


FRIDAY PLANNER

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ew Exhibitor Workshop

 Teaching Mathematics to Students Who Struggle Strand

Highlights

- New Member and First Timers' Orientation (Presentation 140)
- New and Preservice Teachers' Workshop (Presentation 195)

Registration Hours
7:00 a.m.–4:00 p.m.

Exhibit Hours
8:00 a.m.–4:00 p.m.

Bookstore and Member
Showcase Hours
8:00 a.m.–4:00 p.m.

Fire Codes

We have made every attempt to provide adequate seating for participants at the conference, but for your safety and because of fire regulations, only those with seats will be allowed in meeting rooms. To conform to fire codes, it will be necessary to ask persons sitting on the floor or standing to leave the room.

7:15 A.M.–7:45 A.M.

140

New Members and First Timers' Orientation

(General Interest) Session

New to NCTM? Join us to learn how to maximize your membership experience! From journals and online lessons, tools, and activities; to networking and career-advancement opportunities; you'll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.

John E. Hammett III
Saint Peter's College, Jersey City, New Jersey

Room 318

8:00 A.M.–9:00 A.M.

141

Clicking Developmental Mathematics and Beyond

(General Interest) Session

Developmental Mathematics courses use the clicker teaching technique to ask good questions, combined with visual lessons. The method has proven to enhance students' success, increase conceptual understanding, and promote critical thinking in an interactive environment. Most students expect and enjoy learning with the clickers.

Jerry J. Chen
Suffolk County Community College, Selden, New York

Myung-chul Kim
Suffolk County Community College, Selden, New York

Christine Brady
Suffolk County Community College, Selden, New York

Room 410

142

Improving Mathematics Instruction: Curriculum Topic Study in Vertical, Grades K–12 Professional Learning Communities

(General Interest) Session

Learn how a university–grades K–12 math partnership uses curriculum topic study to improve articulation investigate students' misconceptions and age-appropriateness of content, and align instruction with new Common Core and NCTM *Standards*.

Brian Blackmore
Stevens Institute of Technology–Center for Innovation in Engineering and Science Education, Hoboken, New Jersey

Toni Ann Palmisano
Secaucus High School, Secaucus, New Jersey

Room 314

143

The Museum of Mathematics, Opening Spring 2012 in Manhattan

(General Interest) Session

The Museum of Mathematics (momath.org) opens in Manhattan in 2012 with class trips, special programs, teachers' development, and innovative resources to support and enrich classroom math education. Hands-on exhibits will illustrate ideas at various levels, and thus appeal to students from late elementary through high school. Handouts will be provided.

George W. Hart
Museum of Mathematics, New York, New York

Room 318

144

Algebra in the Early Grades: What Does This Mean?

(Pre-K–5) Session

Demand on elementary school teachers to teach algebra can be daunting. It does not mean teaching high school algebra early. This talk will help teachers make sense of what teaching algebra early means, examining what they already teach and showing how they and their students can use that to develop algebraic ways of thinking.

Monica M. Neagoy
MN Mathematics Consulting Services, Arlington, Virginia

Room 420

Extra, Extra...
Pick up your copy of the
Program Updates at the
Registration Area.



8:00 A.M.–9:00 A.M.

144.1

Math Talk: Teaching Concepts and Skills through Illustrations and Stories

(Pre-K–2) Session

Using illustrations from nursery rhymes, fairy tales, and themes, learn how math talk can give your students interactive opportunities to practice early math concepts and skills in a language-based setting. Based on a Singaporean approach, math talk is a powerful way for students to create and solve math stories.

Char Forsten

Staff Development for Educators, Peterborough, New Hampshire

Room 402

145

So You're a Mathematics Specialist? Got This Figured Out?

(Pre-K–5) Session

Elementary mathematics specialists, coaches, or instructional leaders deal with their own set of challenges every day. This session will actively explore issues of transitioning to the Common Core State Standards, the adult learner, and relationships with other teachers and others.

Francis (Skip) Fennell

Past President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland

Jonathan Wray

Howard County Public Schools, Ellicott City, Maryland

Beth Kobett

Stevenson University, Eldersburg, Maryland

Room 403

 146

Yes, We Can! Overcoming Students' Math Anxiety

(3–8) Session

Once students hit an obstacle in learning mathematics, they develop math anxieties that research shows may plague them for life! The speaker will explore the most common sources of anxiety in grades 3–8 and discuss emotional learning tools that will help your students change their attitudes and move forward.

Jennifer Rising

Nueva School, Hillsborough, California

Room 415

147

Exploring Cognitive Demand in Teachers' Use of Instructional Materials

(6–8) Session

What does cognitive demand mean for your classroom? Participants will define and analyze levels of cognitive demand for middle school mathematical tasks. This session will share findings from research on how teachers implement materials, and discuss opportunities to learn and the possible impact on students' achievement.

Karen King

National Council of Teachers of Mathematics, Reston, Virginia

Jessica Tybursky

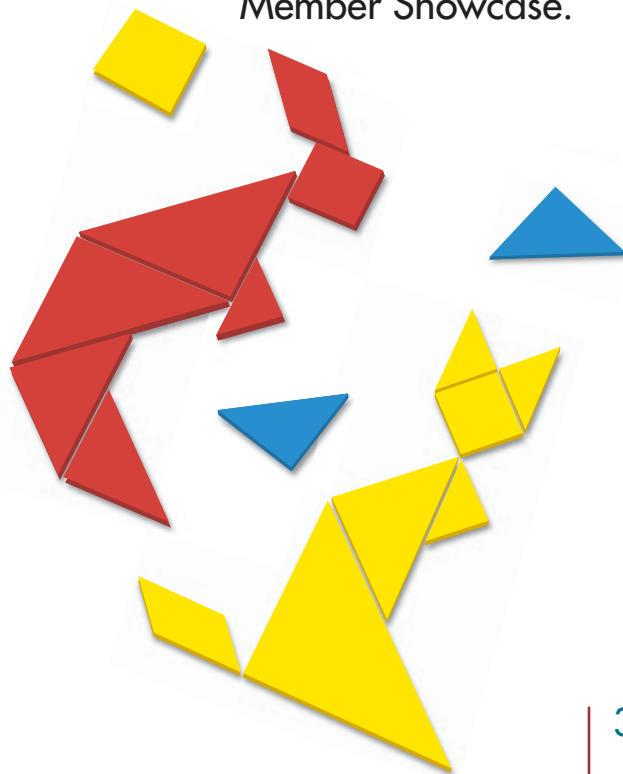
New York University, New York, New York

Candace Barriteau Phaire

New York University, New York, New York

Room 319

Membership Questions?
We've got answers!
Visit the NCTM
Member Showcase.



FRIDAY

8:00 A.M.–9:00 A.M.

149

Illuminate and Clarify Variables and Functions' Behavior with Sketchpad®

(6–12) Session

Students needn't struggle with domain, range, composition, and inverses. Learn how students using Sketchpad 5 create geometric functions, drag input points to determine output points, produce visual images of compositions and inverses, and transform photographic images. We'll report on actual classroom use and offer ready-to-use activities.

Scott Steketee

Key Curriculum Press Technologies, Emeryville, California

Erin Garvey

Science Leadership Academy, Philadelphia, Pennsylvania

Brian Cohen

School of the Future, Philadelphia, Pennsylvania

Room 320

150

Puzzles and Codes that Enhance Number Theory

(6–12) Session

Beginning with the Break the Code game, enjoy an exploration into the marvels of number theory. Take home a cornucopia of games, puzzles, and investigations to share with your students throughout the year.

Eric O'Brien

Bellmore Schools, Bellmore, New York

Room 421

151

Unlock the Secret: Solving Equations + Multiple Representations = Students' Success

(6–12) Session

Treat algebra as a handy language for unlocking secrets—equation solving—and building mathematical models. Participate in a variety of innovative, engaging, nontraditional approaches for solving equations. These unorthodox, researched, and tested methods will empower your students and move them to mastery!

Donna Davis

Baltimore City Public School System, Baltimore, Maryland

Room 414

152

Integrating Quantitative Reasoning (QR) across the Curriculum: A Grass-Roots Movement

(9–12, Higher Education) Session

Our students must develop QR skills to compete in today's world. The speakers will discuss what QR is and how they involve faculty in implementing related activities in their classes. Participants will have access to materials to help them develop QR projects for their classes.

Gordon L. Wells

Ohio Valley University, Vienna, West Virginia

Angie M. Morgan

Ohio Valley University, Vienna, West Virginia

Room 305/306



153

Examining Prospective Teachers' Mathematical Dispositions and Achievement in Mathematics

(Higher Education, Preservice and In-Service) Session

Research literature has used as many as nine distinct categories of mathematical dispositions, but never all together or consistently. The speaker will present a new, coherent, comprehensive framework for students' mathematical dispositions, the researcher-developed instrument to assess them, and results from the current study.

