

Concurrent Sessions and Workshops

The Correlation Coefficient: What It Does Mean and What It Doesn't Mean

Room: Salon C

Julie Graves, North Carolina School of Science and Mathematics

Many non-statistics teachers include data analysis in their courses. It is easy to misinterpret the r and r^2 values the calculator displays when it produces a regression line. It is tempting, but wrong, to use values of r^2 for model selection. We will discuss how to correctly interpret and use r and r^2 .

S1

Saturday Session 1
10:00-10:55 a.m.

American Deja Vu: A Thematic Approach to History

Room: Salon D

Donna Hutchison and Clifford Happy, Arkansas School for Mathematics, Sciences, and the Arts

Is chronological teaching of American history the best approach? No, says the ASMSA faculty - thematic teaching is better. Four themes focus our study: the frontier, innovation and invention, sectionalism, and freedom. This approach allows building upon previous knowledge while introducing new concepts so students learn that all events/ideas are related.

Problem-Based Learning 101 for Computer Science

Room: Salon E

Brian Kelly and Kristina Gillmeister, Anne Arundel STEM Magnet High School at North County High School, MD

When beginning the transition to a student-centered problem-based learning (PBL) classroom, one can often feel overwhelmed. In this session, participants' fears about using this learning approach in computer science will be eased as they are given the confidence and materials for using this STEM-oriented process for themselves.

Advanced Chemistry Labs

Room: Salon F

Mary Schiff and Jamie Skiba, Brooklyn Technical High School, NY

Want to incorporate higher levels of chemistry experiments in your school in order to prepare students for college? Want to get students inquiring instead of relying on "cookbook" based experiments? We'll describe our use of PASCO Pasport laboratory probes and Excel in a variety of advanced labs and provide you with lessons and rubrics for guiding students to construct their own procedures.

Government and Politics Roundtable: Advocating for STEM Education

Room: Salon G

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

This discussion will focus on how our schools and NCSSSMST can influence STEM education policy. Please join us for this valuable conversation, especially if you have experience intersecting with STEM education policy on the local, state, or national level and/or if you would like to see NCSSSMST get more involved in this area.

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STEM Student Summer Programs

Room: Alexandria

Joan Barber, Darlene Haught and Letita Mason, North Carolina School of Science and Mathematics

Walk through the steps of developing and implementing successful and sustainable STEM student summer programs. Four summer programs at NCSSM will be reviewed: Glaxo Fellows, Leadership Academy, Labs 4 Learning, and RECAP - Research Experience in Chemistry, Astronomy, and Physics.

Using Co-Teaching to Enhance STEM Education

Room: Jackson

Sarah Voskuhl and Gareth Davis, Science and Mathematics Academy at Aberdeen High School, MD

Are you wondering how to combine the expertise of your faculty more effectively? Two successful co-teachers will share their tips and tricks that will help bring out everyone's strengths.

Technology Training Using Captivate: Reaching More Teachers More Quickly

Room: Jefferson

Richard Washer and Barbara Dent, Thomas Jefferson High School for Science and Technology, VA

A challenge for staff development is providing training when it is needed in an already busy schedule. This session will look at Captivate, a software program designed to offer training using simulations, animation, flash, audio, podcasts and assessment so teachers can access information and training when they need it.

Internal Clockwork Contributing to Success of IBET Program

Room: Lee

Barbara Wood, Craig Lewis, Emily Orser and Alice Spencer, Thomas Jefferson High School for Science and Technology, VA

This session will describe the design and implementation strategies of our program that integrates ninth-grade Biology, English, and Technology. It develops a research skills foundation for our entire science and technology curriculum and provides a positive atmosphere supporting freshmen as they transition to a rigorous STEM environment.

Combating Junior Year Fatigue and Senioritis

Room: McLean

Amanda Baskett and Debra Arnold, Rockdale Magnet School for Science and Technology, GA

Many students who enroll in multiple AP and accelerated courses to challenge themselves their junior year lose focus early in the spring semester. In this session we will present one model that incorporates professional development both inside and outside the classroom during junior year. Students apply skills learned in the classroom and develop those necessary to succeed in college or the workforce.

