NCTM2011

REGIONAL CONFERENCE & EXPOSITION

ST. LOUIS, MISSOURI
October 26–28, 2011

www.nctm.org

NCTM® | NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

PROGRAM BOOK

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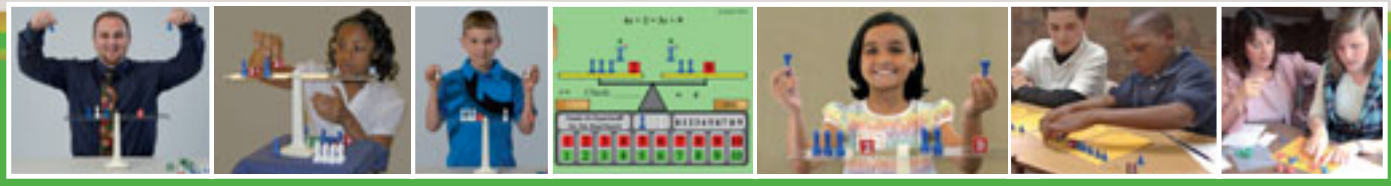

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NCTM2011 REGIONAL CONFERENCE & EXPOSITION

ST. LOUIS, MISSOURI
October 26–28, 2011

Technology and Mathematics: Get Connected!

HOST

Missouri Council of Teachers of Mathematics
Mathematics Educators of Greater St. Louis

MEETING FACILITY

All Regional Conference presentations will be held at America's Center. See pages 80–81 for floor plans.

REGISTRATION

Wednesday	5:00 p.m.–8:00 p.m.
Thursday	7:00 a.m.–4:00 p.m.
Friday	7:00 a.m.–4:00 p.m.

EXHIBITS

Thursday	8:00 a.m.–4:00 p.m.
Friday	8:00 a.m.–4:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE

Wednesday	5:00 p.m.–7:00 p.m.
Thursday	7:00 a.m.–4:00 p.m.
Friday	8:00 a.m.–4:00 p.m.

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National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 20191-1502; Telephone (703) 620-9840; Fax (703) 476-2970; E-mail nctm@nctm.org; Web www.nctm.org

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Welcome to St. Louis!

We're glad you could join us for NCTM's 2011 Regional Conference and Exposition in St. Louis. We are fortunate to have so many classroom teachers, district coordinators, and mathematics educators making presentations. From the opening session on Wednesday evening, "Yes, They Can: Mathematical Habits of Mind for Every Student," to the last sessions on Friday afternoon, the program is loaded with great speakers addressing a wide array of mathematical topics of interest to grades K–16 mathematics teachers. We encourage you to take advantage of the variety of sessions and hands-on gallery workshops that the conference offers. Don't forget to take time to explore the Exhibit Hall and check out some of the latest teaching products and technology. We hope you walk away with a wealth of knowledge and answers to your biggest challenges.

While you're here, don't miss the rich culture and diversity that St. Louis has to offer. Ride to the top of the Gateway Arch. Visit the courthouse where the Dred Scott case was heard; Busch Stadium, where the St. Louis Cardinals call home; and City Garden to enjoy an artistic oasis. And of course, be sure to explore Forest Park's 1,300 acres of forest, lakes, and trails.

A special thanks to the host organizations Missouri Council of Teachers of Mathematics and the Mathematics Educators of Greater St. Louis; the Program Committee, Local Arrangements Committee, and the many volunteers who have worked for nearly two years to make this meeting a reality. We hope you will find this conference to be exciting, that it will stimulate your professional growth as a teacher of mathematics, and be an enjoyable and memorable experience.

Robert Reys
Program Chair
University of Missouri–Columbia

Curtis James
Local Arrangements Chair
Triad High School
Troy, Illinois

THE 2011 NCTM Regional Conference and Exposition officially begins with the Opening Session, starting at 5:30 p.m. on Wednesday in America's Room 223-226 on the second level of America's Center. All other presentation days begin at 8:00 a.m. and are scheduled concurrently throughout the day on Thursday and Friday.

We have made every attempt to provide adequate seating for participants at the Regional Conference and Exposition. The room capacity for each presentation is listed on all meeting room signs. For your safety and due to fire regulations, only those with seats will be allowed to stay in meeting rooms.

Please remember:

- All meeting rooms will be cleared between presentations.
- All seats are available on a first-come, first-served basis.
- Reserving spaces in line or saving seats is not permitted.
- In compliance with fire codes, sitting on the floor or standing is not permitted.
- As a courtesy to the speakers and your colleagues, please turn off your cell phone during all presentations.

Professional Development Focus of the Year 2011–2012

This year's Focus of the Year is *Technology and Mathematics: Get Connected!* The conference will highlight this theme as the topic of Thursday's Learn↔Reflect strand, as well as in many other NCTM activities throughout the year. For more information, visit **www.nctm.org/focus**.

Learn↔Reflect Strand

Plan one full day (Thursday) for the Focus of the Year topic, *Technology and Mathematics: Get Connected!* The strand begins with a morning Kickoff session and concludes with an end-of-the-day Reflection session. In between, you choose from among a number of sessions exploring the topic, all marked with the symbol LCR. Immerse yourself in the topic, and collaborate with leaders and colleagues. We ask participants to reflect on the following questions throughout the Learn↔Reflect strand and then discuss them at the end of the strand, during the Reflection session.

1. What role does technology play in providing multiple representations and opportunities for communication to help students develop mathematical understanding?
2. How does technology influence your instructional decisions, and vice versa?
3. How can technology increase access to significant mathematics to all students? How do you promote social justice for access to and facility with technology in learning mathematics?
4. How are you thinking differently about your use of technology as a result of participating in the Learn↔Reflect strand? What are some of the steps you plan to take to promote growth in your own use of technology?

Learn↔Reflect sessions are open for anyone to attend throughout the day. Participants who attend the Kickoff session, at least one Learn↔Reflect session during the day, and the final Reflection session will receive personalized certificates by mail.

Learn↔Reflect Kickoff Session
Thursday, 9:30 a.m.
Room 223-226

Learn↔Reflect Reflection Session
Thursday, 3:30 p.m.
Room 101

New and Preservice Teachers Workshop

Wondering how to manage your classroom, work with parents, find engaging lessons, and handle homework—all while keeping your sanity? You're not alone! A must for every new teacher, this interactive workshop is your chance to ask questions on topics of your choice. Plus, you will connect with other new and early-career teachers. If you are in the first five years of teaching or are seeking certification, come get resources, materials, and fun prizes to encourage you and give you insight along your journey.

Thursday
2:30 p.m.–4:00 p.m.
Room 232

Friday
10:30 a.m.–12:00 noon
Room 124

New Member and First Timers' Orientation

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

Thursday and Friday
7:15 a.m.–7:45 a.m.
Room 242

PROGRAM INFORMATION

Types of Presentations

All presentations are open to all conference participants. Admission is on a first-come, first-served basis. Reserving spaces in line or saving seats is not permitted.

Sessions (60 minutes) represent a common format where the speaker relates his or her ideas to an audience. The speaker may use audio-visual equipment, technology, and handouts, and he or she may include audience participation. Rooms are set theatre style and vary in size.

Gallery Workshops (90 minutes) have rooms set with round tables for hands-on work and additional gallery seating around the perimeter of the room. The gallery participants will receive the print materials and observe the workshop in a fashion similar to that of a classroom observer.

Exhibitor Workshops (60 minutes) are set theatre-style for at least 100 people. Exhibitors showcase their products and services away from the Exhibit Hall. Look for the symbol EW indicating exhibitor workshops in the program book.

Grade Bands

To assist attendees in finding appropriate presentations to attend, each presentation lists the presentation's target grade-band audience. The grade bands are:

- **Pre-K–Grade 2**
- **Grades 3–5**
- **Grades 6–8**
- **Grades 9–12**
- **Higher Education**—university and college level issues including both two-year and four-year institutions
- **Preservice and In-Service**—content and techniques for providers of preservice teacher education, and professional development for practicing teachers, supervisors, specialists, coaches, and mathematics educators
- **General Interest**—applies to multiple grades and audiences

Program Updates

Don't forget to pick up your copy of the *Program Updates,* which includes speaker and program updates, a complete exhibitor directory, and exhibitor workshop information. *Program Updates* are available in the Registration Area.

Tips for a Rewarding Regional Conference and Exposition

- Download the 2011 St. Louis Conference App for conference alerts and up to the minute information.
- Become familiar with the layout of the America's Center by reviewing the floor plans on pages 80–81.
- Visit the **NCTM Bookstore** for the latest NCTM educational resources, and the **Member Showcase**, where you can learn more about how NCTM can help you professionally and pick up free resources. Save 25 percent off all items.
- Stop by the Information Booth for information on the local area.
- If attending the conference with colleagues, attend different presentations and share your learned knowledge after the conference.
- Wear comfortable shoes and clothes, and dress in layers.
- Turn off cell phones during presentations.
- Visit the Exhibit Hall, where exhibitors will share the latest educational products.
- The more you participate in the presentations, the more you will get out of the conference.
- Tell us about your conference experience by filling out the post-conference online survey.
- Be safe! Remove your name badge when you leave the conference facilities at the end of the day.

Registration and Access to Presentations

You must wear your badge to enter all presentations and the NCTM Exhibit Hall. Please be aware that the fee for a replacement badge is **$5**.

By registering for the 2011 NCTM Regional Conference and Exposition, participants grant NCTM the right to use, in promotional materials, their likeness or voice as recorded on, or transferred to, videotape, film, slides, audiotapes, or other media.

Recycling

Help NCTM Recycle—Finished with your Program Book, plastic name badge holders, or Program Updates? Place them in the specially marked containers for recycling, in the registration area.

For Your Child's Safety

Due to the size and nature of the 2011 NCTM Regional Conference and Exposition, this event is not an appropriate setting for children under 16 years of age. Children under age 16 will not be permitted in the Exhibit Hall. We appreciate your understanding and cooperation. Children 16 years and over will need to register as nonteaching guests. To register a nonteaching guest, please visit the Registration Area.

Member Showcase

Looking for professional resources to help you overcome the challenges you face on a daily basis? Then stop by the **NCTM Member Showcase** located in Hall 1 of America's Center. We'll help you learn more about how your NCTM membership provides you access to lessons, teaching tips and strategies, research findings, and more. Plus, you can also pick up classroom-ready activities, sample journals, and other materials to take back to your classroom.

Whether you are a new member, a current member, or thinking of joining, the NCTM Member Showcase is here to help make your job easier!

Renew your membership or join NCTM for the first time onsite and you will receive a **free** 2012 NCTM Annual Meeting t-shirt! Supplies are limited.

Bookstore

Save 25 percent off the list price on all purchases made at the NCTM Bookstore in Exhibit Hall 1 of America's Center. Flip through NCTM's many publications or find a gift for someone at home. Spreading the word about the importance of math has never been easier. Start your wish list today by previewing NCTM's wealth of resources at www.nctm.org/catalog.

Note on Sales Tax Exemptions: To be considered exempt from sales tax in the NCTM Bookstore, you must provide a copy of a **Missouri tax exemption certificate** at the time of purchase. NCTM is required by law to keep a copy of the certificate, so we cannot return it to you. To qualify, you must make payment with a purchase order, check, or credit card from the school to which the Missouri Exemption Certificate is issued. We cannot accept personal checks, personal credit cards, or cash in conjunction with tax exemption certificates. Tax exemption certificates for states other than St. Louis are not valid for this regional conference.

The NCTM Bookstore is not equipped to handle shipping from the meeting site. The Business Center at America's Center can assist you with your shipping needs.

Information Booth

The NCTM Information Booth will be in the lobby area of America's Center outside Exhibit Hall 1. Local personnel from Missouri will be on hand to answer any questions you may have. They will also assist you with directions and local information, from transportation and historical sites to shopping and entertainment.

Lost-and-Found

You may retrieve or turn in lost-and-found items at the NCTM Information Booth. Unclaimed items will be turned over to Convention Center Security.

First Aid Station

There will be a first-aid station at America's Center during the NCTM conference. If you need medical services while in St. Louis, please check with the hotel concierge for the closest medical facilities.

NCTM Clear Air Act

In accordance with a resolution of the 1978 Delegate Assembly, smoking is permitted only in designated areas.

Your Opinion Counts!

Thank you for attending the 2011 NCTM Regional Conference and Exposition. In the days following the Regional Conference, you will receive an e-mail asking for an evaluation of your meeting experience. Please take a moment to complete the survey. Your feedback is important to us and will be instrumental in the future Regional Conference and Exposition planning process.

EXHIBIT HALL INFORMATION

Exhibits

Be sure to make time in your schedule to visit the NCTM Exhibit Hall. The hours allow ample opportunity to explore, try out, and purchase products and services for use in your classroom or to help you meet your career goals. You'll also be able to meet the people who produce these products, get fresh ideas, and see demonstrations of how products work. Be sure to check out the list of exhibits and a map of the Exhibit Hall on page 82. Please note: Children under age 16 will not be permitted in the Exhibit Hall.

Exhibitor Workshops

Do you want more in-depth, personal interaction with exhibitors? If so, plan to attend the Exhibitor Workshops. These workshops will occur on Thursday and Friday, and they will offer a wide variety of topics. For exhibitor workshop offerings, look for presentations in this program book marked with the symbol **ew** or see the Program Updates.

Internet Station

Need to check e-mail or want to surf the Web? Stop by the NCTM Internet Station located in the registration area.

Conference Sponsors

A special thank you goes to our sponsor: Texas Instruments for providing our volunteer t-shirts. Please stop by their booth when you are in the Exhibit Hall.

Texas Instruments
Your Passion. Our Technology.
Student Success.™

WEDNESDAY PLANNER

5:00

5:30

6:00

6:30

7:00

Highlights

- Opening Session (Presentation 1): *Yes, They Can: Mathematical Habits of Mind for Every Student*

Registration Hours
5:00 p.m.–8:00 p.m.

Bookstore and Member Showcase Hours
5:00 p.m.–7:00 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 to stay 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.

5:30 P.M.–7:00 P.M.

1

Yes, They Can: Mathematical Habits of Mind for Every Student

Opening Session

Common Core State Standards are creating a new reality for many of us. Regardless of the state where you teach, what do we need to do to seize this opportunity and overcome obstacles to realize the vision of decades of work from NCTM and the profession? How can we achieve the real equity of deep, complex mathematical learning for every student?

Cathy L. Seeley
Charles A. Dana Center, University of Texas at Austin, Austin, Texas

Rooms 223-226

THURSDAY PLANNER

8:00	
8:30	
9:00	
9:30	
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3:30	
4:00	
4:30	
5:00	

L↔R Learn↔Reflect Strand ew Exhibitor Workshop

Highlights

- New Member and First Timers' Orientation (Presentation 2)
- Learn↔Reflect Kickoff (Presentation 36)
- New and Preservice Teachers Workshop (Presentation 147)
- Learn↔Reflect Reflection Session (Presentation 149)

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
7:00 a.m.–4:00 p.m.

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7:15 A.M.–7:45 A.M.

2

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. First-time attendees will learn how to make the most of their time at the conference.

Don S. Balka
Saint Mary's College, Notre Dame, Indiana

Room 242

8:00 A.M.–9:00 A.M.

4

How to Support Teachers' Management of Interactive Mathematics Classrooms

(General Interest) Session

Managing an interactive mathematics classroom can be challenging for any teacher. This session will share preliminary findings from research regarding how classroom management can affect the cognitive demand of mathematical tasks in urban classrooms. It will also offer some initial supportive concepts.

Candace Barriteau Phaire
New York University, New York, New York

Room 231

5

Six Secrets of Highly Effective Lesson Design: Research into Practice!

(General Interest) Session

This highly motivational, interactive session will feature six lesson-design questions that deepen students' understanding. Examine the research-guided basis on which you should decide what went well and what to do differently to improve any mathematics lesson. Whether you are a novice or expert teacher, these daily planning secrets are for you!

Timothy Kanold
E^2-PLC Learning, Chicago, Illinois

Room 223–226

6

Mental Math in the Primary School Classroom

(Pre-K–2) Session

Participants will learn how to help primary school students use flexible thinking and multiple strategies to develop mathematical concepts. This session will use hands-on, minds-on activities usable in classrooms. Handouts will be provided.