James E. R. Beyers

College of New Jersey, Ewing, New Jersey

Room 405/406

8:30 A.M.–9:30 A.M.

ew 154

Addressing Common Core Mathematical Practices Using Models from Math in Context®

(General Interest) Exhibitor Workshop

Experience realistic mathematics education and problem solving while exploring multiple number models that support the Common Core. These models move students to a deeper understanding of number and operations. Each participant will receive a free Number Tools workbook.

Britannica Digital Learning

Chicago, Illinois

Room 315

8:30 A.M.–9:30 A.M.

ew 155

Interact with the Common Core Mathematical Practices, Every Day

(K–5) Exhibitor Workshop

Experience the Common Core State Standards for Mathematical Practice in action using interactive technology. Through meaningful classroom discussion centered on the Every Day Counts digital white board curriculum, learn ideas for reinforcing, building, and mastering the Common Core in just ten minutes, every day.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 321

8:30 A.M.–10:00 A.M.

156

Developing Number Sense in the Primary Grades

(Pre-K–2) Gallery Workshop

Experience a variety of rich mathematical tasks that help students to develop number sense in grades K–2. Practical ideas for classroom use will be included, as well as connections to the Common Core.

Linda Gojak
President-Elect, National Council of Teachers of Mathematics;
John Carroll University, University Heights, Ohio

Room 418

157

Math Workstations at Work

(Pre-K–5) Gallery Workshop

Come learn to implement math work stations while providing differentiated instruction. This instructional approach not only addresses Response to Intervention models, but also offers a system for meaningful data collection. Participants will leave with everything they need to begin this approach immediately in their own classrooms.

Debbie Abrams
Sayville Public Schools, Sayville, New York

Merrileen Heidrich
Sayville Public Schools, Sayville, New York

Mary Puglisi
Sayville Public Schools, Sayville, New York

Room 411

158

Stories That Count: Children's Literature in Math Class

(Pre-K–5) Gallery Workshop

A good story captures children's interest, adds to their understanding, connects mathematics to their experiences or imagination, and demonstrates how math applies to everyday situations. Presented by a mathematician and award winning children's author and poet, this session will posit the combination of sound math concepts and good literature, exploring books that fill both requirements.

M. W. Penn
Author, New Haven, Connecticut

Room 302

159

Exploring Addition, Subtraction, and Multiples with Dynamic Number Grids

(3–8) Gallery Workshop

Imagine a number grid that can display multiples of any two numbers simultaneously, change its dimensions and range of values, and be used to develop strategies for addition and subtraction. Better yet, bring your laptop and engage in activities that take the traditional hundreds chart and turbocharge it for the twenty-first century.

Daniel Scher
Key Curriculum Press Technologies, Emeryville, California

Scott Steketee
Key Curriculum Press Technologies, Emeryville, California

Room 417

160

Algebraic Equations and Water: What a Combination!

(6–8) Gallery Workshop

Grades 6–9 students need experiences that allow connections among tables, graphs, equations, manipulatives, and verbal descriptions. Participants will engage in two standards-based activities that allow students to discover and apply slope-intercept form while making mathematical and real-world connections.

Rachelle D. Meyer
Baylor University, Waco, Texas

Room 419

FRIDAY

8:30 A.M.–10:00 A.M.



161

Differentiating Math Instruction for Multiple Intelligences

(6–8) Gallery Workshop

Come learn how to reach and enrich all your students! Our objective is to help all students successfully meet state and national math standards. Teachers will learn how to modify practices by creating activities that appeal to a variety of intelligences and to extend activities and reach higher levels of cognitive thought.

John Hinton

Hofstra University, Hempstead, New York

Room 301

162

Discuss, Develop, and Justify Formulas for Areas of Plane Figures

(6–8) Gallery Workshop

The Common Core State Standards state that students need to discuss, develop, and justify formulas for areas of plane figures by decomposing, rearranging, and relating them to rectangles. Come learn how you can help students improve their mathematical thinking, problem solving, and understanding through a series of area exploration activities.

Makoto Yoshida

William Paterson University, Wayne, New Jersey

William Jackson

Scarsdale Public Schools, Scarsdale, New York

Room 401

163

Making Sense of Transformations with Communicators and the Graphing Calculator

(6–8) Gallery Workshop

The workshop will model how to engage students in hands-on activities that will help build an understand of transformation. Participants will learn how to use communicators and the TI-73 graphing calculator to understand various types of transformation.

James R. Rahn

LL Teach, Inc., Bridgewater, New Jersey

Room 312

164

America's Idol? How the Contestant Most Voted for Doesn't Win

(9–12) Gallery Workshop

In this interactive presentation, participants will calculate means, expectations, biases, and proportions to determine if the *American Idol* competitor who got the most “counted” votes was the contestant who actually received the most votes, because of a flawed, biased voting scheme made worse by geography, age, and gender.

Jason Gershman

Nova Southeastern University, Fort Lauderdale, Florida

Room 412



165

Creative Projects for Teaching Mathematics in the Differentiated Classroom

(9–12) Gallery Workshop

Enhance your students' mathematical literacy by engaging them in creative activities. The speakers will use a constructivist approach to explore advanced concepts of composite and inverse functions, rational exponents, and word problems. Participants will learn effective methods for improving students' study skills.

Diane L. Johnson

Central Consolidated School District #22, Kirtland, New Mexico

Mary A. Boognl

Central Consolidated School District #22, Kirtland, New Mexico

Room 308/309

166

Using Manipulatives in the Algebra Classroom

(9–12) Gallery Workshop

Participants will use dice, number tiles, cards, and two-color counters to practice on algebra ideas—order of operations, exponents, solving linear and quadratic equations, integer arithmetic, multiplying monomials and binomials, and many others. Materials will be provided.

Don Balka

Saint Mary's College, Notre Dame, Indiana

Room 404

8:30 A.M.–10:00 A.M.

167

Promoting Classroom Discourse and Developing Questioning Strategies Using Dynamic Technology

(Preservice and In-Service) Gallery Workshop

Experience this interactive session focusing on students' reasoning and sense making using dynamic technology. Explore strategies that connect mathematical notions including finding solutions to algebraically "unsolvable" problems. Multiple perspectives that promote classroom discourse and involve dynamic technology and software will be discussed.

Farshid Safi

College of New Jersey, Ewing, New Jersey

Room 322

9:30 A.M.–10:30 A.M.

168

Crafting Creative Thinkers: Teaching Life Lessons through Mathematics

(General Interest) Session

What will our students remember after they've forgotten the quadratic formula and how to solve for x ? We celebrate the real prize in teaching—inspiring students' creativity in math and beyond—with entertaining antics that allow us to foster the pleasures of effective thinking while preparing students for the stressful reality of standardized exams.

Edward Burger

Williams College, Williamstown, Massachusetts

Room 403

169

Let Me Count The Ways: Benefits of Subitizing

(Pre-K–2) Session

A partnership between a university instructor and a second-grade teacher resulted in significant gains in basic addition fact automaticity for second-grade students. The speakers will share research, data, results, observations, instructional strategies, and activities.

Mitzi James Adams

Abilene Christian University, Abilene, Texas

Evelyn Moser

Abilene Independent School District, Abilene, Texas

Room 314

 170

Teaching Basic Operations to Diverse Students Using the Model Method

(Pre-K–5) Session

The model method for problem solving from Singapore Math derives from the concrete-representation-abstract technique for teaching mathematics. Learn how to implement the model method for teaching basic computation to students with diverse learning needs.

Joseph Sencibaugh

Truman State University, Kirksville, Missouri

Angela Sencibaugh

Valley Park School District, Valley Park, Missouri

Room 408/409

 171

Activities That Reach the Core of Important Math Concepts

(3–5) Session

This presentation will focus on activities that address essential elements of concepts taught in intermediate grades math curriculum, such as place value, division, fractions, area, and estimation. Participants will try activities that use manipulatives, problem solving, and children's literature.

Joyce A. Glatzer

West New York Public Schools, West New York, New Jersey

Room 410

172

Eliminate Speed Bumps on the Road to Common Core Math Standards

(3–8) Session

We will soon teach—or not—some math concepts that have challenged students most in different grades. This transition will present both a challenge and an opportunity. Participants will consider specific examples and discuss strategies for most effectively implementing the Common Core State Standards.

Robert J. Riehs

New Jersey Department of Education, Trenton, New Jersey

Room 415

FRIDAY

9:30 A.M.–10:30 A.M.

173

Making Memories in the Math Classroom

(3–8) Session

This session will present math magic activities in a spirit of play, emphasizing mathematics's beauty and fun. Teachers will receive handouts of hands-on activities for immediate classroom use and learn to enhance the NCTM Standards and motivate students to become active learners.

Charles B. Sonenshein
Wright State University, Dayton, Ohio

Room 320

174

Multiplication Rock! for the Twenty-first Century

(3–8) Session

Multiplication Rock! animated shorts, staples of 1970s, Saturday-morning television, can teach so much more than just multiplication facts. See how clips from the videos can create exercises in pattern recognition, properties of multiplication, and even alternative number bases. Handouts with lesson ideas will be provided.

