funding. Share what your states are doing in regard to improving STEM education.

Principles of Interactive PowerPoint Design in Chemistry

Room: Rio Grande

Diana Kennen, Rockdale Magnet School for Science and Technology, GA

Avoid the "Death by PowerPoint" phenomenon in your classroom. Discover how to effectively integrate PowerPoint into your daily instruction without sacrificing student involvement and understanding.

Consortium Connections Hub

Room: Vinoy

Dennis Lundgren, Berrien County Mathematics & Science Center, MI

Drop by the NCSSTMST Connections Hub to learn more about NCSSTMST activities and opportunities, to visit with a Board member, and to work with the new Connecting Consortium Professionals part of our website. Make connections with other professionals through the Forum. Check out the Curriculum Center and start sharing projects, labs, lessons, hints and tips.

Understanding Inherited Mitochondrial Disorders Using Molecular Biology and Pedigree Analysis: a GENA Education Module

Room: Lone Star III

Ryan Reardon, Alabama School of Fine Arts - Russell Math and Science Center

The Geneticist-Educator Network of Alliances (GENA) Project is an NSF-supported Math and Science Partnership program that examines the role that scientific societies can play in K-12 programs. This session will provide an overview of the GENA project, compare GENA to other professional development opportunities, and focus on the UAB-ASFA intervention that uses the NSRC 4 stage learning cycle, inquiry-based pedagogy, pedigree analysis and real molecular biology techniques to teach students about a mitochondrial disease called MELAS.

Development, Evolution, and Outcomes of the Student Inquiry and Research Program at IMSA

Room: Presidente

Judith Scheppler, Mark Carlson, David DeVol, and Chris Kolar, Illinois Mathematics and Science Academy

This session will discuss the evolution, challenges, successes, and goals of the Student Inquiry and Research (SIR) Program at IMSA. Student participation is voluntary, investigations may be in any discipline, and the current course format is loosely structured.

Teaching Research in the High School: Scientific Research as a Course

Room: Lone Star II

Ryan Templeton, The Mathematics and Science High School at Clover Hill, VA

See how science research has been adapted for high school at the Mathematics and Science High School at Clover Hill. This course has been in development for several years, and this session will describe its design, planning, and execution. Learn, share and think about science research in the high school.

American Studies: An Interdisciplinary Path to an Understanding of the American Experience

Room: Waverly

Ginger Wilson and Jim Litle, North Carolina School of Science and Mathematics

This session will focus on NCSSM's experience in implementing a team-taught junior American Studies course. Participants will examine classroom activities designed to foster critical thinking and discuss the NCSSM Diagnostic Writing Rubric, which stresses developing mastery of analytical writing skills through a sequence of essay assignments.

Is there a Doctor in the House? Create a Medical Strand of Courses for Your Science Program

Room: Madison

Luisa Ladaga Zirkle and Sam Hamilton, Bayside High School Health Sciences Academy, VA

Many students in our math, science, and technology programs are interested in pursuing medical or health related careers. Our academy program offers a college preparatory program rich in medically related courses that offer the students a solid foundation in anatomy, physiology, pathophysiology, and other medical elective topics. Come explore!

Chat Sessions

Join with other interested participants in your strand in a moderated chat session to discuss topics of mutual interest, such as: How can NCSSSMST be of service to professionals in the new part of our website - Connecting Consortium Professionals? What else can the Consortium be doing to make a difference for you?

F8

Friday Session 8

3:35-4:30 p.m.

College Admissions Chat Session

Room: Lone Star III

Judi Marino, Florida Institute of Technology

Counselor Chat Session

Room: Stanford

Mary Ann Suddeth, Rockdale Magnet School for Science and Technology, GA

Engineering/Tech/CS Chat Session

Rio Grande

John Templin, Blair Science, Mathematics, Computer Science Magnet, MD and Peggy Greff, John Jay Science & Engineering Academy, TX

Humanities Chat Session

Room: Waverly

Pam Curtis and Kate Lewis, Thomas Jefferson High School for Science and Technology, VA

Concurrent Sessions and Workshops

Math Chat Session

Room: Alamo I-II

Danny Jaye, Bergen County Academies, NJ

Residential Life Chat Session

Room: Riviere

Janet Hugo, Arkansas School for Mathematics, Sciences, and the Arts

Science Chat Session

Room: Lone Star I-II

Lynda Smith, Lakeshore HS Math/Science Center, MI and John Stormberg, Liberal Arts and Science Academy of Austin, TX

Consortium Connections Hub

Room: Vinoy

Mary Jo Parker, Academy for Science & Health, TX

Drop by the NCSSSMST Connections Hub to learn more about NCSSSMST activities and opportunities, to visit with a Board member, and to work with the new Connecting Consortium Professionals part of our website. Make connections with other professionals through the Forum. Check out the Curriculum Center and start sharing projects, labs, lessons, hints and tips.

Green Schools Chat Session

Room: Madison

Melissa Schoeplein, Thomas Jefferson High School for Science and Technology, VA

Interested in the "green schools movement?" Trying to get new school buildings and renovations in your area to be environmentally friendly? Join this chat session to discuss what "green" means. Join other interested educational leaders in brainstorming strategies for implementing green building policies in your school.

Gifted Summer Institute

Room: Presidente

Jay Thomas, Aurora University

What is "giftedness" as it is identified and understood among NCSSSMST schools?

NCSSSMST will offer an Institute in July on the topic of gifted education and invites educators with an interest in understanding giftedness and in the identification and development of talent to take part.

This session will provide an overview of the Institute: its rationale, its development, and its planned activities.