Judy Privitt
Columbia Public Schools, Columbia, Missouri

Gail Underwood
Columbia Public Schools, Columbia, Missouri

Room 101

7

Implementing a Math Workshop in the Elementary School Classroom

(Pre-K–5) Session

Explore why a workshop model is an effective differentiation method in the math classroom, and learn how to begin implementation. Understand how a math workshop will allow for targeted instruction and informal assessment. The speaker will overview essential components involved in a workshop, including format, structure, assessment, and time frame.

Catherine Castillo
Bowerman Elementary School, Springfield, Missouri

Room 221 & 228

Pick up your copy of the *Program Updates* for more exhibitor workshops, the latest changes to the program schedule, and other important information at the Registration Area.

8:00 A.M.–9:00 A.M.

8

That's Not How I Learned It: Using Multiple-Algorithm Instruction

(Pre-K–5) Session

Children are concrete thinkers; mathematics is an abstract subject. How do we bridge the gap? This session will consider an appropriate progression of multiple algorithms to teach educators how to build their students' number sense and computational efficiency. See the importance of teaching students to generalize and become algebraic thinkers.

Tracey Mulholland
Rockwood School District, St. Louis, Missouri

Stephanie Nauman
Rockwood School District, St. Louis, Missouri

Emily Pettersen
Rockwood School District, St. Louis, Missouri

Rooms 104

9

Exploring Cognitive Demand in Teachers' Use of Instructional Materials

(6–8, Research) 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 regarding how teachers implement materials. The speakers will discuss opportunities to learn and the possible effect on students' achievement.

Karen D. 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

Rooms 241

10

MathCounts Materials for the Classroom and Beyond

(6–8) Session

A former member of MathCounts's Question Writing Committee will highlight the nationwide MathCounts program. He will present rich, unique problems, usable in several venues besides the regular classroom and math club meetings, to show the wide variety of mathematical thought that MathCounts embraces.

Tom J. Price
Norris Public Schools, Firth, Nebraska

Room 242

11

Making Mathematics a Habit

(6–12) Session

The speaker will look at developing mathematical habits of mind through literature and problem solving by engaging in mathematical adventures using *Number Devil* and other books. Get 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 222 & 227

12

Rocket-Launching and Secret-Sharing Techniques from Algebra

(6–12) Session

A classic movie theme involves three important people having a key 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 276

8:00 A.M.–9:00 A.M.

13

Connections, Multiple Representations, Reasoning, and Sense Making

(9–12) Session

See examples of lessons that show connections and representations as a pivotal part of making reasoning and sense part of your classroom. All lessons will link to both *Principles and Standards* and *Common Core State Standards for Mathematics* and showcase the power of *Focus in Reasoning and Sense Making.*

Fred Dillon
Strongsville City Schools, Strongsville, Ohio

Room 274

14

Going Off on a Tangent: Interactive Mathematics Software for All

(9–12) Session

GeoGebra is a cost-effective alternative for schools, teachers, and students. The speaker will show how to get and use GeoGebra. He will also showcase some algebra and geometry activities that highlight how interactive geometry software can make a difference in the mathematics classroom. Bring your laptop!

Oscar Chavez
University of Missouri—Columbia, Columbia, Missouri

Room 127

15

Reclaiming Lost Ground: Research-Based Interventions for Underprepared Algebra Students

(9–12, Research) Session

Today, all students must succeed in algebra, including those underprepared. These students may need more time in algebra, but time alone is not sufficient. Learn about comprehensive, research-guided strategies and resources from mathematics learning, literacy, social psychology, and special education to help underprepared students.

James Lynn
Learning Sciences Research Institute, University of Illinois at Chicago, Chicago, Illinois

Diane J. Briars
National Council of Supervisors of Mathematics, Pittsburgh, Pennsylvania

Room 106

16

Mathematics and Music

(9–12, Higher Education) Session

This session will describe a freshman course in mathematics and music that the speaker designed and teaches. It interfaces the two subjects with the goal of encouraging students to integrate analytic and artistic thought processes. The speaker will discuss various explicit connections between mathematics and music.

David Wright
Washington University, St. Louis, Missouri

Room 264

8:30 A.M.–9:30 A.M.

ew 17

Common Core State Standards (CCSS)–Aligned Supplemental Curricula for Mathematically Talented Students

(K–5) Exhibitor Workshop

Support advanced mathematics students in grades K–5 with Project M²: Mentoring Your Mathematicians and Project M³: Mentoring Mathematical Minds. These supplemental curriculum units increase math achievement and foster greater interest in mathematics through engaging investigations that align to many CCSS mathematical practices and content standards.

Kendall Hunt Publishing Co.
Dubuque, Iowa

Room 122

ew 18

Pearson's New digits™ Program: Where Math Clicks!

(6–8) Exhibitor Workshop

Experience **digits,** the only Common Core middle grades math curriculum built for today's digital students with all Interactive Whiteboard lessons, online assessments, robust Response to Intervention, and automatic grading and reporting. Find out how **digits** harnesses technology to optimize your time and individualize their learning, both in and out of the classroom. (6–8)

Pearson
Upper Saddle River, New Jersey

Room 262

8:30 A.M.–10:00 A.M.

19

It's Game Time: Using Effective Questioning to Foster Mathematical Reasoning

(Pre-K–2) Gallery Workshop

This workshop session will focus on using effective questioning through games as a tool for fostering students' mathematical reasoning in the primary school classroom. Participants will engage actively in games that address specific standards and receive materials shared in the workshop.

Pamela Norris
Alabama Math, Science, & Technology Initiative, Auburn University, Auburn, Alabama

Room 263

20

Positive Pumpkin Power!

(Pre-K–2) Gallery Workshop

The speaker will use pumpkins to create and model connected, seasonal, positive, powerful learning experiences for students in grades pre-K–2. Content will include number sense, measurement, data collection, and graphing, along with suggestions for assessment and differentiated instruction. Join in the fall fun at this interactive workshop!

Lynn Gannon Patterson
Murray State University, Murray, Kentucky

Room 230

21

Engaging All Children with Number Sense and Problem Solving

(Pre-K–5) Gallery Workshop

The speaker will offer strategies, including using manipulatives, that develop number sense and problem-solving skills. She will demonstrate the power of mathematical discourse to develop concepts, reasoning, and vocabulary and engage attendees in activities that develop place value, patterns, estimation, fractions, and problem solving.

Donna L. Knoell
Consultant, Shawnee Mission, Kansas

Room 102

22

Let's Get Physical, with Math on the Floor!

(Pre-K–5) Gallery Workshop

This very interactive session will introduce teachers to the innumerable, creative ways of exploring many concepts in all strands of math on a large, 100-square floor grid. The speaker will share fun, foolproof strategies for immediate implementation.

Wendy E. Hill
Retired, Huntsville, Ontario, Canada

Room 275

23

Explore Teacher-Developed, Hands-On Materials for Important Elementary School Math Concepts

(3–5) Gallery Workshop

This make-and-take session will involve interactive games for the basic facts, model making for capacity, multiple representations that develop number sense, and a unique geometry puzzle for squares, trapezoids, parallelograms, and rectangles. Learn about how to implement new ideas developed from recent brain research on how children learn.

Mary Kay Bacallao
Mercer University, Macon, Georgia

Room 220

24

What Were They Thinking? Learn to Read Students' Minds

(3–5) Gallery Workshop

Come explore pedagogical strategies for "reading" students' minds while they develop a deep understanding of primary concepts. Using manipulatives, math journaling, and technology, encourage students of all ability levels and learning styles to communicate mathematically. Receive complementary CDs.

Laura M. Skjold
Lewisville Independent School District, Lewisville, Texas

Room 232

8:30 A.M.–10:00 A.M.

25

Engaging Activities + Effective Instructional Strategies = Numerically Nimble Students

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

"Work smarter, not harder" to improve numeric competence, with strategies that promote greater participation and sense making, ideal for intervention success and family math efforts. A ready-for-immediate-use handout includes engaging activities to improve students' performance and enhance mathematical reasoning.

Leigh Childs
Consultant, San Diego, California

Room 103

26

Archaeology: Can You Dig It?

(3–8) Gallery Workshop

Archaeology digs offer multiple, authentic math and multidisciplinary applications, including measurement, problem solving, and dimensional graphing. Participants will engage in hands-on activities, see a dig site setup, and leave with a complete unit.

Gerald Murphy
Edgemont Union Free School District, Scarsdale, New York

Edward Kennedy
Edgemont Union Free School District, Scarsdale, New York

Room 120

27

Building a Soma Cube: More than Just a Puzzle

(3–8) Gallery Workshop

Use the famous Soma cube puzzle to motivate your students! Participate in a lesson that focuses on problem solving, spatial skills development, introduction to geometry concepts, and the puzzle's history. Participants start with a single cube and eventually create their own seven-piece Soma cube puzzle to take home.

Bonnie Spence
University of Montana, Missoula, Montana

Room 265-266

28

Technology, Transformations, 2-D Animation, and Treasures: Making Geometry Come Alive

(3–8) Gallery Workshop

Experience two tech-enhanced geometry lessons. Learn to use the movie *Flatland*, PowerPoint, and Moviemaker to teach properties of 2-D polygons. Embark on a treasure hunt using Geogebra to help students understand coordinate plane, the protractor or angle ruler, and integer skills. Prepare students for Pythagorean theorem and transformations.

Amy English Hunter
Jefferson County Public Schools, Louisville, Kentucky

Sarah Bush
Highland Hills Middle School, Georgetown, Indiana

Room 260

29

Make It Relevant, Make It Fun, Make It Count

(6–8) Gallery Workshop

This gallery workshop will present activity-based activities and projects that inspire the challenged learner and challenge the inspired learner. Teachers can motivate their students with fun, relevant content that counts. Using manipulatives will incorporate all ten of NCTM's Principles and Standards for grades 6–8.

Mary E. Runyon
King Philip Regional School District, Norfolk, Massachusetts

Lynn A. Smith
King Philip Regional School District, Norfolk, Massachusetts

Room 229

Participate in today's Learn↔Reflect Strand. Look for sessions marked with the LCR icon.

8:30 A.M.–10:00 A.M.

30

My Favorite Middle-Level Statistics Activities

(6–8) Gallery Workshop

This session will actively explore how activities link to realistic contexts and activities through which pupils can build an understanding of, and skill in, using statistical concepts and processes. Topics will include creating and interpreting graphs; means, medians, and modes; and generating and using regression lines to make predictions.

Michael Hardy
Saint Xavier University, Chicago, Illinois

Room 240

31

Let's Get Folding!

(6–8, Preservice and In-Service) Gallery Workshop

Learn geometry from paper folding? From circles to three-dimensional shapes, come be a part of learning how to introduce your students to a conceptual understanding of geometric terms through inexpensive, hands-on paper folding. The speaker will discuss relative geometric terms and make references to children's literature.

Joy W. Black
University of West Georgia, Carrollton, Georgia

Sarah K. Westbrook
University of West Georgia, Carrollton, Georgia

Room 123

32

Counting for Fun and Profit: Engaging Students with Combinatorial Problems

(6–12) Gallery Workshop

Concrete, fun counting problems can engage students, from reluctant learners to ardent mathletes, in genuine mathematical thinking. Experience and take home some low-threshold, high-ceiling problems, and see how they can help you incorporate several Common Core State Standards for Mathematical Practice into a variety of course contexts.

Sendhil Revuluri
Learning Sciences Research Institute, University of Illinois at Chicago, Chicago, Illinois

Room 105

33

Data-Driven Functions

(6–12) Gallery Workshop

Using real, student-generated data can involve students powerfully in studying functions. Come experience effective, hands-on activities to help students develop a better understanding of functions and their application to the real world.

Janet M. Shiver
Central Washington University, Ellensburg, Washington

Angel Abney
Georgia College and State University, Milledgeville, Georgia

Room 100

34

Hands-On, Minds-On Geometry

(9–12) Gallery Workshop

Participate in some fun, quick geometry activities that will increase students' interest and teachers' enthusiasm by engaging students actively. Use the "explore and discover" approach to learning in activities easily replicable in your classroom. Discover how manipulatives will spice up your teaching and help your kids retain what they learn.

Gary Kubina
Retired, Mobile, Alabama

Room 124

9:30 A.M.–10:30 A.M.

35

A History of Statistics in the School Mathematics Curriculum

(General Interest) Session

Statistics' place in school mathematics curriculum has changed dramatically over the past century. This session will document high points in its journey from enrichment topic to NCTM standard. Participants will discuss statistics' future in the curriculum.

Dustin L. Jones
Sam Houston State University, Huntsville, Texas

Rooms 241

9:30 A.M.–10:30 A.M.

L↔R

36

Learn↔Reflect Kickoff: Changing Your Approach and Delivery: Fabulous Finds for the Classroom

(General Interest) Session

Need help getting students' attention for topics covered in the classroom? This session will discuss fabulous Web sites, online software, and technology tools to assist all teachers and to allow them to teach more conceptually, improve students' learning, and be more organized as teachers. Use these in your classroom tomorrow.

Jason Frank Williams
Americus Sumter High School, Americus, Georgia

Room 223–226

37

Using National Board Standards to Guide and Improve Mathematics Teaching

(General Interest) Session

National Board for Professional Teaching Standards represents a professional consensus on what accomplished teachers should know and be able to do. Explore mathematics standards in early or middle childhood generalist and early adolescence through young adulthood, and consider why you might pursue National Board certification.

Lisa Stooksberry
National Board for Professional Teaching Standards, Arlington, Virginia

Karen Giesler
Center for Creative Learning, Ellisville, Missouri

Malinda Ice
Mason Ridge Elementary School, Webster Groves, Missouri

Karen D. King
National Council of Teachers of Mathematics, Reston, Virginia

Room 101

Free T-shirts—Stop by the *Member Showcase* to learn how to get one!

38

Effective Games and Practices That Lead to Students' Success

(Pre-K–2) Session

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

Laura L. Choate
Fallbrook Union Elementary School District, Fallbrook, California

Room 274

39

Hoops, Homeruns, and Holes in One: All Star Math Night

(Pre-K–2) Session

Turn parents into math fans and students into "mathletes!" Learn how to involve your community, school, and parents in an action-packed math night. Sports-related activities based on core standards will excite and motivate families to extend learning at home. Leave with all the necessary steps needed to implement a successful math night.

Connie C. Jones
Webster Elementary School, Muscle Shoals, Alabama

Wendi H. Thornton
Webster Elementary School, Muscle Shoals, Alabama

Madonna I. Choat
Webster Elementary School, Muscle Shoals, Alabama

Room 267

40

Conjecturing and Generalizing: Exploring Mathematical Reasoning Elementary Classrooms

(Pre-K–5) Session

Through examples of students' reasoning, we will examine the crucial components of mathematical reasoning in the elementary school classrooms. We will explore how conjecturing, generalizing, and justifying mathematical statements can play an important role in every mathematics lesson.

John Lannin
University of Missouri—Columbia, Columbia, Missouri

Room 106

9:30 A.M.–10:30 A.M.

41

How to Help Struggling Students Succeed in Math

(Pre-K–5) Session

This engaging workshop uses video of struggling math students to train teachers on formative assessments in the classroom. On the basis of models used for reading instruction, participants will learn how to conference with students around key math skills. They will learn about developmental benchmarks for mastering foundational concepts and how to individualize instruction so students can meet these benchmarks.

Angela McIver
Math Foundations, LLC, Philadelphia, Pennsylvania

Room 242

42

Can Third-Grade Students Use the Distributive Property?

(3–5) Session

They certainly can, and the Common Core State Standards recommends it. We can actually make this a useful tool for students as they learn basic facts, not just something else added to the curriculum. The speakers will show hands-on activities and online simulations that can help students begin using the distributive property intuitively.

Jennifer Wall
Northwest Missouri State University, Maryville, Missouri

Christine Benson
Northwest Missouri State University, Maryville, Missouri

Room 231

43

Fractions in Elementary School Textbooks: United States versus Japan

(3–5, Research) Session

How do elementary school mathematics textbooks present fractions? This presentation will compare U.S. and Japanese textbooks, focusing on how and when they introduce fractions, what type of models each uses, how each uses manipulatives, and the nature of problems they present.

Amal H. Alajmi
Kuwait University, Kuwait

Rooms 104

44

Finally! Math for the SMART Board®

(3–8) Session

Getting the most out of the board used to mean drawing a big circle and tapping it in the middle. New math tools with prepared lessons and activities for the SMART Interactive Whiteboard are changing this. Now classes are coming full circle, with no tapping in the middle.