Julie A. Belock
Salem State University, Salem, Massachusetts

Room 402

175

Refocusing Our Classrooms: New Opportunities for Students' Learning

(6–12) Session

The Common Core State Standards suggest mathematical practices students should learn. These standards can offer opportunities, guided by research and supported by technology, to make our classrooms places where students do mathematics in ways that motivate and engage them and that lead to deeper understanding and success for more students.

Gail Burrill
Past President, National Council of Teachers of Mathematics; Michigan State University, East Lansing, Michigan

Room 421

176

Bringing STEM into Your Classroom

(9–12) Session

Schools teach science, technology, engineering, and mathematics (STEM) mostly as separate events. Come see how the University of Texas at Tyler, under Michael Odell's direction, developed several long-term investigations that make worthy STEM classroom events. Take these investigations home to try with your students.

David Young
Fayetteville Public Schools, Fayetteville, Arkansas

Room 319

 177

Easy Does It!

(9–12) Session

Go beyond philosophical concepts and learn simple, classroom-tested, practical techniques that both engage and differentiate instruction for inner-city students. Participants will learn how quick, easy adjustments to an activity will enable them to reach a broad range of students' abilities.

Patrick L. Bryar
New York City Department of Education, New York, New York

Room 414

178

Get Smart! Take the SAT!

(9–12, Higher Education) Session

The speaker took the SAT again after 29 years to relive studying and test taking, fill gaps in her education, and relate better to students' experiences. We can use the SAT/ACT/GED for college and career standards while improving skills and persistence. Studying for the SAT can challenge and entertain while promoting brain fitness at any age.

Robin A. Schwartz
Math Confidence; College of Mount Saint Vincent, Bronx, New York

Room 420

Mingle, explore,
and learn in the
Exhibit Hall

9:30 A.M.–10:30 A.M.

179

Technological Representations: A Tool for Building Developmental Mathematics Students' Understanding

(9–12, Higher Education, Research) Session

Using multiple, linked technological representations of mathematics can empower developmental mathematics students. Witness video clips of a teaching experiment subject exploring representations of a dot pattern he had investigated. Learn how to use technology to allow students to build on their own understanding.

Lauretta E. Garrett

Tuskegee University, Tuskegee, Alabama

Room 405/406



180

Teaching Algebra Concepts to Students with Special Needs

(9–12, Preservice and In-Service) Session

With appropriate strategies, resources, and pedagogy, students with special needs are very capable of learning algebra concepts. This session will explore how those strategies, resources, and pedagogy apply to several important concepts in middle and high school algebra. The speaker will discuss learning difficulties specific to algebra.

Mary Lou Metz

Indiana University of Pennsylvania, Indiana, Pennsylvania

Room 305/306



181

Cooperating Teachers & Coaches: Putting Mathematics Teacher Education into Practice

(Preservice and In-Service) Session

What does it take to be an effective, cooperating teacher? Join officers from the New Jersey Association of Mathematics Teacher Educators and others in answering this and additional questions about mentoring student teachers. Come prepared to share your experiences and suggestions.

Cathy Liebars

College of New Jersey, Ewing, New Jersey

Karen Ivy

New Jersey City University, Ewing, New Jersey

Room 318

10:00 A.M.–11:00 A.M.

ew 181.1

Video Games for Intervention and Fluency, Using Singapore Math Methodology

(K–3) Exhibitor Workshop

Tricia Salerno, developer of iPad and PC games, will discuss and demonstrate the role of video technology in giving additional support in developing math competence using the strategies in Singapore Math.

SingaporeMathNow/SmartTraining

Scottsdale, Arizona

Room 313

ew 182

Transitioning to the Common Core with GO Math!

(K–6) Exhibitor Workshop

Hit the ground running and never look back! Go Math!@2012 is the program of choice for teachers across the country. Come learn more about how the Common Core State Standards will affect what you teach in Grades K-6. See how GO Math!@2012 addresses the Common Core both in content and mathematical practices. Through specific examples in the workshop, participants will learn strategies for developing mathematical practices in their students. Participants will receive a set of concept readers.

Houghton Mifflin Harcourt

Boston, Massachusetts

Room 321

ew 183

Conquer Times Tables in Only Three Weeks, Guaranteed!

(K–8) Exhibitor Workshop

A research-based, multisensory program teaches times tables in *three weeks*, guaranteed! If class average isn't 90 percent on final test, you get a 100 percent refund. Addresses all four learning styles. Regular, special ed, gifted, Response to Intervention. Tons of fun! No training! Sister products: Fishin' for Addition, Subtraction in Action, Divide'n'Slide, Clockwise Fractions and Equivalency. Visit www.rhymesntimes.com and www.clockwisemath.com.

Rhymes 'n' Times

Lewisville, Texas

Room 315

FRIDAY

10:30 A.M.–12:00 P.M.

184

Embedding Number Sense in Measurement

(Pre-K–2) Gallery Workshop

Measurement is the perfect content in which to embed those crucial number-sense skills. Participants will explore a variety of motivating, engaging measurement activities that apply number-sense concepts in a problem-based format. The speaker will share and examine many examples of students' work.

Beth Kobett

Stevenson University, Eldersburg, Maryland

Room 418

185

Building Number Sense to Develop Mental Math Skills

(Pre-K–5) Gallery Workshop

Although number sense is a personal process, exposure to a variety of ways of seeing numbers, and making explicit connections among the representations, can help students form their own number sense. This workshop will explore using five different materials across grade levels to develop number sense and promote mental-math skills.

Jeanne D. Rast

St. John the Evangelist Catholic School, Atlanta, Georgia

Room 322

 186

Making It Real: Easy, Effective Math Centers

(Pre-K–5) Gallery Workshop

Why use learning centers? “Because they’re fun” might come to mind first, but research shows the benefit of using them to engage and motivate students. Through meaningful experiences, learning centers appeal to all four VARK sensory learning styles. Attendees will experience a variety of centers that they can be adapt for different skill levels.

Marilyn Lance

Houghton Mifflin Harcourt, Austin, Texas

Room 412

187

Come Fly with Me! Paper Airplanes Make Mathematics Lessons Soar!

(3–5) Gallery Workshop

Participants will make paper airplanes and then use their models in lively competition to examine concepts of flight, geometry, measurement, and statistics.

James J. Clayton

Saint Peter's College, Jersey City, New Jersey

Sera Clayton

Red Oaks School, Morristown, New Jersey

Room 417

 188

Melodies, Methods, and Models That Make Math Marvelous and Meaningful

(3–5, Preservice and In-Service) Gallery Workshop

Come get ideas that you can use to help your students become true problem solvers and math lovers. Learn unique ways to assess what students have learned. See how putting the content being taught in a context helps students really understand it and remember it. Come get a free copy of the “Melodies that Make Math Marvelous and Meaningful” CD.

Brenda Barrow

Old Dominion University, Norfolk, Virginia

Room 302

 189

Dealing with Diversity: Math Games That Suit All Learners

(3–8) Gallery Workshop

Are you looking for ways to include, motivate, and engage all students in your math program? Come prepared to play card and dice games that help them master the operations, numeration concepts, and more. Experience first-hand the power of games for delivering curriculum, reaching all styles of learners, and promoting active participation by all.

Joanne Currah

Box Cars & One-Eyed Jacks, Edmonton, Alberta, Canada

Room 401

10:30 A.M.–12:00 P.M.

190

Dynamic, Multirepresentational Approaches to Fractions with The Geometer's Sketchpad®

(3–8) Gallery Workshop

Experience the power of interactive fraction tools that allow you to build area models of any fraction whatsoever, even those greater than one, divide and subdivide segments into equal parts, and relate points on number lines to fractional locations. The insights obtainable from these tools will surprise you. Bring your laptop.

Daniel Scher

Key Curriculum Press Technologies, Emeryville, California

Scott Steketee

Key Curriculum Press Technologies, Emeryville, California

Room 308/309

191

Beyond M&M's and Cheerios: Making Data Collection and Analysis Fun!

(6–12) Gallery Workshop

Let's make statistics fun! Participants will actively engage in hands-on, data-collection activities to generate data suitable for scatter plots, trends, box-and-whisker plots, bar graphs, histograms, and other descriptive statistics. Handouts with many other activities will be included. Most activities can be modified for all grades.

Colleen A. Watson

James Madison University, Harrisonburg, Virginia

Room 411

192

Using Your Graphing Calculator to Explore Translations, Rotations, and Reflections

(6–12) Gallery Workshop

This presentation will use the TI-84's LIST and STAT PLOT features to graph objects. By experimenting with changing the x and y values, participants will discover and develop rules for creating translations, reflections, and rotations.

Fred Decovsky

Teachers Teaching with Technology, Millburn, New Jersey

Room 312

193

Piquing Students' Interest in Modeling

(9–12) Gallery Workshop

This workshop will increase teachers' awareness of modeling as an effective instructional tool, help them incorporate twenty-first century skills, and support the need for a writing component, encourage them to include modeling in their classes, and help them convey to students how modeling connects mathematics to real-world problem solving.