Close Your Eyes and Visualize: Developing an MST Academy During Dire Economic Times

Room: Salon C

Lynn Edward, Lisa Vasquez and Steven Frank, Mariner High School, FL

This session will address how to research, develop and sustain an MST Academy (school within a school) using only internal resources while providing students with an exceptional and rigorous experience.

S2

Saturday Session 2

11:05-12:00 p.m.

Using United Nations Simulations to Teach Social Studies

Room: Salon D

Neil Lowenstern, Liberal Arts and Science Academy of Austin, TX

This presentation will take you through a step-by-step process on how to set up a United Nations simulation to teach world geography and history. Examples of meetings of the Security Council, Economic and Social Council, and World Health Organization will be used.

Shortage of Engineering Teachers? Try Student-Run Engineering Modules

Room: Salon E

Rocco Mennella, Jane Hemelt, and Michael Samordic, Eleanor Roosevelt Science and Technology Center, MD

Ten graduates of ERHS majoring in engineering, math, and physics returned to campus last summer to design an entirely new five-semester student-based engineering curriculum for ERHS that requires a teacher facilitator rather than an engineering teacher. Find out more in this session.

Your IRB and its Role in Institutional Research, Student Research, Monitoring Researchers, and Safeguarding Research Subjects

Room: Salon F

Judith Scheppler and Christopher Kolar, Illinois Mathematics and Science Academy; Jay Thomas, Aurora University, IL

The Institutional Review Board's (IRB) role in Consortium schools is many-faceted. Students and staff perform research. Institutions collect, track, and analyze student data. This panel will address the importance of an IRB and how various institutions protect students, researchers, and themselves.

An Interdisciplinary, Multi-Class, Multi-Day Activity on Global Climate Change

Room: Salon G

Steve Warshaw, Tom Clayton, Jim Litle, and Alison Blaine, North Carolina School of Science and Mathematics

Share an activity on Global Climate Change based on the "Climate Wedges" approach. It was scheduled to fall between the end of AP exams and the beginning of finals and involved roughly 180 NCSSM students from four different courses: Economics, Environmental Ethics, Environmental Science, and International Relations.

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Alumni Foundations: Sustaining Excellence at NCSSSMST Schools

Room: Alexandria

Randy Asher, Brooklyn Technical High School, NY and Matthew Mandery, Brooklyn Tech Alumni Foundation

This session is an overview of how an alumni foundation can support instructional initiatives and maintain a culture of excellence while continuing to engage alumni.

New Developments in the Study of Plagiarism

Room: Jackson

Arthur Williams, Louisiana School for Math, Science, and the Arts

Once regarded as unworthy of scholarly attention, plagiarism has recently become an object of serious study - an educational issue as well as an ethical and legal one. In this session we will review the "hard" and "soft" schools of opinion regarding the role plagiarism is playing and suggest directions for handling it in school settings.

Teaching TI 83/84 Programming in Your Math Class

Room: Jefferson

Michael Steuben, Thomas Jefferson High School for Science and Technology, VA

This session introduces the audience to teacher programming of the TI 83/84 calculator in a math class. The benefits are: 1) deeper understanding of algorithms; 2) improved efficiency in calculations; 3) access to solutions by computer simulation; and 4) improved recall of mathematical processes. A manual of tips, tricks, traps, problems, and solutions is included.

School/Local/Global/Universal: Utilizing all Scales to Teach AP Environmental Science

Room: Lee

Julie Mankiewicz, Bronx High School of Science, NY

Our AP Environmental Science course uses systems principles to look at how to change systems ranging from the school to a local river watershed to NYC to the world. Hands on activities include water quality monitoring, biodiversity studies of the schoolyard, vegetable gardening, and paper recycling. While I focus on NYC and USA issues, the students themselves cover the global perspective.