Kathy Robinson
Miss Sally School, Durant, Oklahoma

Room 264

45

A Mathematical Road Trip: Revisiting the Familiar and Exploring the New

(6–8) Session

The speaker will take a fresh look at familiar concepts, such as fractions, and explore new concepts from higher math. Every teacher gets a free, unique fraction manipulative that can visually demonstrate fraction division. This zany, lively talk will use fruits, food processors, fun video clips, and games with prizes to keep audience members engaged.

Frank Wang
Alexander Dawson Foundation, Las Vegas, Nevada

Room 276

46

Empowering Students through Reasoning and Sense Making: Video Clips and Tasks

(6–12) Session

This session will share examples and new developments in NCTM's ongoing high school initiative on reasoning and sense making. Participants will discuss video clips of students engaged in reasoning, students' work samples gathered with Live Scribe pens, and a collection of newly developed reasoning tasks available on the NCTM Web site.

J. Michael Shaughnessy
President, National Council of Teachers of Mathematics; Portland State University, Portland, Oregon

Judith Zawojewski
Illinois Institute of Technology, Chicago, Illinois

Room 222 & 227

9:30 A.M.–10:30 A.M.

47

Vocabulary in Geometry and Algebra: Strategies for Instruction and Assessment

(6–12) Session

Geometry and algebra contain lots of vocabulary words related to students' understanding of important concepts. This session will share strategiesused as both instructional tools and assessments, along with students' algebra and geometry work in grades 6 through college.

Susan Gay
University of Kansas, Lawrence, Kansas

Room 127

48

101 Ideas That Worked to Motivate Students

(9–12) Session

The speaker will present a number—101 to some base—of problems used to motivate and instruct students, along with a compilation of favorites from numerous previous presentations.

Dale Seymour
Retired, Los Altos, California

Room 221 & 228

10:00 A.M.–11:00 A.M.

EW

50

Attaining Success for Students and Teachers Using Britannica SmartMath!

(K–8) Exhibitor Workshop

Engage in lively, Web-based interactive practice and assessment for students in grades K–8. Strengthen all learners' mathematical skills while using adaptive tools that allow teachers to differentiate, assess, track, and evaluate in real-time. Students will enjoy doing math at home and in the classroom.

Britannica Digital Learning
Chicago, Illinois

Room 125

EW

51

Cracking the Code of Algebra, or Cracking One's Head on Algebra

(3–9) Exhibitor Workshop

How does Hands-On Equations enable 80 percent of inner-city fourth graders to succeed with such basic equations as $4x + 3 = 3x + 10$? If algebra is a foreign language to your students, this session is for you! Grades 3–9.

Borenson and Associates
Allentown, Pennsylvania

Room 122

10:00 A.M.–11:00 A.M.

ew 51.1

enVisionMATH Common Core: A Visual Approach to Teaching Word Problems

(General Interest) Exhibitor Workshop

The Standards for Mathematical Practice highlight the continued importance of helping students become proficient in solving problems and reasoning mathematically. Through activities in this workshop, participants will learn strategies to engage a range of learners through problem-based interactive learning and pictorial representations for solving problems.

Pearson

Room 262

10:30 A.M.–12:00 P.M.

52

Keeping Children's Thinking and Understanding *First*

(Pre-K–2) Gallery Workshop

The presenters will share their ongoing journey supporting students' understanding in their classrooms. Participants will identify the important mathematics in first-grade number and examine students' work accordingly. Participants will also apply this knowledge to their grade level.

Tara Guttshall
Paxton Keeley Elementary School, Columbia, Missouri

Katie Russo
Two Mile Prairie Elementary School, Columbia, Missouri

Room 120

53

Mathematics Activities with Unifix Cubes

(Pre-K–2) Gallery Workshop

Unifix Cubes are an important part of any beginning mathematics program, useful for developing classification skills, one-to-one correspondence, basic operations, ordinal numbers, problem-solving skills, patterning, and geometric ideas. Materials will be provided.

Don Balka
Saint Mary's College, Notre Dame, Indiana

Room 229

54

Deliver Dynamic Lessons Using Dominoes

(Pre-K–5) Gallery Workshop

Participants will learn how these readily available manipulatives can help you teach number composition, subitizing, addition, and subtraction including fact families, all while using research-proven, cooperative learning strategies. Learners will create their own foldables using domino concepts.

Autumn Masaoay
Springfield Public Schools, Springfield, Missouri

Room 100

55

A Number Sense Approach to X Facts: Every Day Counts

(3–5) Gallery Workshop

Experience a systematic approach to teaching basic facts in 5–10 minutes a day that encourages reasoning and thinking while building fluency for all. A counting tape with multiple markers and unique array flash cards help students break harder facts into easier ones while building critical connections among ×, ÷, and fractions of a set. Materials provided.

Janet G. Gillespie
Great Source/Harcourt Houghton Mifflin Specialized Curriculum, Wilmington, Massachusetts

Room 230

56

Not Your Ordinary Fact Practice: Intermediate

(3–5) Gallery Workshop

Are you tired of the same old drill and practice? Have you done everything short of standing on your head to get them to learn their basic facts? Then this workshop is for you. Spend some time playing games and practicing your facts in ways that will have you saying, "I wish I'd thought of that!" Leave this session with ready-to-use activities.

Emily Pettersen
Rockwood School District, St. Louis, Missouri

Stephanie Nauman
Rockwood School District, St. Louis, Missouri

Tracey Mulholland
Rockwood School District, St. Louis, Missouri

Room 105

10:30 A.M.–12:00 P.M.

57

Presto! Using Magic to Enhance Math Skills

(3–5) Gallery Workshop

Wave a wand and have students understand math! Unfortunately, we can't do that, but we can teach you mathematical magic to spice up your lessons. Learn math quickies you can interject, math tricks that engage attention, and magic you can teach students that hones their adding, subtracting, multiplying, and dividing skills.

Jeff Lefton
Abra-Kid-Abra, St. Louis, Missouri

Room 232

58

Adventures in Problem Solving: Using Games to Reach *All* Students

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

These highly motivational games help *all* students to develop problem-solving abilities, basic skills, and self-esteem. Participants will engage actively in learning cooperative games that teach computational, spatial, and critical reasoning.

Mary Gilfeather
Pentathlon Institute, Indianapolis, Indiana

Room 265-266

59

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 to use immediately.

Nancy Wisker
Dinah Zike Academy, Comfort, Texas

Room 124

60

Using Probability Models and Simulations in the Middle Grades

(6–8) Gallery Workshop

This workshop will focus on probability activities for middle grade students. The activities will involve using a variety of models and simulations designed to enhance students' understanding of probability concepts, relationships, and applications. Contexts for these activities include free-throw shooting, horse races, and game shows.

Terry Goodman
University of Central Missouri, Warrensburg, Missouri

Room 102

61

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. The speaker will discuss how to adapt the activities, intended for grades 6–12, for the different grade levels. Handouts and materials will be provided.

Kathleen Fick
Buena Vista University, Storm Lake, Iowa

Room 275

62

Interesting Ideas, Manipulatives, and Activities for Teaching Geometry Topics

(6–12) Gallery Workshop

Participants will use hinged mirrors, rubber bands, patty paper, paper plates, other manipulatives, and interesting problems to develop and apply geometry concepts. They will review vocabulary such as similarity, triangle heights, transformations, central angles, polygons, polyhedra, and area.

Christine Mikles
College Preparatory Mathematics Educational Program, Sacramento, California

Room 220

10:30 A.M.–12:00 P.M.

63

Algebra Connections with Multiple Representations

(9–12) Gallery Workshop

Participate in activities that help find the connections among rules, graphs, tables, and contexts. Learn ways to help students move from each representation to the others, developing deep understanding of multiple ways to solve problems. Teachers will receive ideas and materials that they can use in their own classrooms.

Barbara Reed
El Camino High School, Oceanside, California

Stephanie Whitney
Illinois Institute of Technology, Chicago, Illinois

Room 260

64

My Top Ten Favorite Geometry Lessons

(9–12) Gallery Workshop

From "What Army Barbers Give" to "The Electric Slide", these lessons are exciting to teach, ones that the students talk about in the future. Some combine synthetic and analytic geometry, some involve history and music, and some are just crazy.

Patti Blanton
Missouri State University, Springfield, Missouri

Room 103

65

Moving a Wall: An Unbelievable Lesson about Measuring Unimaginable Distances

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

Experience an incredible lesson usable in any geometry or trigonometry course! Using basic properties of triangles and circles and a few simple tools, students calculate how much a wall moves when pushed. The lesson connects mathematics to nanotechnology and provides a real-world application of math concepts that students won't forget.

Matthew C. Hopkins
Champaign Central High School, Champaign, Illinois

Joseph Muskin
University of Illinois at Urbana-Champaign, Champaign, Illinois

Adam R. Poetzel
University of Illinois at Urbana-Champaign, Champaign, Illinois

Room 240

66

Developing Students' Buy-In in a Data-Driven Instructional Environment

(Preservice and In-Service) Gallery Workshop

Increase assessment data's effectiveness and reliability by making the student more than a participant in the process. Learn strategies for building partnerships in the classroom to enhance students' engagement and achievement, particularly as it affects ongoing progress monitoring.

Angela Feaman
Renaissance Learning, Inc., Wisconsin Rapids, Wisconsin

Room 123

67

Math-a-Magic: Magic from a Numbers Perspective

(Preservice and In-Service) Gallery Workshop

Astonish your students by "math-a-magically" reading their minds and telling them the number or card they have secretly selected, or win a "fair" game, every time! Come add magic, mystery, and good math to those spare, teachable minutes.

David E. Ewing
University of Central Missouri, Warrensburg, Missouri

Room 263

11:00 A.M.–12:00 P.M.

68

Guided Math: Applying the Guided Reading Model to Mathematics Classrooms

(General Interest) Session

Reconstruct the typical, direct-instruction mathematics classroom into one of shared learning and differentiated, guided practice. Meeting with small groups, teachers can reach diverse needs while maintaining the rigor of grade-level curriculum. The speaker will share teacher-created materials and detailed steps for developing a successful guided math program.

Amy Marie Varchmin
Robert Frost Junior High School, Schaumburg, Illinois

Tricia Leong
Robert Frost Junior High School, Schaumburg, Illinois

James Vreeland
Schaumburg School District 54, Schaumburg, Illinois

Room 231

69

NCTM and Issues in Implementing and Assessing the CCSSM

(General Interest) Session

This session will give current information on NCTM's work 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.

Anne M. Collins
Board of Directors, National Council of Teachers of Mathematics; Lesley University, Cambridge, Massachusetts

J. Michael Shaughnessy
President, National Council of Teachers of Mathematics; Portland State University, Portland, Oregon

Room 276

70

Easy as 1, 2, 3: Developing Number Concepts

(Pre-K–2) Session

This session will focus on developing students' understanding of number and quantitative relationships in the early grades. Explore tasks ready for the classroom that develop number ideas using a measurement approach and higher-order thinking.

Barbara J. Dougherty
University of Missouri—Columbia, Ames, Iowa

Room 221 & 228

71

Important Ideas in Data Analysis for Prekindergarten–Grade 2

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

Teachers will learn about the various topics in data analysis relevant for pre-K–2 students, ways they can integrate these topics with other content strands at this grade level, and instructional strategies for helping students explore and understand the ideas.

Denise A. Spangler
University of Georgia, Athens, Georgia

Rooms 241

LOR

72

Effective Methods for Developing Math-Fact Fluency

(Pre-K–5) Session

How can students master math facts? Which methods promote automaticity across a broad range of students, and for all operations? See the latest results of ongoing research into fact fluency and how students attain it over time, based on longitudinal performance data being continuously collected on an innovative, online research platform.

Paul Cholmsky
ExploreLearning, Charlottesville, Virginia

Room 264

11:00 A.M.–12:00 P.M.

73

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

(Pre-K–5) Session

Elementary mathematics specialists, coaches, and instructional leaders deal with their own set of challenges—every day! Participants will actively engage in exploring issues of transitioning to the Common Core State Standards, the adult learner, and relationships with other teachers and others.

Jonathan Wray
Howard County Public Schools, Ellicott City, Maryland

Beth Kobett
Stevenson University, Eldersburg, Maryland

Room 223–226

LOR 74

Bridging Understanding in Math Using GeoGebra: Exploring Quadrilaterals and Measurement

(3–5) Session

The speakers will present geometry activities on quadrilaterals and measurement for elementary grades math using geoboards and GeoGebra. GeoGebra, an emerging technology in the United States, has become a dynamic tool for teaching mathematics and helping develop a deeper understanding of geometric concepts in grades 3–5.

Joseph Michael Furner
Florida Atlantic University, John D. MacArthur Campus, Jupiter, Florida

Carol Marinas
Barry University, Miami Shores, Florida

Lisa Herron
Cypress Bay High School, Weston, Florida

Room 127

Hear what's new from Exhibitors—attend an Exhibitor Workshop (see pg. 5)

75

Problem Solved: Using Literacy Strategies to Teach Mathematics

(3–8) Session

This session will explore reading and mathematics strategies that help students reduce learning anxieties. The speaker will offer literacy techniques and strategies that will help educators understand ways in which they can enable students to learn mathematics. Strategies will include techniques to develop numerical literacy and critical thinking.

Zandra H. Stino
Nova Southeastern University, Fort Lauderdale, Florida

Room 274

LOR 76

Teaching Number Sense to the Internet Generation

(3–8) Session

This session will examine how to engage, motivate, and teach the grades 3–5 Internet generation through videos, Web sites, social networking, and motivational strategies that can lead to building better number sense and facility with rational numbers.

Eric Milou
Rowan University, Glassboro, New Jersey

Room 222 & 227

77

Proportional Reasoning: Building Understanding beyond Cross Products

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

Participants will explore fundamentals of proportional reasoning and multiple ways that students can solve proportions.

Johanna Bunn
Boston University, Boston, Massachusetts

Diana Cheng
Towson University, Towson, Maryland

Room 242

11:00 A.M.–12:00 P.M.

78

I Believe: Common Myths about Learning Mathematics

(6–12) Session

"If you can't work a problem in five minutes, you might as well give up." "Math must be learned from an expert." These and other common myths can affect how much your students learn. This session will present strategies for changing those beliefs and increasing success for all your students.

Rita Barger
University of Missouri—Kansas City, Kansas City, Missouri

Rooms 104

79

LOR

Calculus Animations with Geogebra

(9–12, Higher Education) Session

Geogebra is a free, Web-based software that does dynamic geometry and graphing. The software's dynamic feature allows for animations that can illustrate a variety of calculus topics. This talk will showcase some animations the speaker has used and show how to create such animations. Come with ideas for animations.

Kevin W. Hopkins
Southwest Baptist University, Bolivar, Missouri

Room 267

80

High School Mathematics Curricula and College-Level Performance

(9–12, Higher Education, Research) Session

The speaker will discuss results from five longitudinal studies that examining the relationship between various high school mathematics curricula, NSF-funded and not NSF-funded, and college-level performance. In general, they found high school curricula not to be a determining factor in students' subsequent college-level performance.

Thomas R. Post
University of Minnesota—Twin Cities, Minneapolis, Minnesota

Room 106

81

Triangles, Probability, and Amazement: A Connected Classroom Experience

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

This session will explore an intriguing set of classroom-tested, laboratory-style problems that mesh geometry, algebra, and probability. Engaging and loaded with mathematical insights, the experiences use reasoning, sense making, and connections.

James M. Rubillo
DeSales University, Center Valley, Pennsylvania

Room 101

11:30 A.M.–12:30 P.M.

EW

82

enVisionMATH Common Core: What Does Teaching through Mathematical Practices Look Like?

(General Interest) Exhibitor Workshop

This workshop will show how to develop an understanding of each Standard for Mathematical Practice and see how various types of learning tasks and questioning strategies can engage students, so that they develop understanding and proficiency in mathematics.

Pearson
Upper Saddle River, New Jersey

Room 262

EW

83

Mathematical Practices in the National Science Foundation's K–5 Think Math! Program

(K–5) Exhibitor Workshop

Mathematical practices in ***Think Math!*** pervade the entire program appropriately to age. The program articulates mathematical habits that develop precisely the kind of mathematical practices described in the Common Core State Standards. This workshop will illustrate examples of the eight mathematical practices and provide a resource packet.