Ben Fusaro

Florida State University, Tallahassee, Florida

Room 301

194

Exploring Divisibility: A Central Concept throughout the Curriculum

(Preservice and In-Service) Gallery Workshop

NCTM's Standards indicate the importance of primes, factors, and multiples. This hands-on workshop will explore divisibility through base-ten pieces, color tiles, a computer algebra system, and modular arithmetic. It will delve deeper into divisibility ideas in the Fibonacci and Lucas sequences, using congruences to furnish proofs for divisibility.

Jay L. Schiffman

Rowan University, Glassboro, New Jersey

Room 419

195

New and Preservice Teachers' Workshop

(Preservice and In-Service) Gallery Workshop

Find answers to your questions on topics such as classroom management, parents, motivation, and keeping your sanity. Connect with other new teachers, learn from experienced professionals, and find resources to engage you and your students. You might even win a prize!

G. Patrick Vennebush

National Council of Teachers of Mathematics, Reston, Virginia

Room 404

FRIDAY

11:00 A.M.–12:00 P.M.

196

Math + Adrenaline = The Roller Coaster

(General Interest) Session

Designing roller coasters uses a little bit of algebra, geometry, statistics, and measurement. Come explore the mathematics of these amazing machines, and take a peek at using the video game *Roller Coaster Tycoon* and data-collection devices for teaching math concepts.

Mike Long

Shippensburg University, Shippensburg, Pennsylvania

Nathan Barr

Shippensburg University, Shippensburg, Pennsylvania

Room 320

197

NCTM and Issues around Implementing and Assessing the Common Core

(General Interest) Session

This session will give current information on NCTM's work with teachers, schools, and districts implementing the Common Core State Standards in Mathematics (CCSSM) and on CCSSM's upcoming assessment. It will discuss NCTM's related professional development work, publications, and joint work with other organizations, including the two Assessment Consortia.

Kimberly D. Mueller

Board of Directors, National Council of Teachers of Mathematics; Lumberton Township School District, Lumberton, New York

J. Michael Shaughnessy

President, National Council of Teachers of Mathematics; Portland State University, Portland, Oregon

Room 303

198

Partners Building Knowledge: Collaboration among Practitioners, Researchers, and Curriculum Developers

(General Interest) Session

When research-and-development (R&D) projects are true partnerships for building knowledge and products, everyone benefits. Through experienced practitioners' and R&D agents' perspectives, learn strategies that lead to effective collaboration, along with successful partnerships' benefits, challenges, and expectations.

Karen King

National Council of Teachers of Mathematics, Reston, Virginia

Gary Benenson

City University of New York, New York, New York

Derek Riley

Policy Studies Associates, Inc., Washington, D.C.

Room 318

199

Providing Best Mentoring Practices and Online Support for New Teachers

(General Interest) Session

A mentor or cooperating teacher plays a crucial role in beginning or student teachers' development. The speaker will discuss successful strategies for guiding new teachers to effective mathematics teaching, ideas on dealing with their classroom challenges, and the effectiveness of using an online support model for discussion and reflection.

Nina R. Girard

University of Pittsburgh at Johnstown, Johnstown, Pennsylvania

Room 405/406

200

Effective Games and Practices That Lead to Students' Success

(Pre-K–2) Session

Be more efficient and selective about time devoted to number. A ready-to-use handout of highly engaging, repeatable activities and instructional strategies will help you enhance number sense and build confidence in your students.

Laura L. Choate

Fallbrook Union Elementary School District, Fallbrook, California

Room 402

11:00 A.M.–12:00 P.M.

201

A Real Hands-On Approach to Teaching Place Value

(Pre-K–5) Session

Audience members will participate in activities designed to develop a deep understanding of place value. Manipulatives based on the most powerful representation of ten will help develop strong number sense and efficient mental strategies.

Brian J. Tickle
Consultant, Taree, Australia

Room 319

202

Teaching Fractions to Build Proportional Reasoning

(3–5) Session

This session will focus on strategies for building proportional reasoning through three models of fractions—area, set and number line. Participants will experience literature, songs, and meaningful, ready-to-go activities for the elementary school classroom.

Kim Sutton
Creative Mathematics, Arcata, California

Room 421

203

Multiplicative Identity Property of 1: Connect Its Meaning to Applications

(3–8) Session

Relevant contextual problems reveal the value of the multiplicative identity property of 1. Enjoy an activity involving measurement conversion. Reflect on the identity property's power in finding equivalent fractions, adding and subtracting fractions, dividing decimals, finding scale factors, and rationalizing denominators.

Karen Lucas
University of Tennessee, Knoxville, Tennessee

Room 305/306

204

Practices That Improve Attitude and Achievement in Mathematics and Science

(6–8, Preservice and In-Service) Session

The speakers will discuss examples of interdisciplinary, research-related lessons and related, theme-based field trips; describe their effect on middle school students, math and science teachers, administrators, and graduate students; and give results from qualitative and quantitative assessments, including interviews of students and teachers.

Kenneth C. Wolff
Montclair State University, Montclair, New Jersey

Sumi Hagiwara
Montclair State University, Montclair, New Jersey

Elaine Lipani
Kearny Board of Education, Kearny, New Jersey

Room 414

205

Launching Rockets and Secret Sharing Techniques from Algebra

(6–12) Session

A classic movie theme involves three important people having keys to launch a missile, at least two of which are needed for launch. How are such schemes implemented in real life? With algebra! This presentation will show how finding lines' and parabolas' equations can allow students to find secret passwords, combinations, and launch codes.

Teo J. Paoletti
Moorestown High School, Moorestown, New Jersey

Room 415

206

Making Mathematics a Habit!

(6–12) Session

The speaker will use mathematical adventures in *Number Devil* and other books to look at developing mathematical habits of mind through literature and problem solving. Take away teaching ideas and problems to use with your students, and have fun doing math yourself! Topics will include Pascal's triangle, prime and Fibonacci numbers, and more.

Trena Wilkerson
Baylor University, Waco, Texas

Room 408/409

FRIDAY

11:00 A.M.–12:00 P.M.

207

What Does the Brain Do with All That Mathematics?

(9–12) Session

Why do we find ourselves reteaching basic concepts at different stages of mathematical development? How can we help students learn toward mastery? This session will explore current brain research and give insights into how we can make instruction more effective and increase students' mathematics retention.

Carolyn Williamson

Virginia Advanced Study Strategies, Richmond, Virginia

Room 410

208

Diver Problem, Surfer Problem Further Extended

(9–12, Higher Education) Session

The presenters will demonstrate methods and techniques used to help students enjoy the famous surfer problem, developing original proofs for it and extending it to a 3–D, deep-sea-diver problem with appropriate, analogous results. If you need some interesting, straightforward projects to enrich your students' learning, come join us.

Ronald G. Smith

Harding University, Searcy, Arkansas

Dean B. Priest

Harding University, Searcy, Arkansas

Room 314

209

If Math Were an Animal: Addressing Math Anxiety

(Preservice and In-Service) Session

Come experience an approach that helps preservice teachers identify and address their math anxieties such that they can lead their future classrooms in meaningful, engaging, enjoyable mathematics learning. Hands-on activities, literature, and handouts will be included.

Kimberly C. Arp

Cabrini College, Radnor, Pennsylvania

Room 420



210

What Do We Know about “Good Teaching” for All Students?

(Preservice and In-Service) Session

Participants will investigate teaching practices claimed to promote mathematics learning for all students. They will examine vignettes, case studies, and other artifacts from research articles to judge the claims' validity.

Marilyn Strutchens

Auburn University, Auburn, Alabama

Room 403

11:30 A.M.–12:30 P.M.

ew 211

Visualize Singapore Math: Transitioning from the Concrete to the Abstract

(K–6) Exhibitor Workshop

Singapore's Mathematics Framework focuses on problem solving and conceptual understanding through visualization. Transition from concrete to pictorial to abstract with Math in Focus: Singapore Math by Marshall Cavendish, the U.S. edition of Singapore's widely used program. This workshop will model Singapore's visual strategies: ten-frames, number bonds, and bar models.

Houghton Mifflin Harcourt

Boston, Massachusetts

Room 321

ew 212

Mental Math with Fractions, Decimals, Percents, and Degrees

(Pre-K–8) Exhibitor Workshop

This multisensory program connects fractions, decimals, percents, and degrees to a clock face. Do mental math, compare fractions, convert them to decimals, add or subtract in your head, and master pie charts. Discover real-world applications for all four learning styles, regular, special ed, gifted, Response to Intervention. Tons of fun! *No* training! www.clockwisemath.com

ClockWise Fractions

Lewisville, Texas

Room 315

12:30 P.M.–1:30 P.M.

214

Understanding and Implementing the Common Core State Standards for Mathematics

(General Interest) Session

This session will help participants understand the rationale and development of the Kindergarten–Grade 12 Common Core State Standards for Mathematics. The presenter will review the standards’ design and substance. Participants will receive resources and related materials for developing curriculum and implementing the standards locally.