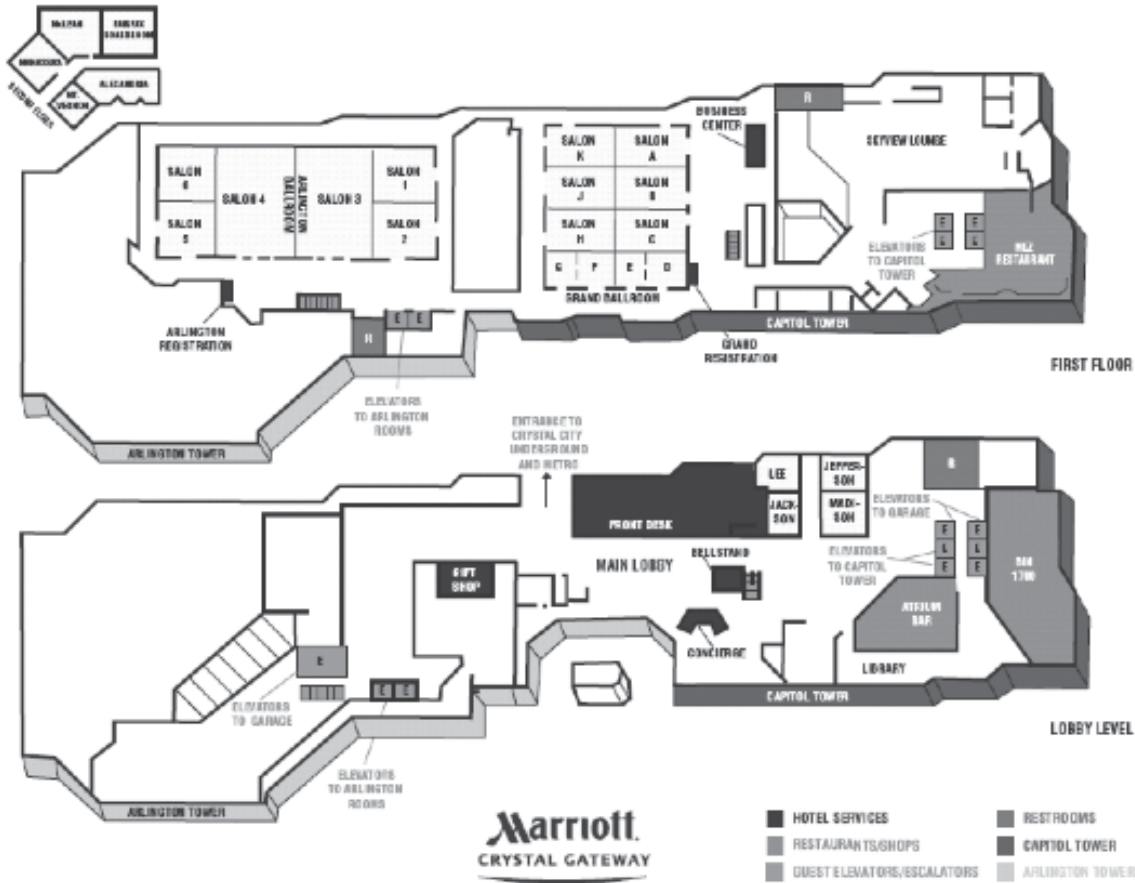
A Plan for Leveraging Articulation Agreements into Partnerships

Room: McLean

Keith Aufderheide and Phillip Peroune, Oglethorpe University, GA

Articulation agreements can serve as the basis for strategic, cooperative relationships between universities and specialized STEM schools. At Oglethorpe we are exploring the components of a plan that includes mutual on-site visitations, a summer experience at our University for rising high school seniors, and merit scholarship incentives.

Map



Meals

All meals are in Salon HJK

Grand Registration

is the conference check-in and information desk.

Opening Reception

Lobby Level in the Library and Bin1700 area.