School Specialty Math and Intervention
Nashua, New Hampshire

Room 122

11:30 A.M.–12:30 P.M.

EW 84

Conquer Times Tables in *Only Three Weeks,* Guaranteed!

(K–8) Exhibitor Workshop

This research-based, *multisensory* program teaches times tables in three weeks, guaranteed! If the class average isn't 90 percent on the final test, receive a 100-percent refund. Address all four learning styles—regular, special education, 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 125

12:30 P.M.–1:30 P.M.

85

Making a Math-Minute Video

(General Interest) Session

The You Tube phenomenon has captured our students' attention. Find out how to tap into this energy by having your students create their own videos.

Jeff Woodroffe
Upper Canada College, Toronto, Canada

Deirdre Timusk
Upper Canada College, Toronto, Canada

Rooms 104

86

Power Your Math Instruction with Meaningful Contexts and Visual Models

(General Interest) Session

Real-world contexts interacting with illustrations and graphic representations can communicate mathematical concepts to students and bring math to life. The presenter will define visual learning, outline its associated skills, describe its benefits for mathematics teaching, and share current, relevant visual-learning research.

Stuart J. Murphy
Author, Boston, Massachusetts

Room 231

87

Primary Problem Solving: Free and Easy!

(Pre-K–2) Session

Model and teach problem solving in just minutes a day at no cost to you! Learn how to incorporate a system of problem-solving strategies that you can begin using in your classroom tomorrow. Students will love the real-life applications.

Rena Pate
Danville School District 118, Danville, Illinois

Room 274

LCR 88

Developing Algebra, Number Sense, and Geometry through NCTM's Free E-Examples

(Pre-K–5) Session

Make your classroom come alive with NCTM's E-examples! From geoboards and tangrams to hundreds boards and interpreting graphs, these newly revised interactive applets provide online resources that demonstrate multiple representations, explore connections, and communicate understanding. Leave prepared to facilitate guided reflections on Monday.

David Barnes
National Council of Teachers of Mathematics, Reston, Virginia

Room 127

LCR 89

Multiplayer Gaming and Math Fact Fluency

(Pre-K–5) Session

Ninety-seven percent of elementary school students play video games. If we can combine aspects of multiplayer gaming with educational content, we can transform the learning experience. The speaker will demonstrate multiplayer multiplication games and discuss results of an NSF study on multiplayer gaming and fact fluency.

David Woodward
Boulder Valley School District, Boulder, Colorado

Room 101

12:30 P.M.–1:30 P.M.

90

So Many Children, So Little Time!

(Pre-K–5) Session

This session will focus on intervention techniques, routines, and activities for the specialist and classroom teacher working with students in grades 1–5. Participants will receive examples of daily routines, process-oriented interview guidelines, and activities that promote skillful development of mathematical concepts.

Peggy Cuevas
Hays Consolidated Independent School District, Kyle, Texas

Room 222 & 227

91

Using Effective Questions to Promote Students' Thinking

(3–5, Preservice and In-Service) Session

Questions requiring students to think more deeply produce better learning outcomes than questions for which they only need remember a fact or routine. Look at some questions that promote students' understanding and explore how to incorporate effective questioning into your mathematics instruction.

Linda M. Gojak
John Carroll University, University Heights, Ohio

Rooms 241

92

Analyzing Middle School Students' Algebra-Related Misconceptions and Errors

(6–8) Session

Participants will examine common algebra-related misconceptions and errors in variables, equality, equation writing, computation, graphing, functions, properties, and proportions. This session will discuss teaching strategies and interventions that can address these misunderstandings and errors.

Sarah Bush
Highland Hills Middle School, Georgetown, Indiana

Amy English-Hunter
Gheens Professional Development Academy, Louisville, Kentucky

Room 221 & 228

93

At the End of a Class, Who Owns the Mathematics?

(6–12) Session

The speaker will focus on classroom discourse with the goal of helping students learn to think and reason in mathematical situations through "mathematical talk." She will share examples of productive classroom discussion among students and the teacher and discuss teachers' moves that promote classroom discourse.

Glenda Lappan
Past President, National Council of Teachers of Mathematics; Michigan State University, East Lansing, Michigan

Room 223–226

94

Geometry Concepts Applied to Physics Problem Solving in Mathematics Classrooms

(6–12) Session

This session will present examples of integrating geometric and algebraic concepts with applied physics, as appropriate for use in the mathematics classroom and adaptable to various age levels and depths of knowledge. Topics will include vector applications, angle relationships, similar triangles, and trigonometric ratios.

Sherrie L. Wisdom
Lindenwood University, Saint Charles, Missouri

Room 276

LCR

95

Illuminate Variables and Functions Behavior Geometrically with Sketchpad 5®

(6–12) Session

Students needn't struggle with domain, range, composition, and inverses. Through a report on actual classroom use, see how students can use Sketchpad 5 to create geometric functions, drag input points to determine output points, produce visual images of compositions and inverses, and transform photographic images. Receive classroom-ready materials.

Scott Steketee
Key Curriculum Press Technologies, Emeryville, California

Daniel Scher
Key Curriculum Press Technologies, Emeryville, California

Room 264

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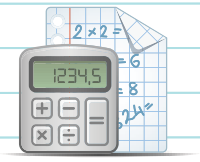

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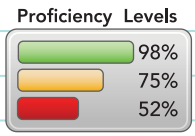

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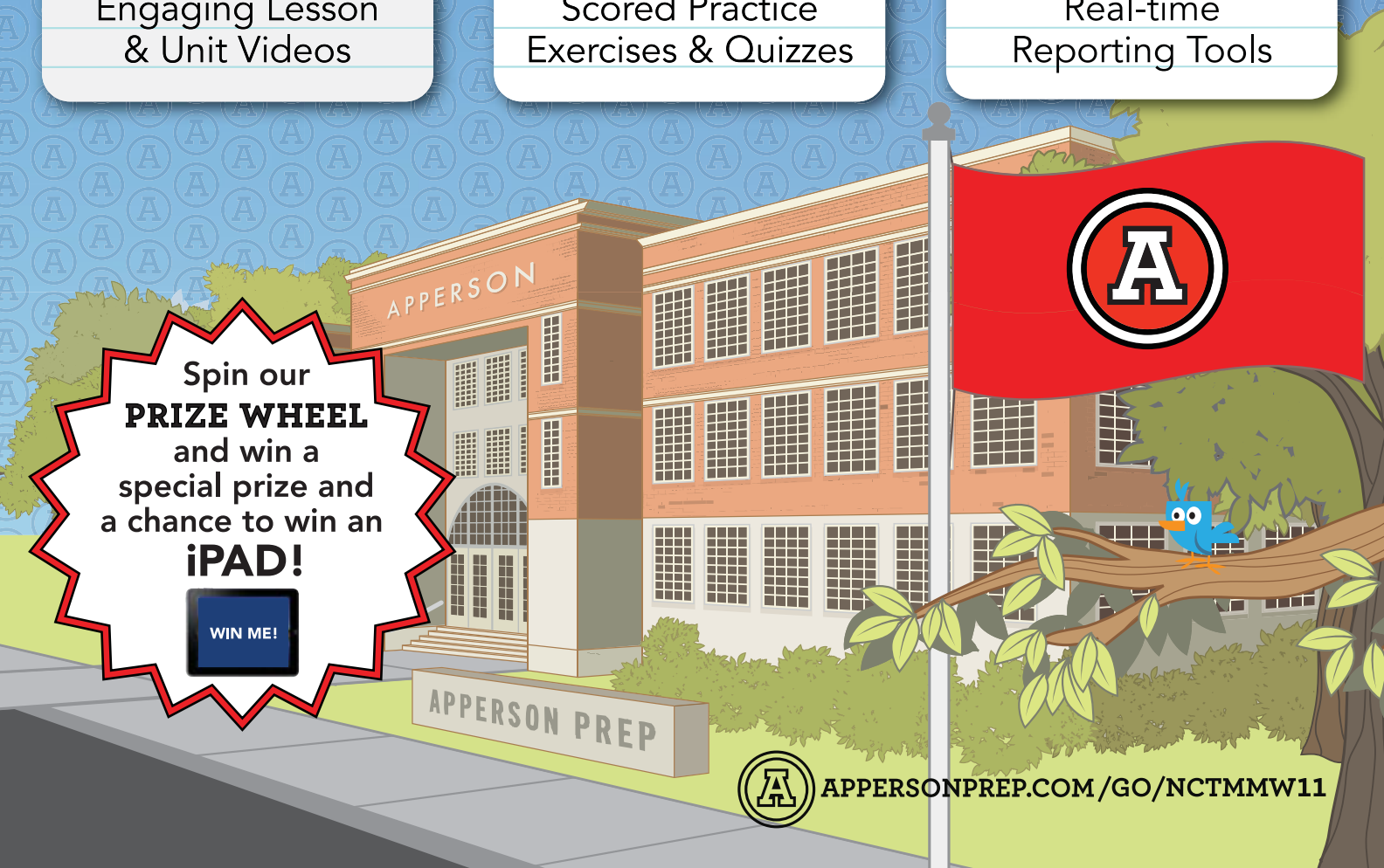

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12:30 P.M.–1:30 P.M.

LCR 96

Technology Tools to Transform Homework

(6–12) Session

Are your students bored with homework? Are you a frustrated teacher who struggles with students not getting homework turned in? This session will give you ideas for transforming typical math assignments using Web 2.0 tools. Watch your students become excited about homework and the opportunity to show you their creativity and understanding of the content.

Jeffrey P. Lay
Osage County Interlocal Cooperative, Hominy, Oklahoma

Room 267

97

Looking at the Big One from Prealgebra to Precalculus

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

The presenter will spiral the different "looks" the number 1 takes in the high school mathematics curriculum, from finding simple common denominators, to changing units of measure, to rationalizing radicals, to calculating complex conjugates.

James Miller
Portland High School, Portland, Tennessee

Room 242

98

Are You Interested in a Ph.D. in Mathematics Education?

(Preservice and In-Service) Session

A shortage of doctorates exists in mathematics education. This session will offer some data on the shortage and discuss job opportunities for classroom teachers interested in pursuing a Ph.D. in mathematics education. Faculty members from several institutions of higher education will discuss their job responsibilities.

Robert Reys
University of Missouri—Columbia, Columbia, Missouri

Robert Glasgow
Southwest Baptist University, Bolivar, Missouri

Christa Jackson
University of Kentucky, Lexington, Kentucky

Room 120

99

Coaching and Elementary Mathematics Specialists: Findings from Research

(Preservice and In-Service) Session

Elementary mathematics specialists and coaches in schools serve as onsite professional resources for teachers, often with expectations of students' improved achievement. Recent research examined these specialists' roles and challenges and the specialists' impact on students' achievement. Attendees will survey this work and discussion its implications.

Patricia F. Campbell
University of Maryland, College Park, Maryland

Room 106

12:30 P.M.–2:00 P.M.

100

Transforming Money, Eating Away Time, and Flip-Flop Operations Develops Excited Learners

(Pre-K–2) Gallery Workshop

The speaker will use transformers, moveable numbers, play dough, and snacks as hands-on approaches to developing every student's concepts of numbers, money, time, and measurement. English speakers of other languages, exceptional students, or anyone will enjoy these hands-on activities that will transform reluctant learners into avid mathematicians.

Kathryn Robinson
WriteMath Enterprises, Inc., Valrico, Florida

Room 105

101

Using Math Games to Develop Number Sense in Grades K–2

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

Teachers will play number-sense math games designed to help children develop a sense of, represent, and use whole numbers flexibly, including relating, composing, and decomposing numbers. Teachers will receive a packet of twenty games for developing number and operation sense, place value, basic facts, and whole-number comparison and computation.

Sheri Bevis
Emporia State University, Olathe, Kansas

Nancy L. Smith
Emporia State University, Emporia, Kansas

Room 123

102

Shuffling into Math: Primary School Math Games

(Pre-K–5) Gallery Workshop

Come prepared to play card and dice games that will help your primary school students succeed in numeration, operations, place value, and graphing. The speaker will share excellent take home ideas, gameboards, students' samples. and more for regular, English language learner, and after-school programs.

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

Room 103

103

Games: An Essential Component for Differentiation and Center Activities

(3–5) Gallery Workshop

Participants will play, analyze, and differentiate games that furnish single- and cross-strand conceptual practice while promoting problem solving. Topics will include regrouping, place value, fractions, decimals, and algebraic thinking. The speakers will model game implementation and distribute rules and relations materials.

Giselle Williams
LL Teach, Inc., Bridgewater, New Jersey

Suzi Streppone
LL Teach, Inc., Bridgewater, New Jersey

Room 232

104

Accessible Geometry

(3–8) Gallery Workshop

This session will develop shapes, properties, spatial visualization, and their connections across the curriculum. The speakers will show how a solid foundation in early grades gives a big payoff later. They will focus on addressing adaptations for students with diverse needs. Come see how reasoning and sense making can be part of your classroom.

Karen Karp
University of Louisville, Louisville, Kentucky

Fred Dillon
Strongsville City Schools, Strongsville, Ohio

Room 275

12:30 P.M.–2:00 P.M.

105

Conceptual Systematic Intervention: Your Classroom

(3–8) Gallery Workshop

This session will focus on conceptual instructional strategies that develop mathematical understanding of fractions through systematic instructional design which addresses the intervention needs in your classroom. Participants will engage in hands-on activities, including games and technology. Handouts and materials will be distributed.

Carolyn M. Moore
McGraw-Hill, Columbus, Ohio

Room 229

106

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 for any fraction (even those greater than one); divide and subdivide segments into equal parts; an animate fraction locations on number lines. The insights obtainable through 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 260

107

Math Jazz: Problem-Solving Games That Develop Improvisational Strategies

(6–8, Preservice and In-Service) Gallery Workshop

Strategy games can teach important mathematical concepts and skills while also developing improvisational thinking. Like jazz, such reasoning teaches crucial problem-solving characteristics of flexibility, persistence, and inventiveness.

John C. Del Regato
Pentathlon Institute, Indianapolis, Indiana

Room 100

108

An Algebraic "Whack on the Side of the Head!"

(6–12) Gallery Workshop

2*B* or not 2*B*: Is algebra the question? What is "algebra," anyway? Why do our students so often view it as a mishmash of procedures with *no* connection to the real world, rather than the powerful tool it is? Join us for some activities and discussions that explore that question. Everyone should have a fun time!

Larry Campbell
Missouri State University, Springfield, Missouri

Room 263

12:30 P.M.–2:00 P.M.

109

Exceptional and Free Online Resources for the Middle Grades Classroom

(6–12) Gallery Workshop

Illuminations (illuminations.nctm.org) has new, improved resources for middle school. Participants will play Deep Sea Duel, on online game based on an *MTMS* article; explore discrete mathematics with the recently improved Graph Creator; attempt a brainteaser from our newsletter, *Bright Ideas;* and explore other lessons and activities.

G. Patrick Vennebush
National Council of Teachers of Mathematics, Reston, Virginia

Jim Rubillo
DeSales University, Willow Grove, Pennsylvania

Room 124

110

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

(9–12) Gallery Workshop

We teach students to evaluate, graph, and transform functions, but we sometimes fail to teach students how to understand them. Participate in a variety of ready-to-use activities, all available free from the NCTM Illuminations project, that explore representations of functions, graphs, and limits.

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

Room 220

111

Worthwhile Mathematical Tasks

(9–12) Gallery Workshop

This session will focus on what makes a worthwhile mathematical task for algebra and geometry. Participants will work hands-on in a collaborative setting to solve rich tasks involving algebra and geometry. Participants will receive ready-to-use, worthwhile mathematical tasks for the classroom.

Mark Jarboe
Keytesville High School, Keytesville, Missouri

Room 240

112

Dang It! A Function Overview for Algebra 2

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

Begin the year with an overview of functions for Algebra 2. The presenter will incorporate NCTM Illuminations and TI Nspire activities to create a function book where students can communicate functions Descriptively, Algebraically, Numerically, and Graphically (DANG it!).

Ruth Knop
Parkway West High School, Ballwin, Missouri

Room 102

113

Problem Solving in Geometry for 2011

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

We'll warm up with some of the classics of problem solving, including the "Bookworm" and "Spider and the Fly" problems, among others. We'll explore a few new ones, then finish with a famous problem posed by Pólya. Participants will work in cooperative groups and present their solutions.