Nancy L. King

Cedar Crest College, Allentown, Pennsylvania

Room 403

215

Using Asian Textbooks to Develop Number Sense in Early Grades

(Pre-K–2) Session

The Common Core State Standards (CCSS) cite focused, coherent curricula from high-performing Asian countries, textbooks from which can help us understand the new standards’ intent. Explore how Japanese and Singaporean textbooks develop students’ number sense in early grades and how we can use their ideas to bring the CCSS to life.

William Jackson

Scarsdale Public Schools, Scarsdale, New York

Makoto Yoshida

William Paterson University, Wayne, New Jersey

Room 421

216

Gaining Insight into Students’ Mathematical Understanding: The “Write” Way

(Pre-K–5) Session

Are you looking for a strategy to engage students’ higher-level thinking? Math journaling lets students demonstrate mathematical knowledge while also allowing insight into students’ comprehension of conceptual and procedural knowledge. Explore practical ideas for integrating math journaling into your classroom.

Rena Castelluci

West Allegheny School District, Oakdale, Pennsylvania

Kirsten Davis

West Allegheny School District, Oakdale, Pennsylvania

Room 314

217

Manipulatives from the Dollar Store

(Pre-K–5) Session

If you work in a school where manipulatives are hard to come by, or your district has a tight budget, you need not fret. Mathematics lessons for grades 1–4 can use common items from any dollar store, such as dice, playing cards, play money, colored beads, workbooks, sticky-backed shapes, and tangram pieces.

Anita Schuloff

Paramus Catholic High School, Paramus, New Jersey

Room 415

217.1

Examining the IMPACT of UDL in Special Education Mathematics Instruction

(3–5) Session

The NJDOE Improving Partnerships and Active Collaboration for Teaching (IMPACT) grant has provided Universal Design for Learning (UDL) training, coaching, and 21st century tools to enhance classroom instruction: general mathematics, special education, pull-out and inclusion. IMPACT teachers from one district will describe their experiences.

Jennifer V. Jones

Rutgers University, New Brunswick, New Jersey

Leslie Malara

Bergenfield Public Schools, Bergenfield, New Jersey

Lauren Rogers

Bergenfield Public Schools, Bergenfield, New Jersey

Room 405/406

218

Flip It Over and Multiply? What’s That?

(3–8) Session

The speaker will share strategies for conceptual development where one might say, “I know *how* to do it, but not *why!*” Concepts include multiplying fractions, multiplying two digit numbers, subtracting a negative, the area of a trapezoid, algebraic thinking, and more. Participants will receive a CD and lesson plans.

Rudy V. Neufeld

Neufeld Learning Systems, Inc.; Thames Valley Schools, London, Canada

Room 318

FRIDAY

12:30 P.M.–1:30 P.M.

219

Writing across the Mathematics Curriculum to Assess Conceptual Understanding

(3–8) Session

This session will focus on the benefits of using authentic, meaningful writing in the math classroom as an assessment tool and an instructional strategy. The speakers will share and explain different writing strategies and a step-by-step process. Participants will receive clear examples that they can use as models with students.

Carla J. Hunt

Albemarle County Schools, Charlottesville, Virginia

Colleen Branche

Albemarle County Schools, Charlottesville, Virginia

Monica Cabarcas

Albemarle County Schools, Charlottesville, Virginia

Room 410

 220

Interested in Differentiation, But Not Sure Where to Begin?

(6–8) Session

This interactive session will get you started. Use NCTM resources, state standards, and advanced courses to develop anchor activities, challenges, and tiered assignments. Design lessons and activities that create a challenging, engaging learning environment for students with different readiness levels and learning styles.

Laurie Griffo

Harrison Central School District, Harrison, New York

Linda Criniti

Harrison Central School District, Harrison, New York

Andrea Courtney

Harrison Central School District, Harrison, New York

Room 319

221

The Mathematics behind Sports

(6–8) Session

Students love to participate in and watch summer and winter Olympic sports. They also like to participate actively in their mathematical learning. The speakers will show some fun mathematical activities pertaining to basketball and figure skating that you can do with your energy-filled students.

Diana Cheng

Towson University, Towson, Maryland

Johanna Bunn

Boston University, Boston, Massachusetts

Room 402

222

Using Arithmetic Sequences to Introduce Linear Functions

(6–12) Session

Students sometimes have difficulty connecting the idea of a linear function with its analytic representation. This alternative approach uses students' prior knowledge of arithmetic sequences to generate the point-slope form of a linear function. In the process, students develop a conceptual understanding of slope as a rate of change.

Michael Manganello

Downingtown Area School District, Downingtown, Pennsylvania

Matthew Grinwis

Downingtown Area School District, Downingtown, Pennsylvania

Room 320

 223

Technology as a Lever for Reasoning and Sense Making in Mathematics

(9–12) Session

Technology can create new opportunities for reasoning and sense making. The speakers will draw exemplars from throughout secondary school mathematics, including numbers and operations, algebra, geometry, functions and modeling, statistics, and probability. They will discuss choosing and using technology effectively in mathematics classrooms.

Thomas P. Dick

Oregon State University, Corvallis, Oregon

Karen F. Hollebrands

North Carolina State University, Raleigh, North Carolina

Room 408/409



12:30 P.M.–1:30 P.M.

224

Alternative Assessments in Precalculus: Putting Concepts in Context

(9–12, Higher Education) Session

Participants will explore assessments that use precalculus concepts in real-world contexts. Technology will link regression with the Olympics, sine curves with tide changes, function transformations with art, digital cameras with trigonometry, and more. You will leave with examples and rubrics, ready to implement these projects on Monday.

Amy Gersbach

Seneca High School, Tabernacle, New Jersey

Ingrid Williams

Shawnee High School, Medford, New Jersey

Room 414

225

Teacher Outreach: Math Mondays and Recruiting Students

(Higher Education) Session

Discover a set of collaborative, interactive seminars for grades K–12 teachers on diverse topics. Teachers earn continuing education credits while learning math across disciplines. Among the activities shared will be STEM Girls, a one-day, university-sponsored conference encouraging mathematics and science interest for seventh-grade girls.

Margaret Wirth

East Carolina University, Greenville, North Carolina

Room 420

226

NCTM and the Common Core State Standards: Implications for Teacher Education

(Preservice and In-Service) Session

As the Common Core State Standards for Mathematics are adopted, teacher educators need to examine what they do to prepare new mathematics teachers and offer professional development. This session will explore how the NCTM Standards and other NCTM resources continue to play an integral role in mathematics teacher education.

W. Gary Martin

Auburn University, Auburn, Alabama

Room 305/306

12:30 P.M.–2:00 P.M.

227

Addition and Subtraction: What Are the Essential Understandings?

(Pre-K–2) Gallery Workshop

Using NCTM's newly published Essential Understanding book on grades Pre-K–2 addition and subtraction, the speaker will present important goals and corresponding activities that would link to them. She will also use such topics as number sense, word problem structures, and the equal sign to showcase materials, games, and diagnostic assessments that link to these concepts.

Karen Karp

University of Louisville, Louisville, Kentucky

Room 419



228

One Size Does Not Fit All!

(Pre-K–2) Gallery Workshop

The “one size fits all” policy doesn't work for clothing *or* mathematics instruction. This workshop will use differentiation strategies to demonstrate hands-on, Standards-based activities that support equitable access to mathematics for all students. Activities will highlight algebraic reasoning, geometry, measurement, and number and operations.

Latrenda Knighten

East Baton Rouge Parish School District, Baton Rouge, Louisiana

Room 302

229

Using the Power of Stories to Develop Mathematical Concepts

(Pre-K–2) Gallery Workshop

Dynamic, exciting children's books invite and motivate children to learn mathematics by responding to stories, characters, and their experiences in children's literature. By promoting children as active thinkers, we teach them mathematics by forming relationships, making connections, and integrating concepts.

Lynn Columba

Lehigh University, Bethlehem, Pennsylvania

Room 417

FRIDAY

12:30 P.M.–2:00 P.M.

230

Use Children's Literature to Create Dynamite Lessons

(3–5) Gallery Workshop

Participants will actively learn ways to incorporate literature into their math lessons to initiate investigation, discourse, manipulative use, and inquiry-based teaching. Concepts and lessons teachable using Spaghetti and Meatballs for All, A Cloak for a Dreamer, Alexander Who Was Rich Last Sunday, and Pigs Will Be Pigs will be shared.

Robert Jolley

LLTeach, Inc., Bridgewater, New Jersey

Room 312

231

Know When to Fold 'Em to Measure Up in Math

(3–8) Gallery Workshop

Come out of the textbook and into the fold in this fast-paced, hands-on workshop as you learn to make and use measurement-focused, 3–D graphic organizers aimed at helping your students “measure up in math.” Depart with practical, evidence-based, kinesthetic, and integrative ideas ready for immediate use.