Michael Serra
Consultant, San Francisco, California

Room 230

114

We See Mathematics Everywhere, But How Can We *Use* It?

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

Textbook examples and chapter projects often refer to math in the world around us, yet restrict it to two-dimensional photographs and static representations. Participants will develop lessons, based on photographs and videos taken during this conference, that including using technologies that superimpose the mathematics directly onto images.

Mike Reiners
Christ's Household of Faith School, Saint Paul, Minnesota

Room 265-266

1:00 P.M.–2:00 P.M.

ew 115

Mental Math with Fractions, Decimals, Percents, and Degrees

(K–8) Exhibitor Workshop

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

ClockWise Fractions
Lewisville, Texas

Room 125

ew 116

CCSS-Aligned Mathematics for the Middle Grades

(6–8) Exhibitor Workshop

At last—a middle grades curriculum in an engaging, digital format that's also aligned to the Common Core State Standards (CCSS)! Math Innovations focuses on reasoning, sense making, questioning, and mathematical discourse while increasing students' conceptual understanding. Learn about the interactive eBook and integrated learning tools, including whiteboard activities, practice games, and more.

Kendall Hunt Publishing Co.
Dubuque, Iowa

Room 122

ew 116.1

Navigating Your Way through the Fraction Story of the Common Core

(K–8) Exhibitor Workshop

One approach to the story of fractions is to build upon students' understanding of counting and whole number arithmetic and extend this previous knowledge to the study of fractions. This session will focus on conceptual understanding of the "knotty" topic of fractions including connections to equal partitioning and unitizing. Video clips will be used to examining the conceptions many students have that allow them to complete some tasks successfully but that prove inadequate in other contexts.

Pearson
Upper Saddle River, New Jersey

Room 262

2:00 P.M.–3:00 P.M.

117

Common Core State Standards (CCSS): What's New? What's Needed? What's Next?

(General Interest) Session

This session will highlight national and regional activities, under way and planned, to support implementing CCSS. It will also highlight needs and actions that professional organizations, state and federal agencies, and others need to consider. Audience discussion will be encouraged.

Barbara Reys
University of Missouri—Columbia, Columbia, Missouri

Room 223–226

118

Teachers' Knowledge of Equity in Teaching Mathematics

(General Interest, Research) Session

This session will present research findings on elementary school mathematics teachers' knowledge of equity in teaching, specifically with African American students. Participants will engage in dialogue on how to promote equity in mathematics education by examining their beliefs and their knowledges of equity issues and equity pedagogy.

Christa Jackson
University of Kentucky, Lexington, Kentucky

Room 106

119

What Do You Mean, There's No Homework?

(General Interest) Session

This presentation will describe a secondary school classroom that does not assign nightly homework to students. The presenter will outline the successes and potential pitfalls of not assigning homework, discuss her experience with it, and show how omitting homework from daily routine has changed her mathematics teaching and made it meaningful.

Kate Degner
University of Iowa, Iowa City, Iowa

Room 264

2:00 P.M.–3:00 P.M.

120

Navigating the Mathematics Pre-K–2 Common Core State Standards

(Pre-K–2) Session

Charting a course that guarantees smooth sailing to implementing the Common Core State Standards (CCSS) can be tricky. This session will include instructional and assessment activities and resources that show ways to transition from current standards to the CCSS.

Cindy Bryant
Missouri Department of Elementary and Secondary Education, Jefferson City, Missouri

Room 231

121

The Kentucky Numeracy Project (KNP)

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

Learn to use the sortable KNP Intervention Guide, a free resource for dynamic lesson design connected to numeracy progessions and the Common Core State Standards, with strategies for differentiated assessment and learning tasks for advancing students' number knowledge and computation skills.

Alice Gabbard
Kentucky Center for Mathematics, Highland Heights, Kentucky

Room 221 & 228

LCR

122

Engaging Math Lessons Using Interactive Whiteboards and Students' Response Systems

(Pre-K–5) Session

Experience the effect student-centered lessons and formative assessment have on students' achievement in this highly engaging elementary school mathematics presentation. Manipulate objects in interactive math lessons using the MimioTeach Interactive system, and use the MimioVote assessment system to obtain formative feedback.

Tricia Fontenot
Saint Landry Parish School Board, Opelousas, Louisiana

Room 101

LCR

123

Beyond Paper: Using Technology to Extend the Lesson

(3–5) Session

This interactive session will encourage extending mathematical concepts through nontraditional avenues such as writing assignments, interactive boards, forums, and classroom systems. The speaker will specifically focus on students having the opportunity to communicate orally and in print.

Nicole Hamilton
Archipelago Learning, Dallas, Texas

Room 267

124

Heart of Math Word Problems: Understanding the Structural Reading Barriers

(3–8) Session

This presentation will identify issues preventing success in math word problems. Students need to negotiate vital and auxiliary words structured in each of three functions—setup, givens, and whachyawantfromme. Recognizing these elements cures math reading issues in the normal developmental, remedial, and special education learning processes.

Richard H. Sherman
University of Phoenix—South Florida Campus, Plantation, Florida

Room 276

125

Rational Numbers on the Cartesian Coordinate Plane

(6–8) Session

Participants will examine how to represent ratios on the Cartesian coordinate plane and how to use a graphical representation to add, subtract, multiply, and divide fractions.

Anne M. Collins
Board of Directors, National Council of Teachers of Mathematics; Lesley University, Cambridge, Massachusetts

Room 242

2:00 P.M.–3:00 P.M.

126

Let's Talk Mathematics: Supporting Mathematical Discourse in Your Classroom

(6–12) Session

This session will focus on specific discourse moves teachers can use to support students' learning during mathematical discussions. Teachers will analyze an episode of teaching that illuminates these moves and discuss how to implement them in their classrooms.

Elizabeth Hughes
University of Northern Iowa, Cedar Falls, Iowa

Room 222 & 227

LCR 127

Targeted Connections: Energy Conservation—Make a Good Decision

(6–12) Session

Appliances use energy. Which ones use the most? What changes can we make to save energy and minimize costs? This data analysis activity will have students analyze household energy use by exploring online simulations. Students gather data on multiple aspects of energy consumption and graph equations to analyze efficiency across multiple measures.

Cheryl Malm
Northwest Missouri State University, Maryville, Missouri

Patricia Lucido
Rockhurst University, Kansas City, Missouri

Room 127

LCR 128

Crop-Circle Algebra: Students Teaching Farmers?

(9–12) Session

Using Google Earth, students can find fascinating examples of how farmers have tried to maximize land coverage by center-pivot irrigation circles. See how to use technology, including some computer algebra systems, to explore interesting mathematics from prealgebra through calculus, grounded in real, problem-solving scenarios.

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

Rooms 104

129

The Housekeeper and the Professor: Teaching Mathematics with Fiction and Film

(9–12) Session

The Housekeeper and the Professor, a novel by Yoko Ogawa and *The Professor's Most Beloved Equation,* a movie based on the book, both tell a touching story about memory, family, and a boy with a flat head named Root who grows up to be a math teacher. This workshop will appeal to teachers wanting to use fiction and film to teach algebra and geometry.

Ron Lancaster
Ontario Institute for Studies in Education, University of Toronto, Toronto, Canada

Room 274

130

Mathematical Understandings of and for Beginning Secondary School Mathematics Teachers

(Preservice and In-Service) Session

Two related projects focused on identifying the mathematical understandings of prospective secondary school teachers and characterizing mathematical understandings for secondary school teaching. Participants will identify the mathematical understandings and ways of mathematical thinking in examples drawn from these projects.

M. Kathleen Heid
Pennsylvania State University, University Park, Pennsylvania

Rooms 241

2:30 P.M.–3:30 P.M.

ew 131

Do You Have the "Right Stuff" for Science, Technology, Engineering, and Mathematics (STEM) Leadership?

(General Interest) Exhibitor Workshop

See if you have the "right stuff." Join Dr. Meghan Marrero, director of curriculum for U.S. Satellite Lab, in an activity from Math Connections to STEM Education, a course in Endeavor, a 100-percent online professional development experience that offers a STEM education certificate endorsed by NASA and Teachers College of Columbia University.

Houghton Mifflin Harcourt
Austin, Texas

Room 122

131.1

Organizational Resources for Professional Development of Middle School Mathematics Teachers

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

The author conducted a statewide survey of 633 middle school mathematics teachers in Missouri in 2010, and found that teachers who received more material, human, and social resources are more likely to participate in high quality professional development in mathematics.

Motoko Akiba
University of Missouri, Columbia, Missouri

Room 240

2:30 P.M.–4:00 P.M.

133

Identifying Barriers and Guiding Instruction for Struggling Learners

(Pre-K–2) Gallery Workshop

Participants will receive a framework that analyzes samples of struggling learner's work to identify barriers students experience in number and operations. Participants will also discuss and develop instructional tasks that address identified barriers.

John Lannin
University of Missouri—Columbia, Columbia, Missouri

Delinda van Garderen
University of Missouri—Columbia, Columbia, Missouri

Jeni Davis
University of Missouri—Columbia, Columbia, Missouri

Room 275

134

Math Explorations: Developing Numeracy through Play

(Pre-K–2) Gallery Workshop

Learn how early learners develop visual representations for the digits in our number system by playing with puzzles. Understand the stages that children go through as they learn to count. Play with materials developed for learning about our base-ten number system as we celebrate the number ten's importance for early learners.

Aldo Bacallao
Henry County Schools, McDonough, Georgia

Room 120

135

Teaching Quantity, the Gateway to Number Sense

(Pre-K–2) Gallery Workshop

Understanding quantity in lower grades is the key to success with higher-math concepts. Developing number sense concretely allows students to manipulate algebraic principals. Participants will have time for "make it, take it" and hands-on games and leave with handouts and ideas for making inexpensive materials to teach students in grades K–2.

Johnsie Tucker
Sutton Elementary School, Owensboro, Kentucky

Vicki Shelton
Cravens Elementary School, Owensboro, Kentucky

Room 102

136

Using Manipulatives to Make Sense of Number in Grades K–2

(Pre-K–2) Gallery Workshop

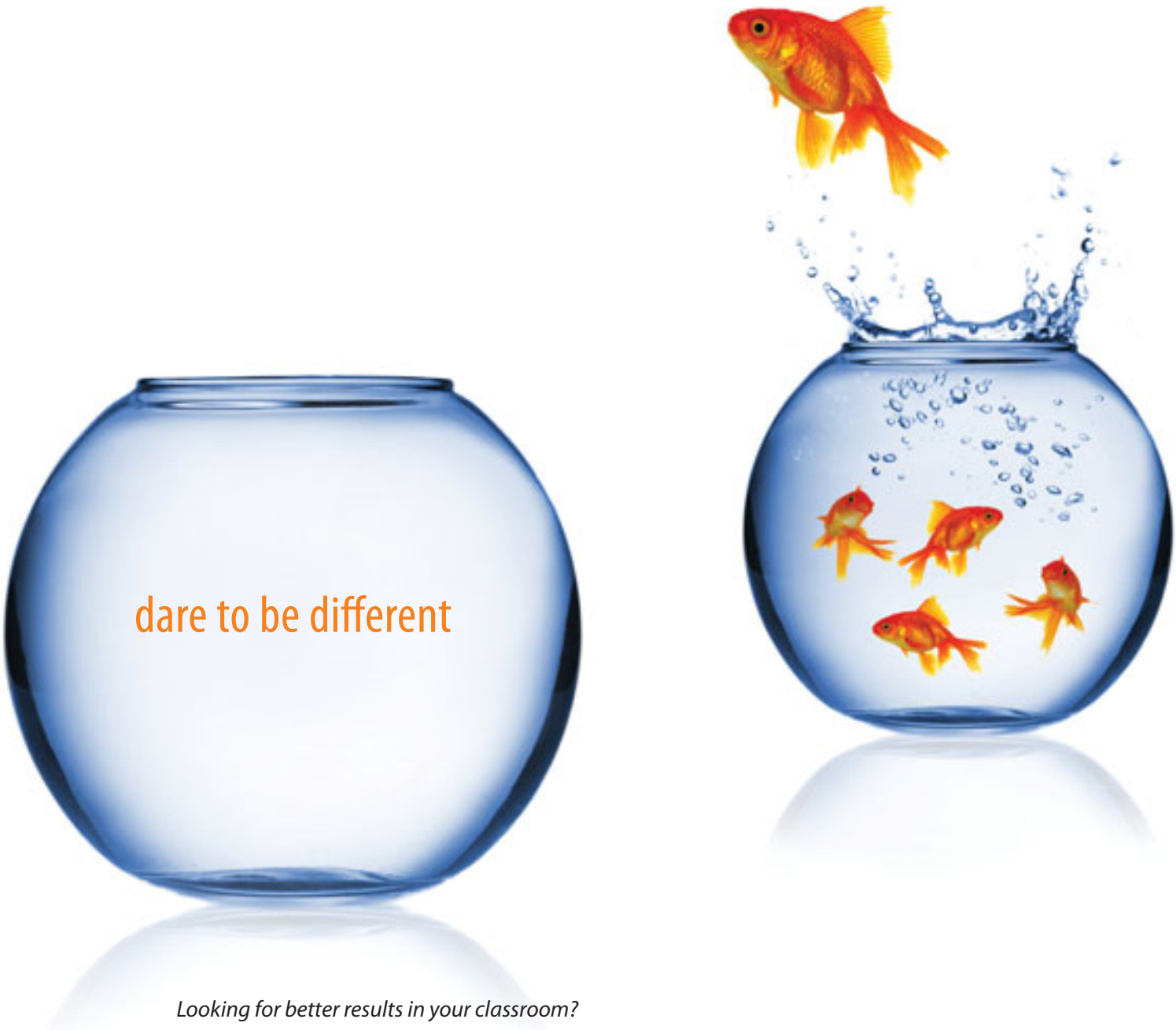
Participants will use classroom manipulatives to explore developmentally appropriate number-concept activities with students in kindergarten through grade 2. Participants will share their own ideas and experiences. The first participants will receive take-home kits of manipulatives.

John Swartz
University of Missouri—Kansas City, Kansas City, Missouri

Clare V. Bell
University of Missouri—Kansas City, Kansas City, Missouri

Room 220

ORIGO



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2:30 P.M.–4:00 P.M.

137

Fraction Attraction? Who Are You Kidding?

(3–5) Gallery Workshop

Children need to work with fractions through several different models. Come see and try these inexpensive models and activities that foster conceptual understanding of fractions and operations on fractions. Handouts will be available.

Sarah K. Westbrook
University of West Georgia, Carrollton, Georgia

Joy W. Black
University of West Georgia, Carrollton, Georgia

Room 105

138

Finding the Mean: Not Just an Application of Long Division

(3–8) Gallery Workshop

Participants will learn three hands-on approaches to finding the mean of small data sets. The data-leveling interpretation derives the familiar formula, whereas variations of the balance-point interpretation develop properties of the mean. Come see how seesaws, number lines, and blocks help your students make sense of the mean.

Robin O'Dell
Buffalo State College, Buffalo, New York

Room 100

139

A Pi-Day Bash Raises Cash and Awareness

(6–8) Gallery Workshop

Welcome to the world of pi, where we explore and celebrate the irrational! Attendees will take away several activities for middle schools and their classrooms to raise funds for the math department, derive pi, compute with pi, and celebrate pi. Handouts and resources will be provided.

Monica E. Hocter
New Kent County Public Schools, New Kent, Virginia

Shawn Millaci
Portsmouth Public Schools, Portsmouth, Virginia

Room 265-266

140

Bring All Students into the Folds of Geometry through Origami

(6–12) Gallery Workshop

Participants will actively engage in geometry by folding an open faced hexahedron and a skeletal octahedron. They will model concepts of coordinates; trihedral, parallel, perpendicular, and skew lines; vertices; edges; truncation; and duality and examine relationships in side lengths, perimeters, areas, and volumes among similar objects.

Nancy Elaine Bergfeld
Valley Park School District, Valley Park, Mississippi

Room 263

141

Developing Statistical Concepts and Generating Inferences through Informal Approaches

(6–12) Gallery Workshop

This interactive session will develop intuitive approaches for finding statistical measures that can be coordinated to generate informal inferences. Real-world data sets and engaging contexts will frame the problem statements as endorsed by the Common Core State Standards. No prior statistics knowledge is required.

Maryann Huey
Drake University, Des Moines, Iowa

Room 229

142

Improve At-Risk Students' Understanding of Algebraic Concepts through Technology

(6–12) Gallery Workshop

Electronic whiteboards, graphing calculators, and software are changing the way we teach mathematics. This interactive workshop will focus on how this technology can help at-risk students visualize difficult topics and gain confidence in their math ability. Participants will investigate algebraic functions through a guided exploration.

James W. Kearns
Salem State College, Salem, Massachusetts

Room 123

2:30 P.M.–4:00 P.M.

143

Real-World Math: Engaging Students through Global Issues

(6–12) Gallery Workshop

This hands-on session will use real-world data to teach the foundational concepts of algebra and geometry, through problem-solving exercises similar to what students will encounter in their professional and personal lives. Receive a researched-based teacher's guide that supports using global issues and themes to engage students.

Amy Spies
Volusia County Schools, DeLand, Florida

Dave Wilton
Facing the Future, Seattle, Washington

Room 230

144

Shuffleboard, Racecars, and Reaction Times: Find the Algebraic Connection

(6–12) Gallery Workshop

Participants will set up a playing field and write the equation that represents the possible points scored in the game. They will conduct time trials, predict who would win a car race, and then simulate the race to see if the predicted winner wins. Finally participants will measure their reaction time, calculate measures of central tendency, and create a histogram.

Claudia D. Maness
CORD Communications, Inc., Waco, Texas

Room 103

145

Geometric Proof! Finally, a Logical Approach.

(9–12) Gallery Workshop

Participants will learn how to work with some nongeometric games and concepts at the beginning stages of proof. These will help students develop logical thought, develop strategies, draw conclusions, communicate and justify their reasoning, and emphasize the need to have students use both oral and written arguments to construct logical proofs.

Roy B. Dean
Jefferson County Schools R-1, Arvada, Colorado

Christine Mikles
College Preparatory Mathematics Educational Program, Sacramento, California

Room 124

146

Public Domain Mathematical Software to Support Implementation of the CCSS

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

This session will overview the design features and a demonstration of CPMP-Tools, a suite of public domain software that includes a computer algebra system, a spreadsheet, and interactive geometry, data analysis, and discrete mathematics tools. The speakers will focus on problems that align with the Common Core State Standards (CCSS), for which the software is useful.

Christian R. Hirsch
Western Michigan University, Kalamazoo, Michigan

Beth E. Ritsema
Western Michigan Unversity, Kalamazzoo, Michigan

Room 260

147

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!

David Barnes
National Council of Teachers of Mathematics, Reston, Virginia

Room 232

3:30 P.M.–4:30 P.M.

148

Assessing Students on the Common Core: Your Next Steps

(General Interest) Session

This session will give an update on the PARCC and SMARTER Better Balanced Assessment consortia's production of math assessments for use by 2014–15. The speaker will recommend uses and interpretations to improve your students' learning. We will need your feedback during test development, through your school, district, and state.

Henry Kepner
Past President, National Council of Teachers of Mathematics; University of Wisconsin—Milwaukee, Milwaukee, Wisconsin

Room 223–226

3:30 P.M.–4:30 P.M.

LOR

149

Learn↔Reflect Reflection Session

(General Interest) Session

The culmination session of the Learn↔Reflect strand is a facilitated discussion of four reflection questions. Those who attend the Kickoff, at least one Learn↔Reflect session, and the Reflection session will earn a personalized certificate.

Ann Perry
Saint Joseph's Academy, St. Louis, Missouri

Helene Sherman
University of Missouri—St. Louis

Richard Lodholz
Consultant, School Mathematics: Teaching & Learning, Creve Coeur, Missouri

Rita Barger
University of Missouri—Kansas City

Room 101

150

Redefining *Help:* Research-based Strategies for Helping All Students Learn

(General Interest) Session

How can we help students? Engaging students in productive struggle and making relationships explicit makes a difference, to name a few. Come explore specific ways to help all students become really competent and confident in mathematics.

Jennifer M. Bay-Williams
University of Louisville, Louisville, Kentucky

Room 231

Stay Connected! Check us out on Twitter and Facebook.

151

Turning the Tables: Using Video for Meaningful Professional Development

(General Interest) Session

A group of teachers forms a video club when they watch a video of a group member's teaching and discuss it. Seeing yourself in action—and getting your peers' feedback on it—is scary, but incredible. Technology makes it easier than ever before. The speaker will share her experience creating a video club in her school.

Deirdre Timusk
Upper Canada College, Toronto, Canada

Rooms 241

152

Building Links between Addition and Subtraction: Concepts and Number Facts

(Pre-K–2) Session

Addition and subtraction are closely linked. This session will demonstrate strategies that can reinforce the connection between them and develop flexible thinking. The speaker will show how to develop number facts practically for both operations using visual materials and games.

James L. Burnett
ORIGO Education, Saint Charles, Missouri

Room 267

153

Using Relevant Mathematics Contexts for Elementary School English Language Learners (ELLs)

(Pre-K–5) Session

Contexts can facilitate or hinder ELLs' mathematics learning. In this interactive session, participants will discuss contexts that can help their ELLs learn math. The presenters will use examples from curriculum materials and classroom videos to illustrate their strategies.

Anne Estapa
University of Missouri—Columbia, Missouri

Room 222 & 227

3:30 P.M.–4:30 P.M.

154

Fact Fluency: Do You Kakooma?

(3–5) Session

Kids need to know their math facts. But what's the best way to teach them? Good teaching means smart strategies followed by practice, practice, and more practice. Join us as we explore how technology combined with the puzzling fun of Kakooma can take the mystery out of mastering math facts.

Greg Tang
Houghton Mifflin Harcourt Math, Boston, Massachusetts

Room 274

155

If You Give a Moose a Map

(3–8) Session

Take a journey with Maddie Moose down the Appalachian Trail. This culminating unit incorporates computation skills (buying supplies, balancing a checkbook), fractions, geometry, measurement, probability, and graphing. The unit is geared for grade 4, but can be adapted to any level.

Lisa Carlson
Saint Charles School, Kettering, Ohio

Room 242

156

Automaticity and High School Readiness in Mathematics

(6–8) Session

The speakers will describe a successful high school readiness initiative with three phases: diagnosis, remediation, and students' individualized reinforcement and enrichment. The comprehensive, basic-skills program stresses automaticity, numeracy, and math fluency. In its second year, the project has expanded to more than 45 school districts.

Cheryll E. Crowe
Eastern Kentucky University, Richmond, Kentucky

Nancy Blue Williams
Eastern Kentucky University, Richmond, Kentucky

Robert Thomas
Eastern Kentucky University, Richmond, Kentucky

Room 264

157

Data-Driven, Differentiated Instruction Achieves Algebra Readiness in Middle School

(6–8) Session

Assessment, hands-on activities with manipulatives matched to Common Core State Standards, and research-based strategies will prepare the lowest 20 percent of middle school students for success in algebra. The speakers will demonstrate differentiated instruction for Response to Intervention, English language learner, and special education students.

Caryl K. Pierson
Math Teachers Press, Inc., Minneapolis, Minnesota

Amy Johnson
Math Teachers Press, Inc., Minneapolis, Minnesota

Room 276

158

The Catenary and the Saint Louis Arch

(9–12) Session

The speakers will entertain participants with two different slide shows of photographs and music. The presentation itself will include the Arch's historical background; a look at its creator, Eero Saarinen; and some of the mathematics surrounding its design.

Nancy E. English
Fontbonne University, Clayton, Missouri

Greg Gude
Hazelwood West High School, Hazelwood, Missouri

Room 221 & 228

159

Variability Is the Spice of Life

(9–12, Higher Education) Session

According to the American Statistical Association's *GAISE* document, all statistics education should focus on variability. But how well do we and our students understand variability? This session explores variability's pesky nature while uncovering important tools for dealing with it as we organize, represent, and analyze data.

Robert Glasgow
Southwest Baptist University, Bolivar, Missouri

Room 127

3:30 P.M.–4:30 P.M.

160

Interactive Model Building: Eliciting Students' Geometric Thinking through Questioning Techniques

(Preservice and In-Service) Session

The presentation will help teachers understand students' thinking and reasoning better by improving teachers' questioning techniques. The session will focus on improving questioning strategies to elicit students' geometric thinking. Participants will receive scenarios and reflect on their questioning strategies.

Julie Amador
Indiana University Bloomington, Bloomington, Indiana

Crystal Marie Vesperman
Indiana University Bloomington, Bloomington, Indiana

Heidi Wiebke
Indiana University Bloomington, Bloomington, Indiana

Rooms 104

161

What's a Mathematics Coach to Do?

(Preservice and In-Service) Session

Learn about the variety of roles and responsibilities of mathematics coaches from districts across the country. Come share what mathematics coaches do in your district. You will leave with tips to help you in your job as a mathematics coach!

Maggie B. McGatha
University of Louisville, Louisville, Kentucky

Room 106

Interested in presenting at a 2012 NCTM regional conference?

Submit Speaker Proposals for Dallas, Hartford, and Chicago by November 1, 2011 at www.nctm.org/speak

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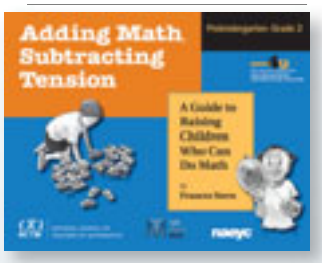

NEW

Adding Math, Subtracting Tension

A Guide to Raising Children Who Can Do Math

Prekindergarten through Grade 2

By Frances Stern

Stock# 13786 | List Price: $24.95 | NCTM Member Price: $19.96

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NEW

Using Classroom Assessment to Improve Student Learning

Math Problems Aligned with NCTM and Common Core State Standards

By Anne Collins

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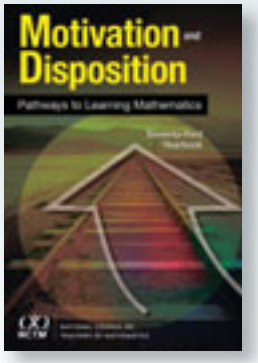
CONFERENCE PRICE: $27.71



NEW

Motivation and Disposition

Pathways to Learning Mathematics – 73rd Yearbook (2011)

Daniel J. Brahier, Volume Editor and William R. Speer, General Editor

Stock# 13864 | List Price: $55.95 | NCTM Member Price: $44.76

CONFERENCE PRICE: $41.96

Visit the NCTM Bookstore in the Exhibit Hall

Wed.	5:00 pm	– 7:00 pm
Thurs.	7:00 am	– 4:00 pm
Fri.	8:00 am	– 4:00 pm

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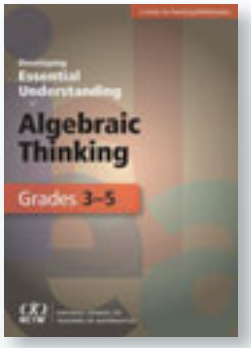
NEW TITLES in the Essential Understanding Series



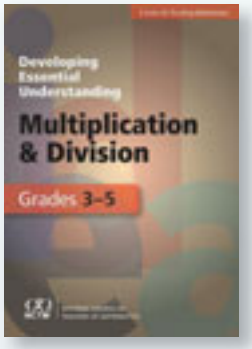
Developing Essential Understanding of Algebraic Thinking for Teaching Mathematics in Grades 3-5

By Maria Blanton, Linda Levi, Terry Crites, and Barbara Dougherty

Stock# 13796

List Price: $30.95 | NCTM Member Price: $24.76

CONFERENCE PRICE: $23.21



Developing Essential Understanding of Multiplication and Division for Teaching Mathematics in Grades 3-5

By Albert Otto, Janet Caldwell, Cheryl Ann Lubinski, and Sarah Wallus Hancock

Stock# 13795

List Price: $30.95 | NCTM Member Price: $24.76

CONFERENCE PRICE: $23.21

Developing Essential Understanding of Addition and Subtraction for Teaching Mathematics in Pre-K-Grade 2

By Janet Caldwell, Karen Karp and Jennifer M. Bay-Williams

Stock# 13792

List Price: $30.95 | NCTM Member Price: $24.76

CONFERENCE PRICE: $23.21

NEW TITLES in Focus in High School Mathematics Series

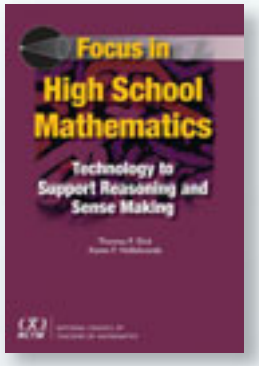
Focus in High School Mathematics: Fostering Reasoning and Sense Making for All Students

Edited by Marilyn E. Strutchens and Judith Reed Quander

Stock# 13989

List Price: $29.95 | NCTM Member Price: $23.96

CONFERENCE PRICE: $22.46



Focus in High School Mathematics: Technology to Support Reasoning and Sense Making

By Thomas P. Dick and Karen F. Hollebrands

Stock# 14287

NEW TITLE in Curriculum Focal Points Series

Focus in Grade 2

Teaching with Curriculum Focal Points

Stock# 13790

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FRIDAY PLANNER

8:00	
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ew Exhibitor Workshop

Highlights

- New Member and First Timers' Orientation (Presentation 162)
- New and Preservice Teachers' Workshop (Presentation 227)

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.

FRIDAY

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 to stay 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.

162

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. First-time attendees will learn how to make the most of their time at the conference.

Marilyn Strutchens
Auburn University, Auburn, Alabama

Room 242

8:00 A.M.–9:00 A.M.

163

Curse, No! Technology, Recursion, and Induction, Yes!

(General Interest) Session

From the time very young students describe an "add 3" pattern, they use recursion. With spreadsheets, at middle school, they use recursive formulas. In high school, they prove conjectures naturally with mathematical induction. Come experience recursive thinking.

Johnny Lott
Past President, National Council of Teachers of Mathematics; University of Missisippi, Oxford, Mississippi

Room 223–226

164

Mathematical Intuition: Its Role in Reasoning and Sense Making

(General Interest) Session

Intuition can seem like a mysterious force. Does it have a role in reasoning and sense making? Great mathematicians and researchers have long reported that a keen intuition was the bedrock of their greatness. Great teachers have been known to say the same. Want to hone your own intuition and those of your students? Please join us.

Linda Arnold
University of Tennessee, Knoxville, Tennessee

Room 276

165

Mathematics and College Readiness: Myths or Methods?

(General Interest) Session

College prep is not college-ready. A high school student's gender, socioeconomic status, ethnical background, grade point average, test scores, or listed school curriculum do not indicate success in college. The speaker will discuss the four surprising, important roles that college readiness expects high school mathematics to play.

Alan Zollman
Northern Illinois University, DeKalb, Illinois

Room 221 & 228

166

The Promethean Interactive White Board as a Main Teaching Board

(General Interest) Session

Although interactive whiteboards exist in many classrooms, many teachers use them only for special projects or particular lessons. This presentation will show how to use the board daily as the main teaching tool. The audience will see lessons that use the board regularly. The presenter will demonstrate techniques that use the Promethean board.

Angela Walmsley
Saint Louis University, St. Louis, Missouri

Room 106

167

The Whole-Brain Approach to Mathematics Learning for Children

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

Learn about some of the research on the development of 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 264

8:00 A.M.–9:00 A.M.

168

What's Happening in an Engaging Mathematics Classroom?

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

This session is for teachers who want to rethink their mathematics instruction to make it more engaging for their students or preservice teachers who would like to think about engaging their students. Explore ways to structure your mathematics class to engage students in active learning and characteristics of good math programs.

Linda Coutts
University of Missouri—Columbia, Columbia, Missouri

Room 242

169

Explorations in Nature That Integrate Math and Science Inquiry

(3–8) Session

Learn about integrating math and science inquiry and questioning pedagogy into an outdoor, natural setting. This presentation will include raising questions, authentic math and science applications in the outdoor classroom, the golden ratio in nature, and math-and-science notebooking.

Nikki J. Davenport
School District of University City, University City, Missouri

Room 274

170

Response to Intervention (RtI) and Instructional Practices

(3–8) Session

The presenters will discuss recent research and research syntheses on mathematics practices for students at-risk for special education or who have learning disabilities. We will concentrate on crucial issues related to RtI for middle school students, particularly in curriculum and motivation.