Nancy Wisker

Dinah Zike Academy, Comfort, Texas

Room 308/309

232

Transformational Geometry through Games and Hands-On Activities

(3–8) Gallery Workshop

Make your transformational geometry unit come to life. Try methods for teaching transformations. Using games like Blokus to candy boxes, learning about reflection, rotation, and translation can be lots of fun. Participants will leave with all they need to use these activities in their own classroom.

Norma Boakes

Richard Stockton College of New Jersey, Pomona, New Jersey

Room 404

233

Experiencing Geometry through Dollar Bills, Paper Bags, and More

(6–12) Gallery Workshop

Participants will use paper-folding activities to review and investigate geometric vocabulary and concepts, discuss adapting and incorporating these activities for the different grade levels, and receive handouts and materials.

Kathleen M. Fick

Delaware State University, Dover, Delaware

Room 412

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12:30 P.M.–2:00 P.M.

234

Multiple Representations of Motion: Mellow Yellow Works Out with Sketchpad®

(6–12) Gallery Workshop

Understanding motion involves representing time, distance, velocity, acceleration, and the motion itself. The speakers analyze and plan Mellow Yellow's cross-country workouts, shifting among a written plan, motion, table, and graphs of distance, rate, and acceleration. Bring a laptop, take home four classroom-ready activities. No calculus needed.

Scott Stekettee

Key Curriculum Press Technologies, Emeryville, California

Daniel Scher

Key Curriculum Press Technologies, Emeryville, California

Room 301

235

Reasoning and Sense Making: Algebra Instruction to Meet New Standards

(6–12) Gallery Workshop

Participants will look at lessons whose strategies focus on algebraic reasoning and sense making. BS/WNET Thirteen resources and lesson plans will offer real-world applications, including hip-hop music, fashion design, and videogaming, to help students and teachers meet the new Common Core State Standards and Algebra I assessment expectations.

Deborah L. Ives

Morris School District, Morristown, New Jersey

Room 401

236

From Wikki Stix to Graphing Calculators

(9–12) Gallery Workshop

Participants will try technology-rich activities designed to lead students through discovering relationships and rules covering fundamental topics in Algebra 1 through precalculus. They will use graphing calculators and discuss many ways to incorporate technology and manipulatives to make lessons more meaningful.

Deedee Stanfield

Oxford City School System, Oxford, Alabama

Room 411

 237

Riding the Ferris Wheel: A Sinusoidal Model

(9–12) Gallery Workshop

Often, students encounter scenarios that model the sine function, such as tides or a Ferris wheel, but do not get a concrete understanding of the model. This activity will use a hamster wheel and other inexpensive, everyday items to model Ferris wheel motion. Participants will collect data and develop their own model for the motion.

Sharon E. Taylor

Georgia Southern University, Statesboro, Georgia

Kathleen Mittag

University of Texas at San Antonio, San Antonio, Texas

Room 418

238

Maximize the Math: Link Home, School, and after School

(Preservice and In-Service) Gallery Workshop

Do more math to optimize results. Link story books to math activities. Link school math to after-school and summer programs. Encourage more math at home, by running parent education and family programs. Think of making connections as *the* core standard.

Claire B. Passantino

Lets Read Math!, Yardley, Pennsylvania

Room 322

1:00 P.M.–2:00 P.M.

ew 238.1

Nourishing Young Math Minds with MANGO!

(4–8) Exhibitor Workshop

See how easy it is to create a classroom of active learners with creative, enjoyable games and activities that you can immediately and effortlessly implement in a classroom. See how to use tools to help students discover math concepts, foster discussion on math ideas, and mentally process math facts to inspire confidence in mathematics and beyond.

MANGO Math Group

Snohomish, Washington

Room 315

FRIDAY

1:00 P.M.–2:00 P.M.

ew 239

HELP Implement RtI for ELL Math

(5–8) Exhibitor Workshop

Interact with HELP Math, a digital intervention designed for English language learners (ELLs) in elementary and middle school. Explore strategies that increase achievement: target precise learning needs, adjust instruction's intensity and nature, scaffold new material and language, integrate technology into a Response to Intervention (RtI) model.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 321

2:00 P.M.–3:00 P.M.

240

Are These the Right Standards for Preparing Future Mathematics Teachers?

(General Interest) Session

NCTM is currently revising the standards for mathematics teacher education programs, for use as part of the NCATE program review process, among other in venues. Come hear about the draft standards and help shape the final revisions through your feedback.

NCTM NCATE Program Standards Task Force
National Council of Teachers of Mathematics, Reston,
Virginia

Room 318

241

Keys to Successful Teaching: Turning Research into Practice

(General Interest) Session

With heart, humor, amusing anecdotes, a recount of his own compelling life story, and references to the latest research, the speaker will describe five easy-to-apply, yet powerful tips for improving teaching effectiveness. The talk will be light-hearted and entertaining; the goal, serious: helping students achieve their maximum potential.

Frank Wang
Alexander Dawson Foundation, Las Vegas, Nevada

Room 403

241.1

Developing Number Sense: The Big Ideas in Pre-K–Grade 2

(Pre-K–2, Preservice and In-Service) Session

Participants will explore how children develop number sense and how teachers can best scaffold early learning experiences to meet the needs of all children. Video clips of young children thinking aloud in individual interviews and in classroom settings will be used to illustrate development of the big ideas in number and operations.

Linnea Weiland
William Paterson University, Wayne, New Jersey

Room 303

243

Don't Tell Them, Ask Them!

(Pre-K–5) Session

Requiring students to explain *why* in math class is a strong tool for increasing conceptual understanding. Allowing time in class to discuss how students got their answers, why they solved problems as they, and whether anyone solved the problems different way uses time valuably. Come learn questions to ask and ways to respond to them in your class.

Tricia N. Salerno
Benchmark School, Phoenix, Arizona

Sherri Adler
Benchmark School, Phoenix, Arizona

Room 319

 244

Using Open-Ended Questions to Develop Deep Understanding and Higher-Order Thinking

(Pre-K–5) Session

Participants will examine using specific, open-ended questions designed to develop deep understanding and reasoning and communication skills. The session will focus on using open-ended questions to gauge students' level of understanding and thinking skills.

Brian J. Tickle
Consultant, Taree, Australia

Room 415

2:00 P.M.–3:00 P.M.

 245

Universal Design for Learning (UDL) in the Math Classroom

(3–5) Session

This presentation will examine integrating UDL concepts into the elementary school mathematics classroom. Although often thought of simply as a special-education construct, UDL offers many opportunities for improving students' mathematics experiences. Come learn about UDL, and see how it can help you reach all students.

Adam Goldberg

Southern Connecticut State University, New Haven, Connecticut

Deborah Newton

Southern Connecticut State University, New Haven, Connecticut

Room 421

246

Helping Community College Developmental Mathematics Students See and Understand Mathematics

(6–8, Higher Education) Session

A SMART Board is a wonderful tool to help students build a solid foundation in mathematics. Develop visual explanations, create engaging lessons, and focus students' attention. Tie together mathematical concepts and skills, enhancing students' understanding. Use the Internet and digital images to bring the real world into your classroom.

Linda Treilman

Mercer County Community College, West Windsor, New Jersey

Room 314

Join us at the 2012 Regional Conferences:

- Dallas, Texas • October 10–12
- Hartford, Connecticut • October 24–26
- Chicago, Illinois • November 28–30

247

Reaching All Students with Mathematics: Experience Success in Action

(6–8, Preservice and In-Service) Session

Actions speak louder than words. Experience proven strategies for increasing focus, feedback, and conceptual understanding. Learn questioning techniques that elicit enthusiastic, whole-class participation; raise achievement; and prepare students for success in algebra and beyond.

William J. Glee

Project SEED, Berkeley, California

Howard Baker

Project SEED, Berkeley, California

Room 414

248

Encouraging Students' Reasoning and Sense Making through Lesson Study and Technology

(6–12) Session

Participants will ponder, through a lesson-study approach, several problems proven to be rich sources for promoting students' reasoning and discourse in the classroom. They will analyze collaboratively planned and inquiry lessons using technology, how assessment aligns with instruction, and students' work.

José Francisco Sala García

Instituto de Educación Secundaria Sa Colomina, Ibiza, Balearic Islands, Spain

Room 405/406

249

Finance and Math: A Combination You Can Bet On!

(6–12) Session

Twenty states, including New Jersey and New York, require financial education for high school graduation, and other states are moving to join them. The speakers will show how to support those requirements in math class, in lessons from algebra through precalculus, while making math more interesting and teenagers more money-savvy.

Paul Westbrook

Rutgers University, New Brunswick, New Jersey

Deborah Zisa

North Warren Regional High School, Blairstown, New Jersey

Room 402

FRIDAY

2:00 P.M.–3:00 P.M.

250

Problems Students Want to Solve: Getting beyond “Two Trains Leave ...”

(6–12) Session

Students often find problem solving boring. Word problems have little relevance to their lives. Why can't algebra and geometry involve video games, music, or sports? This session will look at problems that middle and high school students would find interesting and want to solve. Problem solving, math modeling, and communication will be emphasized.