John Woodward
University of Puget Sound, Tacoma, Washington

Russell Gersten
Instructional Research Group, Los Alamitos, California

Takako Nomi
Consortium on Chicago School Research, Chicago, Illinois

Room 222 & 227

171

Algebraic Reasoning Tasks That Span the Abstraction Continuum

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

This session will engage participants n middle-grades algebra tasks that allow students to draw on their strengths to solve the problems. Each task has multiple points of entry and exit to ensure access to students at various levels of abstraction.

Brian E. Townsend
University of Northern Iowa, Cedar Falls, Iowa

Rooms 241

172

Developing Student's Quantitative Literacy (QL) through the News

(6–12) Session

QL's importance in today's world continues to grow. The speaker will examine how using media articles that embed mathematical problems in real-world settings can enhance students' QL skills. Participants will engage in problems pulled from the news and examine how they can use the news to create lessons for their classroom.

Shannon Dingman
University of Arkansas, Fayetteville, Arkansas

Rooms 104

173

Tasks to Promote Reasoning and Sense Making (RSM) in High School

(9–12) Session

Selecting good tasks is the first step in promoting RSM in your classroom, as discussed in *Focus in High School Mathematics*. This session will offer a how-to guide for identifying promising tasks—what to look for, where to look, and how to use what you find to promote RSM while meeting your course objectives.

W. Gary Martin
Auburn University, Auburn, Alabama

Room 267

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

8:00 A.M.–9:00 A.M.

174

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—numbers and operations, algebra, geometry, functions and modeling, statistics, and probability. They will discuss guidelines for choosing and using technology effectively in the mathematics classroom.

Karen Hollenbrands
North Carolina State University, Raleigh, North Carolina

Thomas Dick
Oregon State University, Corvallis, Oregon

Room 101

175

TIME for Lesson Study

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

Technology Integration in Mathematics Education (TIME) uses a modified Japanese lesson-study format to train preservice teachers to use instructional mathematics technology with an interactive whiteboard. The session will highlight a university–high school partnership that promotes preservice teachers' technological efficacy.

Jamalee Stone
Black Hills State University, Spearfish, South Dakota

Tiffany Post
Black Hills State University, Spearfish, South Dakota

Hayley Handcock
Black Hills State University, Spearfish, South Dakota

Room 231

176

Algebra for Algebra Teachers

(Preservice and In-Service) Session

The speaker will discuss the development and content of a graduate credit algebra course for algebra teachers. The course 's main goal is to help teachers understand better the conceptual underpinnings of school algebra and how to transform that understanding into improved classroom practice.

Ira Papick
University of Nebraska—Lincoln, Lincoln, Nebraska

Room 127

8:30 A.M.–9:30 A.M.

ew 177

Assessment and Manipulatives Play Crucial Roles in Developing Number Sense

(Pre-K–3) Exhibitor Workshop

Learn how to lay the foundation for essential prenumber and numeracy concepts needed by students in grades Pre-K–3. Using Developmental Math Group materials (DMA, Bears and Chairs, 5, 10, and double 10 ten-frame mats, and so on), engage in explorations that build an early numeracy foundation.

Developmental Math Group
Hilliard, Ohio

Room 125

ew 178

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 new devices fit into math instruction, and why do they appeal to the current generation of students? Come imagine and explore real-life applications, modeling, and problem solving using iPads and mobile devices in the classroom.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 122

8:30 A.M.–10:00 A.M.

179

Place-Value Foundations

(Pre-K–2) Gallery Workshop

How do young students develop deep understanding of place-value concepts? This session will offer hands-on strategies, routines, and activities to build the foundation for place-value understanding, regrouping concepts, and multiple representations of multidigit numbers.

Judy Welch
Wetumpka Elementary School, Wetumpka, Alabama

Kimberly Henderson
Coosada Elementary School, Millbrook, Alabama

Room 100

8:30 A.M.–10:00 A.M.

180

Planning a Lesson So All Students Are Learning

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

Using students' work, teachers will assess and categorize a first-grade class's strategies and plan a lesson to develop the strategies of each individual student in the class further. The content will involve whole-number operations and developing students' strategies from "acting out" to "symbol manipulation that reflects thinking strategies."

Cheryl Ann Lubinski
Illinois State University (Emerita), Normal, Illinois

Room 103

181

Domino Games: Connecting the Dots for Primary School Students

(Pre-K–5) Gallery Workshop

Dominoes are a staple found in most primary school classrooms. Come prepared to play games that teach number sense, patterning, operations, place value, and problem solving. Receive great game boards and ideas to use Monday morning for centers, backpacks, after-school programs, and regular, English as a Second Language, and Title 1 programs.

Allison Riddle
Davis School District, Salt Lake City, Utah

Room 263

182

Using Children's Literature to Create a Context for Learning Mathematics

(Pre-K–5) Gallery Workshop

This workshop will engage participants in hands-on activities using children's literature as a basis for introducing, teaching, and reinforcing mathematical concepts. Participants will receive an annotated bibliography of current children's books with suggested classroom activities.

Marvin Harrell
Emporia State University, Emporia, Kansas

Nancy L. Smith
Emporia State University, Emporia, Kansas

Toni Harrell
State Library of Kansas, Topeka, Kansas

Room 123

183

Fabulous Fractions

(3–5) Gallery Workshop

The speaker will go through several activities that you can use with various manipulatives to develop the concept of fractions. Materials and handouts will be provided.

Marilyn L. Hasty
Southern Illinois University Edwardsville, Edwardsville, Illinois

Room 265-266

184

Jibber-Jabber, or Quality Conversation?

(3–5) Gallery Workshop

Classroom conversations are a crucial component of math instruction, yet most teachers have not experienced, or been trained to facilitate, productive mathematics conversations. Join the speaker for a talk about talk and gain strategies for moving your students from sharing their answers to justifying their solution paths.

Lori Williams
Manitowoc Public School District, Manitowoc, Wisconsin

Room 220

185

Silly Statistics and Meaningful Means: Data Explorations for Upper Elementary School

(3–5) Gallery Workshop

This workshop will engage participants in several investigations designed to help students develop an understanding of data analysis. These activities will focus on collecting and organizing data, and on developing an understanding of the statistical methods used in the elementary grades. Participants will leave with classroom-ready activities.

Emily Combs
Clinton Public Schools, Clinton, Missouri

Ann McCoy
University of Central Missouri, Warrensburg, Missouri

Room 102

8:30 A.M.–10:00 A.M.

186

Developing Spatial Reasoning through Investigation and Exploration

(3–8) Gallery Workshop

Participants will explore how to develop students' spatial reasoning using polydrons and other manipulatives. The speaker will focus on developing conceptual understanding in students. Hands-on materials and classroom activities designed to assist students in developing spatial reasoning will be available.

James E. Truelove
Southwest Baptist University, Bolivar, Missouri

Room 105

187

Orienteering: Compass Work, Measurement, Graphing, and Geometry

(3–8) Gallery Workshop

Orienteering and using a compass can be powerful tools in mathematics instruction. Orienteering skills lend themselves easily to many aspects of measurement, graphing, and geometry. This presentation will demonstrate how these skills can help write and solve multistep word problems.

Edward Kennedy
Edgemont Union Free School District, Scarsdale, New York

Gerald Murphy
Edgemont Union Free School District, Scarsdale, New York

Room 229

188

They Need More Time!

(3–8) Gallery Workshop

The speaker will describe an after-school or summer intervention program that she and others use to fill the gaps for struggling math students. The lessons will give participants ideas for how to help their strugglers.

Sherri Adler
Benchmark School, Phoenix, Arizona

Room 240

189

Developing Students' Algebraic Thinking and Reasoning

(6–8) Gallery Workshop

This session will examine an algebra curriculum's promising organizing theme that highlights algebra's big ideas and promotes deep understanding and reasoning as reflected in the mathematical practices in the Common Core State Standards. The speaker will discuss how mathematical practices can develop students' algebraic reasoning and understanding.

Elizabeth Phillips
Michigan State University, East Lansing, Michigan

Room 124

190

NASA Smart Skies: Distance-Rate-Time Math in Air Traffic Control

(6–8) Gallery Workshop

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

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

Rebecca Green
NASA Ames Research Center, Moffett Field, California

Room 260

191

Activities to Help the Lower 50 Percent of Students Learn Algebra

(6–12) Gallery Workshop

Looking for methods and activities that will engage and reach the reluctant learner? This workshop is for you. Receive several activities that will engage your students as they learn difficult algebraic concepts, including solving equations, writing linear equations from data, systems of equations, and more.

Paul J. Weisse
Appleton Area School District, Appleton, Wisconsin

Thomas Strauss
AMME, Inc., Fond du Lac, Wisconsin

Room 232

8:30 A.M.–10:00 A.M.

192

Linking Rigorous Geometry to Construction

(9–12) Gallery Workshop

A math and a career-and-technical-education teacher recently teamed up to design a rigorous geometry class taught using a relevant, project-based application of building a house. The speaker will describe similar, contextualized activities that have significantly raised state test scores. www.geometryinconstruction.org

Tom W. Moore
Thompson Schools, Loveland, Colorado

Room 230

193

Hands-On Geometry and Topology

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

We examine several hands-on activities using manipulatives such as Play-doh, toothpicks, and marshmallows to examine Eüler characteristics, a pair of subjects roped together to examine knot theory, and doodling to illustrate some aspects of graph theory. The activities can be adapted for classrooms, math clubs, or math circle sessions.

Jonathan Corbett
Harris-Stowe State University, St. Louis, Missouri

Ann Podleski
Harris-Stowe State University, St. Louis, Missouri

Room 120

194

TI-Nspire™CX Color and SMART Boards™: Integration Enhances Success

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

Get hands-on experience with the new TI-Nspire CX color handheld—how to create valuable instruction time with color, pictures, 3D graphs, much more. Use SMART Boards and color to help your students learn more effectively, posting notes online in pdf and video formats. Obtain a CD with hundreds of ready-to-use Nspire and other teaching activities.

Tom Reardon
Fitch High School; Youngstown State University, Youngstown, Ohio

Room 275

9:30 A.M.–10:30 A.M.

195

Attaining Uncommon Results with Common Standards

(General Interest) Session

The advent of *Common Core State Standards for Mathematics* does not change a fundamental research finding: much of what we have traditionally labeled *the achievement gap* comes from instructional practices and policies. The speaker will discuss three features of schools that are successfully closing the achievement gap.

Matt Larson
Lincoln Public Schools, Lincoln, Nebraska

Room 223–226

196

Differentiating Instruction in Grades 3–8

(General Interest) Session

Participate in hands-on examples of ways to address students' needs. The speaker will examples from number, algebra, geometry, measurement, and data, with particular attention to implementing the Common Core mathematics standards.

Janet H. Caldwell
Rowan University, Glassboro, New Jersey

Room 106

197

Strategies for Establishing a Statewide Partnership for Mathematics Instruction

(General Interest) Session

NebraskaMATH is an NSF-funded partnership between the University of Nebraska—Lincoln and educational units focusing on math instruction. The speaker will share strategies for connecting math teachers through formal course study, mentoring, coaching, lesson study, and online collaboration, and succesess and challenges during program development.

Jerel L. Welker
Lincoln Public Schools; University of Nebraska—Lincoln, Lincoln, Nebraska

Room 231

9:30 A.M.–10:30 A.M.

198

From Balancing Students to Balancing Equations: Helping Children Visualize Mathematics

(Pre-K–2, Research) Session

The speakers will explore algebraic ideas and the concept of equality using role play, manipulatives, and children's literature. They will share methods, from helping kindergarten students build equations to teaching balanced equations, that help younger children become enthusiastic, visualizing mathematicians.

Kyle Patterson
Centerfield Elementary School, Crestwood, Kentucky

Marcia Rowe
Centerfield Elementary School, Crestwood, Kentucky

Room 242

199

Teaching Computation to Students with Disabilities: Strategies and Activities

(Pre-K–5) Session

Because a solid understanding of operation sense is essential for developing reasoning and computational skills, students with disabilities often struggle with conceptual learning. This session will demonstrate strategies and activities for teaching basic operations explicitly to elementary school students with disabilities.

Joseph Sencibaugh
Truman State University, Kirksville, Missouri

Angela Sencibaugh
Valley Park School District, Valley Park, Missouri

Room 276

200

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 property's power of this property as you use it to find equivalent fractions, add and subtract fractions, divide decimals, find scale factors, rationalize denominators, and more.

Karen Lucas
University of Tennessee, Knoxville, Tennessee

Room 221 & 228

201

Activities and Applications for Teaching Probability in Middle School Mathematics

(6–8) Session

This session will present activities and applications that can be used directly in the middle school classroom to motivate students and teach probability.

Rick Billstein
University of Montana, Missoula, Montana

Room 127

202

The Triangle World Using GeoGebra

(6–8) Session

Geometry activities on triangles for middle grades math will be presented using geoboards and GeoGebra. GeoGebra, an emerging technology in the unites States, has become a dynamic tool for teaching mathematics and developing a deeper understanding of the geometric concepts in the grades 6–8.

Carol Marinas
Barry University, Miami Shores, Florida

Joseph Michael Furner
Florida Atlantic University, John D. MacArthur Campus, Jupiter, Florida

Ana Escuder
Florida Atlantic University—Boca Raton, Boca Raton, Florida

Room 267

203

Beyond Good Teaching: Meeting the Mathematical Needs of English Language Learners (ELLs)

(6–12) Session

This presentation will overview teaching mathematics to ELLs, focusing on describing the stages of second-language development and implications for teaching secondary school mathematics. Video clips and lesson plans will illustrate examples of how ELLs at different English proficiencies can engage in learning mathematics.

Nora Ramirez
TODOS: Mathematics for ALL, Tempe, Arizona

Sylvia Celedón-Pattichis
University of New Mexico, Albuquerque, New Mexico

Rooms 241

9:30 A.M.–10:30 A.M.

204

Bringing STEM into Your Classroom

(9–12) Session

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

David Young
Fayetteville Public Schools, Fayetteville, Arkansas

Room 264

205

Checking the Troops: How Far Did the General Ride?

(9–12) Session

Investigate a distance-rate-time problem that lends itself to several solution methods with increasing levels of precision. In addition to offering some challenges in proportional reasoning and modeling the situation, the problem has a surprising and interesting generalized solution.

Linda Bolte
Eastern Washington University, Cheney, Washington

Rooms 104

206

Sketchpad®: It's More than Just Geometry!

(9–12) Session

Don't let the name fool you. Files created using The Geometer's Sketchpad can illustrate important concepts and foster critical thinking at all levels of high school math. The speakers will highlight sketches from geometry, Algebra 2, precalculus, and calculus and discuss how to use them to foster investigation, discovery, and discussion.

Kevin A. Thompson
Illinois State University, Normal, Illinois

Michael A. Sondgeroth
Illinois State University, Normal, Illinois

Room 274

207

Assessing Geometry Knowledge for Teaching

(Preservice and In-Service, Research) Session

The speakers will present the process of validating empirically an instrument designed to measure teachers' knowledge about geometry, proof, and conjecture. They will discuss the overall assessment framework, specific items, and validation results from a sample of 70 in-service geometry teachers.

M. Alejandra Sorto
Texas State University—San Marcos, San Marcos, Texas

Alana Rosenwasser
Texas State University—San Marcos, San Marcos, Texas

Ewelina McBroom
Texas State University—San Marcos, San Marcos, Texas

Room 101

208

Geometric Structures for Elementary Teachers (GeoSET): An Inquiry-Based Approach Using Study Teams

(Preservice and In-Service) Session

The speaker will present the GeoSET model's delivery through study teams, logistical issues and expectations for students, observations from student-generated data, and suggestions for collaboration.