Betsy J. McShea

Richard Stockton College of New Jersey, Pomona, New Jersey

Maureen Yarnevich

Towson University, Towson, Maryland

Christina Tiley

Howard Community College, Columbia, Maryland

Room 420

251

Using Manipulatives to Help Students Be Successful with Algebra

(6–12) Session

Do your students struggle with algebraic concepts? See how they can benefit from a visual approach to algebra, and learn how hands-on activities can help promote their understanding of algebraic concepts. Topics include integer operations, solving equations, polynomial expressions, graphing, and more!

Kevin Dykema

Mattawan Middle School, Mattawan, Michigan

Room 408/409

252

An Innovative Assessment Paradigm: From Classroom to NSF-Funded Research Study

(9–12, Higher Education) Session

The speakers will discuss evidence and a theoretical framework that led a four-year, NSF-funded study on a “proficiency-based assessment and reassessment of learning outcomes” system. A random-control-trial study evaluated the system’s effect on students’ achievement, engagement, and attitudes in ninth-grade algebra and geometry classrooms.

Michael A. Posner

Villanova University, Villanova, Pennsylvania

Nancy Lawrence

Twenty-first Century Partnership for STEM Education, Conshohocken, Pennsylvania

Room 410

253

Math Modeling across the Curriculum

(Higher Education, Preservice and In-Service) Session

Join us to discuss how math modeling spans and bridges the NCTM *Standards*, the Common Core, and your curriculum as we explore activities from middle grades through high school that encourage students to investigate and explore how math applies in the real world.

Ben Galluzzo

Shippensburg University, Shippensburg, Pennsylvania

Johnathan Hocker

Shippensburg University, Shippensburg, Pennsylvania

Room 305/306

254

Professional Development for Middle- School Teachers: Recent Research in the United States

(Preservice and In-Service, Research) Session

During academic years 2009–11, research identified completed projects that used United States government funding to address professional development for middle school teachers. This presentation will describe the research’s methodology, summarize its findings, and direct attendees to material that the projects produced.

Katherine Safford-Ramus

Saint Peter’s College, Jersey City, New Jersey

Room 320



2:30 P.M.–3:30 P.M.

ew 255

iPads, Tablets, Mobile Devices: New Tech for the Math Classroom

(6–12) Exhibitor Workshop

The secondary school math classroom of the future is here, now. How do these devices fit into math instruction? Why do they appeal to the current generation of students? Come imagine and explore real-life applications, modeling, and problem solving using iPads, tablets, and mobile devices.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 321

2:30 P.M.–4:00 P.M.

256

Methods and Games to Enhance the Understanding of Basic Facts

(Pre-K–2, Preservice and In-Service) Gallery Workshop

Engage in discussion and activities to illustrate how basic mathematical facts can be learned with an emphasis on conceptual understanding that begins at an early age. Hands-on, take-away activities involving teaching grades pre-k–2 math facts will be provided.

Rich Busi
University of Florida, Gainesville, Florida

Room 308/309

257

Parents and Children: Playing Math Games Together

(Pre-K–5) Gallery Workshop

Are you looking for ways to partner with parents in the educational process? Do you want to engage parents in meaningful, fun activities that will also strengthen math skills? Explore exciting games that encourage counting, estimation, facts, and logical thinking to be played “any time and any place,” even in the busiest lives!

Martha E. Hildebrandt
Chatham University, Pittsburgh, Pennsylvania

Barbara Biglan
Chatham University, Pittsburgh, Pennsylvania

Room 301

ew 258

Visual Models and Instructional Strategies for Struggling Learners

(3–5) Gallery Workshop

Targeted intervention (Tier II) in mathematics requires a step-by-step instructional approach and visual models that play an integral part in bridging the thinking for struggling learners. What instructional strategies bridge the learning for other students?

Rob Nickerson
ORIGO Education, Saint Charles, Missouri

Room 302

ew 259

They Need More Time!

(3–8) Gallery Workshop

This presentation will describe an after-school or summer intervention program that the soaker and others use to fill the gaps for struggling math students and share videos of some of the lessons. Participants will leave with ideas for how to help their strugglers.

Sherri Adler
Benchmark School, Phoenix, Arizona

Room 411

260

Constructing Patterns to Figure Functions

(6–8) Gallery Workshop

Explore how color tiles, children’s literature, and graphing calculators help middle grades students gain a conceptual understanding of representing growing patterns in tables, equations, and graphs. Growing patterns come alive as students construct them with color tiles. Activity sheets will be provided. Bring your favorite graphing calculator.

Bridget Coleman
University of South Carolina—Aiken, Aiken, South Carolina

Room 417



Photos Courtesy of the Atlantic Convention & Visitors Bureau

FRIDAY

2:30 P.M.–4:00 P.M.

261

From NASA: Distance-Rate-Time Math in Air Traffic Control

(6–8) Gallery Workshop

Using NASA Smart Skies, a Web-based simulator; an online graphing tool; and distance-rate-time relationships at the prealgebra and algebra levels, your students will learn to predict and resolve air traffic control conflicts. All materials, including the simulator, graphing tool, videos, print workbooks, and teacher's guides, are free online.

Gregory W. Condon
NASA Ames Research Center, Moffett Field, California

Rebecca Green
NASA Ames Research Center, Moffett Field, California

Room 312

 262

An Nspired Math Trail

(6–12) Gallery Workshop

When your students ask you if you can go outside today, give them an emphatic yes! Come with your walking shoes as we investigate ways to take your students out into your community to discover that mathematics is all around them. TI-Nspire (no experience needed) will deliver the actual trail. Participants will interact with experienced students.

Larry Ottman
Haddon Heights Junior-Senior High School, Haddon Heights, New Jersey

Room 322

263

Reasoning and Sense Making in Data Analysis and Probability

(6–12) Gallery Workshop

Most students do not understand what variability means. Interactive, dynamic software creates opportunities for students to make sense of data, explore correlation, simulate probability questions, and investigate random variables' behavior, helping them develop an understanding of fundamental statistical concepts.

Gail Burrill
Past President, National Council of Teachers of Mathematics; Michigan State University, East Lansing, Michigan

Room 412

264

Stacking and Nesting Reveal the Multiple Personalities of Slope

(6–12) Gallery Workshop

Participants will collect data from real-world activities related to object stacking or nesting. They will analyze the data using TI-SmartView and judge whether the data are linear or nonlinear. With the linear data they will discover, "If it stacks or nests, then it has a slope and intercept!"

John M. Ashurst
Harlan County Public Schools, Harlan, Kentucky

Room 418

265

Facets of Functions: Making Sense of $F(x)$ Using Illuminations Resources

(9–12) Gallery Workshop

Students are taught to evaluate, graph, and transform functions, but sometimes teachers don't succeed in teaching students to understand functions. Come participate in a variety of ready-to-use activities that explore representations of functions, graphs, and limits. Best of all, everything is available free from the NCTM Illuminations project.

Julia Zurkovsky
National Council of Teachers of Mathematics, Reston, Virginia

Room 404

266

Making Functions in Algebra 2 Active and Interesting

(9–12) Gallery Workshop

Participants will do several activities concerning functions, including using a human graph to explore functions, domain and range, and asymptotes. There will be a function carousel, silent board game, and some work on parent graphs and what investigating functions means. The session will end with a function treasure hunt.

Christine Mikles
College Preparatory Mathematics Educational Program, Sacramento, California

Room 419

2:30 P.M.–4:00 P.M.

267

Validating Proofs: Students' Use of Inductive and Deductive Reasoning

(9–12, Preservice and In-Service) Gallery Workshop

Participants will examine tasks used with preservice teachers to explore common misconceptions students have about proof, especially concerning inductive and deductive reasoning. The preservice teachers received samples of students' proofs and discussed the proofs' validity.

Sarah K. Bleiler

University of South Florida, Tampa, Florida

Room 401

3:30 P.M.–4:30 P.M.

269

The Proof, the Whole Proof, and Nothing But the Proof

(General Interest) Session

Students can handle proof! Pivotal examples get students in the habit of "speaking the proof" before and after high school geometry. See how students experience more than moments of proof using fractions, decimals, integers, probability, algebra, geometry, and number theory. Leave with new ways to get to the proof of the matter in your classroom.

Ralph Pantozzi

Scotch Plains—Farwood Public Schools, Scotch Plains, New Jersey

Room 414

270

Geometry: What's Most Important for Primary School Students?

(Pre-K–2) Session

The grades K–2 geometry learning progression detailed in NCTM's Focal Points gives guidelines for what is important when limited classroom geometry time exists or students lack experience. Activities and discussion will help participants understand the important geometry and spatial experiences that help prepare students for future learning.

Jean Howard

Office of Public Instruction, Helena, Montana

Room 314

271

The Whole-Brain Approach to Mathematics Learning for Children

(Pre-K–2, Preservice and In-Service) Session

Learn about some of the research on developing perception, language, concepts, procedures, and attitudes related to mathematics. These components of learning naturally permit us to use and speak about mathematics. Participants will leave with a sense of how perception, attention, autonomy, and trust all support optimal learning experiences.

Daniel J. Franklin

Six Red Marbles, Charlestown, Massachusetts

Room 408/409

272

Build It, Write It, Talk It, Own It! Empowerment Strategies

(Pre-K–5) Session

Explore methods to "hook" students with different abilities to deeper conceptual understanding in mathematics. Participants will receive a CD and sample lessons for grades 3–5 that you can use in your own classes.

Rudy V. Neufeld

Neufeld Learning Systems, Inc.; Thames Valley Schools, London, Canada

Room 305/306

273

Elementary School Math: Teach Discretely

(Pre-K–5) Session

Explore math problems for students in pre-K–grade 6. Cuisenaire Rods, Unifix cubes, and other classroom manipulatives can develop problem-solving skills and critical thinking. Discuss how to strengthen students' discourse and encourage them to reflect and converse mathematically using discrete math topics seen in everyday life.

Kevin R. Merges

Rutgers Preparatory School, Somerset, New Jersey

Room 402

FRIDAY

3:30 P.M.–4:30 P.M.

 274

Playing with Numbers in the Elementary Grades

(Pre-K–5) Session

Learn how playing with numbers helps develop number sense and fluency with whole-number computation. The Common Core Math Standards emphasize developing an understanding of operations and their properties. The speaker will examine learning trajectories for numerical operations across the elementary grades, with examples of hands-on activities.

Janet H. Caldwell

Rowan University, Glassboro, New Jersey

Room 403

275

Lessons From Singapore: Transitioning from Arithmetic to Algebra

(6–8) Session

Ever since Singapore's rise to prominence on TIMSS, the curriculum used there has generated considerable interest. This session will focus on the curriculum's visual models, which enable students to tackle algebraic problems and develop deep understanding of topics such as operations with fractions and proportion.

Andy Clark

Houghton Mifflin Harcourt, Portland, Oregon

Room 320

275.1

Meaningful Middle School Math: Effectively Infusing Technology with UDL Principles

(6–8) Session

Do you long to hear your students say these three little words, "I love math"? Come discover how to implement hands-on, Universal Design for Learning Choice Boards infused with technology. Highlighted technologies will include: TI-Technologies, Flip Camera Movies, Voki Avatars, Smart Board Technologies, Sensory Integration, and more.

Melissa Jackson

Monongahela Middle School, Deptford, New Jersey

Meredith Howell

Monongahela Middle School, Deptford, New Jersey

Room 318

276

Strategies That Increase "Aha!" Moments for Fractions, Decimals, and Percents

(6–8) Session

Students struggle with solving problems involving fraction and decimal operations. Come join the speaker to explore how combining visual representations, manipulatives, and multiple instructional strategies will increase success for all students. Each participant will receive a preview CD and sample lesson plans.

Brenda J. Morgan

Houston Independent School District, Houston, Texas

Room 415

 277

Overcoming Challenges to Develop Mathematically Promising Students in Urban Schools

(6–12) Session

Understand cultural and social issues in urban schools to better the needs of mathematically promising students better. Develop strategies to keep up with the math classroom's changing dynamic and strengthen students' belief and ability to do well in mathematics. Help students develop their mathematical potential fully.

PingHsiu Lee

Reagan High School, Houston, Texas

Room 319

278

Developing Students' Ability to Reason and Conjecture with Dynamic Technology

(9–12, Higher Education, Research) Session

Dynamic technology software can help promote effective classroom discourse and engage students in purposeful reasoning and conjecturing. This session will highlight pedagogical perspectives in connecting mathematical notions using the Technological Pedagogical Content Knowledge (TPACK) framework.

Farshid Safi

College of New Jersey, Ewing, New Jersey

Room 405/406

3:30 P.M.–4:30 P.M.

279

Exponential Functions and the Global Energy Crisis

(9–12, Higher Education) Session

The session will explore how replacing an incandescent light bulb with a compact fluorescent lamp saves energy, carbon dioxide (CO₂) emissions, and money. Activities will model CO₂ levels and the energy wind power produces. Math topics will be exponential functions, geometric series' sums, and data analysis for Algebra 2, precalculus, and calculus.

Maria Hernandez

The NC School of Science and Mathematics, Durham, North Carolina

Room 421

280

Quantitative Reasoning (QR) across the Curriculum: Enhancing Skills in All Disciplines

(9–12, Higher Education) Session

QR skills typically develop in high school and college mathematics courses. Although this is essential, students resonate more with QR incorporated into projects in other disciplines. The speaker will discuss how to offer projects that connect QR skills with other fields and encourage teachers in other fields to add QR in their classes.

David G. Taylor

Roanoke College, Salem, Virginia

Room 410

281

Why Do We Have to Learn This? The Math Connection

(Preservice and In-Service) Session

Have you ever heard “Why do we have to learn this, anyway” in your classroom? Come learn why students ask this common question and how to avoid hearing it in your classroom any longer by thinking outside the box! The speaker will share how she has used meaningful learning practices with students from nursery school through college.

Sherese A. Mitchell

Hostos Community College, Bronx, New York

Room 420



NCTM's 2012 Annual Meeting
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Philadelphia, Pennsylvania
April 25 – 28, 2012

FRIDAY

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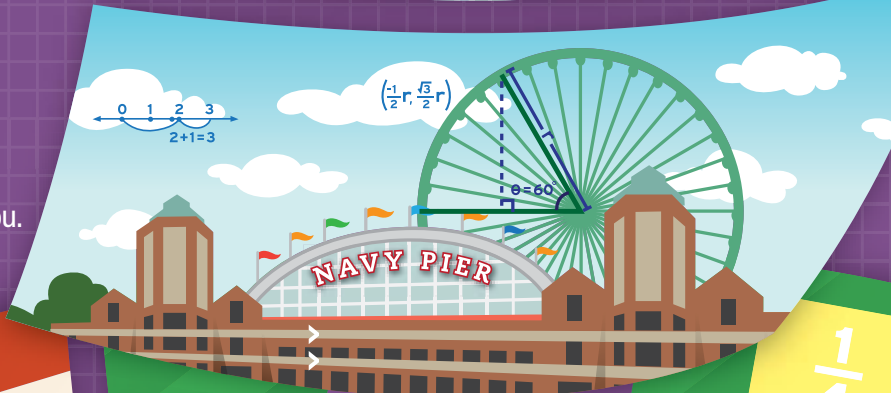
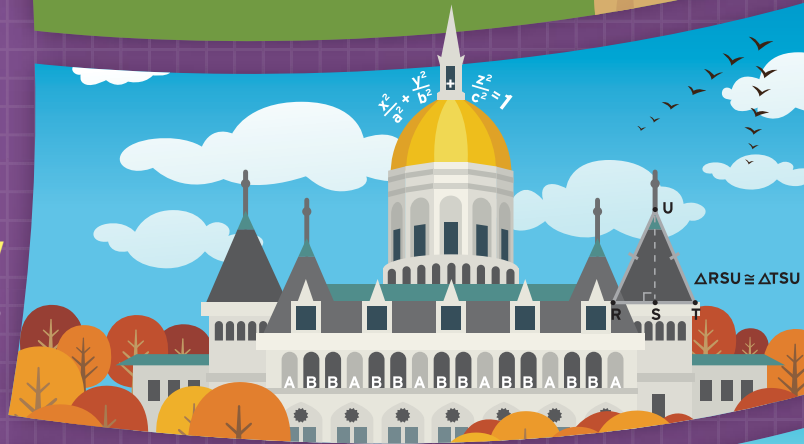
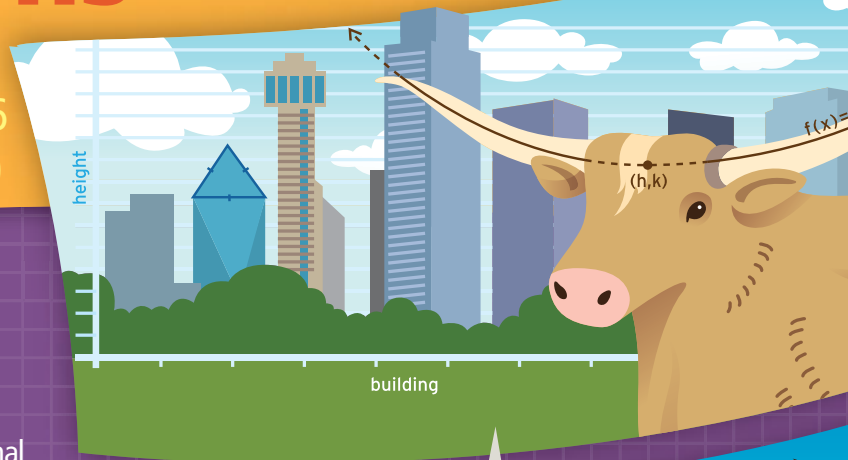
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CHICAGO, IL | NOVEMBER 28–30

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