Douglas B. Aichele
Oklahoma State University, Stillwater, Oklahoma

Room 222 & 227

10:00 A.M.–11:00 A.M.

ew 209

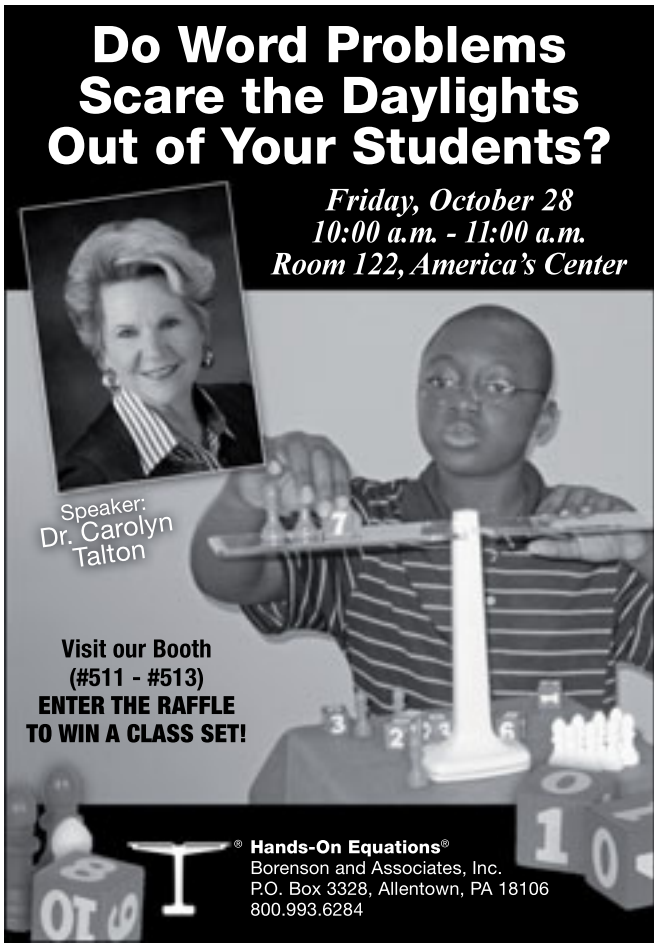
Creative Curriculum: Teaching Math Concepts Using Duplicate Bridge

(General Interest) Exhibitor Workshop

Duplicate bridge is a game of mathematics. The game is a vehicle for introducing concepts such as probability, percentages, data analysis, reasoning and proof, assessing value and applying this assessment to problem solving, and practicing inferential reasoning skills. Bridge offers students the chance to build their social and teamwork skills. Presented by Kathy Rolfe.

American Contract Bridge League
Horn Lake, Mississippi

Room 262



ew 210

Conquer Times Tables in *Only Three Weeks,* Guaranteed!

(K–8) Exhibitor Workshop

This research-based, *multisensory* program teaches times tables in three weeks, guaranteed! If the class average isn't 90 percent on the final test, receive a 100-percent refund. Address all four learning styles—regular, special education, 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 125

ew 211

Do Word Problems Scare the Daylights Out of Your Students?

(4–9) Exhibitor Workshop

Find out how Hands-On Equations® enables students to represent and solve word problems, including age and consecutive-number problems, visually using game pieces. Grades 4–9.

Borenson and Associates
Allentown, Pennsylvania

Room 122

10:30 A.M.–12:00 P.M.

212

Not Your Ordinary Fact Practice: Primary School

(Pre-K–2) Gallery Workshop

Are you tired of the same old drill and practice? Have you done everything short of standing on your head to get them to learn their basic facts? Then this workshop is for you. Spend some time playing games and practicing your facts in ways that will have you saying, "I wish I'd thought of that!" Leave this session with ready-to-use activities.

Stephanie Nauman
Rockwood School District, St. Louis, Missouri

Tracey Mulholland
Rockwood School District, St. Louis, Missouri

Emily Pettersen
Rockwood School District, St. Louis, Missouri

Room 229

10:30 A.M.–12:00 P.M.

213

Place Value: Building a Strong Bridge for Understanding

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

This presentation will focus on participatory learning activities that build foundational place-value concepts and skills. Activities that use manipulatives and drawings to support symbols range from patterning to estimation. The speaker will analyze and discuss error patterns. Handouts will be included.

Helene J. Sherman
University of Missouri—St. Louis, St. Louis, Missouri

Room 123

214

Getting Students into Shape(s) with Origami

(Pre-K–5) Gallery Workshop

Participants will actively engage in folding several simple origami models appropriate for the primary grades. This is a great vehicle for teaching describing shapes and their attributes, composing and decomposing shapes, and measurement. Classroom-ready directions for each activity will be provided.

Nancy Elaine Bergfeld
Valley Park School District, Valley Park, Missouri

Room 105

215

Math Activities for the Special Student in the Regular Classroom

(Pre-K–5) Gallery Workshop

Are you having difficulty teaching computation to your special-needs students? Do you need alternative strategies? Using the NCTM Math Computation Standard, learn about games and activities that develop concepts and then practice and apply them in problem solving.

Shirley H. Bradsby
Jefferson County Schools, Lakewood, Colorado

Room 230

216

Differentiation and Accommodation for Students with Special Needs

(3–5) Gallery Workshop

This presentation will discuss differentiation and accomodation in lesson planning and teaching for special-needs students. The speakers will specifically discuss techniques for teaching rich mathematical tasks in probability and patterns to students with cognitive or social difficulties.

James E. R. Beyers
College of New Jersey, Ewing, New Jersey

John DeRosa
College of New Jersey, Ewing, New Jersey

Room 275

217

Rational Number Project (RNP): Teaching Fraction Addition and Subtraction

(3–8) Gallery Workshop

This workshop will involve participants in hands-on activities that the RNP found effective in building fraction number sense, meaning for fraction addition and subtraction, and facility with symbolic procedures. Participants will work through RNP lessons and receive a link to download two sets of RNP fraction lessons.

Kathleen Cramer
University of Minnesota—Twin Cities, Minneapolis, Minnesota

Room 120

218

Funtastic Fractions: Making Fraction Sense

(3–12) Gallery Workshop

"It is not yours to ask why, just invert and multiply." Unfortunately, we often use phrases like this when teaching concepts related to fractions. This session, using a variety of manipulatives and the TI-73 calculator, will explore fractions meaningfully so that students can come to understand and not merely memorize phrases.

Ann M. Schlemper
Columbia College, Columbia, Missouri

Room 260

10:30 A.M.–12:00 P.M.

219

My 20 Favorite Olympiad Problems, and 50 More

(6–8) Gallery Workshop

Challenge young minds with these rich, classic problems. Deepen and strengthen their understanding of math while you excite their imagination and empower them through discovery, collaboration, and mastery. Present math as a way of thinking rather than as a skill set.

Dennis C. Mulhearn
Math Olympiads for Elementary and Middle Schools, Bellmore, New York

Room 263

220

Engaging At-Risk Learners through Reasoning and Sense Making

(6–12) Gallery Workshop

Engage your at-risk learners by using lessons that involve reasoning and sense making. Learn how to incorporate strategies from NCTM's Focus in High School Mathematics series, and see how it can work in your existing curriculum.

Jennifer J. Salls
Sparks High School, Sparks, Nevada

Fred L. Dillon
Strongsville High School, Ohio, Ohio

Room 100

221

NASA's Pi in the Sky

(6–12) Gallery Workshop

What, exactly, is pi? And what's a radian? Use mathematics, and materials available free from NASA, to investigate scientific phenomena in astronomy.

Janet L. Moore
National Air and Space Administration, Rohnert Park, California

Room 103

Mingle, explore, and learn in the Exhibit Hall

222

Researched-Based Strategies to Help *All* Students Learn Algebra

(6–12) Gallery Workshop

Be actively involved using a research-based model with intervention techniques. See a model for instruction determined by assessment, and use hands-on activities that promote concept development, practice, and problem solving. Investigate a management model that diagnoses students' needs, prescribes corrective instruction, and maintains students' records. Leave with ideas that you can implement immediately.

Larry Bradsby
Jeffco Schools, Lakewood, Colorado

Room 220

223

Scaling the Universe with Mathematics

(6–12) Gallery Workshop

The NASA EPO group at Sonoma has developed free activities based on the science of the GLAST Fermi mission launched in June 2008. Students often have difficulty comprehending orders of magnitude. Your students will see mathematical models that help scientists measure and understand physical phenomena.

Mary Garrett
NASA EPO, Sonoma University, California

Room 240

224

Stacking and Nesting Reveal the Multiple Personalities of Slope

(6–12) Gallery Workshop

Participants will use TI-SmartView to collect data from a variety of real-world activities related to stacking or nesting objects; perform data analysis will be performed, and judge the data as linear or nonlinear. With the linear data, we will discover, "If it stacks or nests, then it has a slope and intercept!"

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

Room 232

10:30 A.M.–12:00 P.M.

225

Do You Remember That? How to Use Students' Prior Knowledge

(9–12) Gallery Workshop

What challenges surface when using students' prior knowledge? The speakers will present animated vignettes of classroom instruction where strategies used to uncover students' prior knowledge conflicted with the mathematical content. Discussion will center on alternative teaching actions that promote mathematical understanding.

Gloriana González
University of Illinois at Urbana-Champaign, Champaign, Illinois

Kristine Galloway
University of Illinois at Urbana-Champaign, Champaign, Illinois

Anna Fricano
University of Illinois at Urbana-Champaign, Champaign, Illinois

Room 265-266

226

What's the Limit with TI-Nspire™?

(9–12) Gallery Workshop

The speaker will explore two related, contextual problems involving exponential functions and their limits. She will discuss and evaluate technology's role in exploring the problems. The activity's goal is for students to develop conceptual understanding for the formal definition of a limit of a sequence.

Linda K. Griffith
University of Central Arkansas, Conway, Arkansas

Room 102

227

New and Preservice Teachers Workshop

(Preservice and In-Service) Gallery Workshop

Find answers to your questions on 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!

David Barnes
National Council of Teachers of Mathematics, Reston, Virginia

Room 124

11:00 A.M.–12:00 P.M.

228

Mathematics Problems My Students and I Have Found Challenging

(General Interest) Session

The presentation will draw from problems from the speakers' Web site and notes that have had some interesting twists and surprises for elementary, middle, and secondary school students; mathematics teachers; graduate students; and some mathematicians.

James Wilson
University of Georgia, Athens, Georgia

Rooms 241

229

The Shape of Geometry and the Geometry of Shape

(General Interest) Session

Shape is a fundamental idea to geometry study at all grade levels. In the past half century, four major trends have influenced how we approach geometry: transformations, applications, coordinates, and technology. This talk will describe how each trend modifies both the shapes we study and our meaning of *shape*.

Zalman Usiskin
University of Chicago, Chicago, Illinois

Room 221 & 228

230

Multisensory Approaches to Helping Visually Impaired Students Learn Mathematics

(Pre-K–2) Session

The speakers will share activities that have young, visually impaired students use their other senses to develop concept understandings in number, pattern, data, geometry, and measurement. Discuss guidelines for modifying and individualizing lesson materials for visually impaired students, along with print and technology-based resources.

Carrie L. La Voy
University of Kansas, Lawrence, Kansas

Susan Gay
University of Kansas, Lawrence, Kansas

Room 274

231

Assessment Data: How Can Teachers Use It in the Classroom?

(Pre-K–5) Session

Assessment data on students inundates many teachers. We now face the challenge of how to use the data to help our students make gains. This session will highlight the latest research on assessing young students' math concepts. Participants will learn how to use the data to design activities to improve math performance.

Jeff Ohmer
McGraw-Hill Companies, St. Johns, Florida

Rooms 104

232

Teaching Basic Operations to Diverse Students Using the Model Method

(Pre-K–5) Session

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

Angela Sencibaugh
Valley Park School District, Valley Park, Missouri

Joseph Sencibaugh
Truman State University, Kirksville, Missouri

Room 127

11:00 A.M.–12:00 P.M.

233

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! Explore the most common sources of anxiety in grades 3–8, and discuss emotional learning tools that help your students change their attitudes and move forward.

Jennifer Rising
Nueva School, Hillsborough, California

Room 264

234

Be Irrational: Celebrate Pi Day

(6–8) Session

Write "Pi Day" in your lesson plan book for March 14, 2012. Pi Day can celebrate the fun of mathematics with your students. Investigating infinity, randomness, irrationality, and mathematical intrigue with a lesson that involves eating pie will leave students with a lasting memory and understanding that math extends far beyond the classroom.

Kathy Steinhoff
Jefferson Junior High School, Columbia, Missouri

Room 106

235

Developing Linear Graphs and Equations through Guided Discovery

(6–8) Session

Learn how to increase students' engagement and understanding with guided discovery. This session will use Microsoft Excel to investigate graphical, numerical, and algebraic data representations. Students will construct a line's equation and explore how the equation's various parameters of the equation relate to the line's graph.

Virginia Fraser
Indiana University Southeast, New Albany, Indiana

Room 276

236

Strategies That Increase "Aha" Moments for Fraction, Decimal, and Percent

(6–8) Session

Students struggle with solving problems involving fraction and decimal operations. 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 242

237

Birthday Bonanza

(6–12) Session

Every child has a birthday, and we can use that birth date to teach and review important mathematics. Discover how to use students' birthdays to keep students invested as they explore and practice topics like fractions, lines, coordinate geometry, probability, and compatibility.

Bob Mann
Western Illinois University, Macomb, Illinois

Room 222 & 227

238

Classroom Conversations: The Heart of Teaching

(6–12) Session

The questions teachers and students ask, and the answers that emerge, drive learning in classrooms. What should discussions look and sound like to make reasoning and making sense of mathematics the norm? What do we know from research, and how can we use this knowledge to make mathematics come alive in our classes?

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

Room 223–226

11:00 A.M.–12:00 P.M.

239

What Is GeoGebra, and How Could I Use It?

(6–12) Session

The speakers will discuss and demonstrate how to use the free, open-source dynamic mathematics software GeoGebra. Participants will learn the ease of changing graphs of functions using a slider, how to restrict the domain to graph piecewise functions, and how to use everyday pictures to analyze mathematical properties.

Ana Escuder
Florida Atlantic University—Boca Raton, Boca Raton, Florida

Lisa Herron
Cypress Bay High School, Weston, Florida

Joseph Michael Furner
Florida Atlantic University, John D. MacArthur Campus, Jupiter, Florida

Room 267

240

Ready-to-Go Problems and Activities for Group Problem Solving

(9–12, Higher Education) Session

Attendees will learn about the University of Illinois merit model and leave with a packet of proven activities for engaging groups of students in problem solving and improving conceptual understanding. Door prizes will be given!

Jennifer R. McNeilly
University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois

Gretchen Adams
University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois

Tracey Hickox
University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois

Room 101

11:00 A.M.–12:00 P.M.

241

Supporting Beginning Teachers through an Online Discussion Board

(Preservice and In-Service) Session

The speakers will describe the Knowles Science Teaching Foundation mathematics fellowship, including an online discussion board designed to support fellows. Attendees will learn about struggles that these beginning teachers face and examine actual posts to explore scaffolding, types of responses, and the role of the facilitator.

Ginger Rhodes
University of North Carolina at Wilmington, Wilmington, North Carolina

Rachael Eriksen Brown
Knowles Science Teaching Foundation, Moorestown, New Jersey

Room 231

11:30 A.M.–12:30 P.M.

ew 242

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 most widely used program. This workshop will model Singapore's visual strategies: ten frames, number bonds, and bar models.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 122

ew 243

Mental Math with Fractions, Decimals, Percents, and Degrees

(K–8) Exhibitor Workshop

This research-based, *multisensory* program connects fractions, decimals, percents, and degrees on a clock face! Do mental math in a snap, compare fractions, convert them to decimals, add or subtract in your head, and master pie charts! Discover real-world applications. Support all four learning styles for regular, special education, gifted, and Response to innovation. Tons of fun! *No* training! Sister products: Fishin' for Addition, Subtraction in Action, Divide 'n' Slide, ClockWise Fractions and Equivalency. www.clockwisemath.com

Clock Wise Fractions
Lewisville, Texas

Room 125

12:30 P.M.–1:30 P.M.

244

Learning from the Program of International Student Assessment (PISA): Challenging Tasks and Informative Results

(General Interest) Session

In PISA, 15-year-old students solve problems that one might encounter outside school. The program's mathematics tasks, and their results, are relevant for teachers in grades 6–11 and are a resource for teacher educators and professional developers. Examples will be provided.

Edward A. Silver
University of Michigan, Ann Arbor, Michigan

Rooms 241

12:30 P.M.–1:30 P.M.

245

Using PowerPoint to Support Dynamic Mathematics Teaching

(General Interest) Session

We can use PowerPoint to design instruction that increases students' visualization of mathematics concepts. Participants will learn how to insert pictures, video, charts, and graphs into their lessons. They will also experiment with using action buttons, animations, and audio recordings to create slides that encourage students' engagement.

Virginia Fraser
Indiana University Southeast, New Albany, Indiana

Room 231

247

Using Children's Literature to Reduce Math Anxiety in the Classroom

(Pre-K–2) Session

The speaker, a math educator and children's author, will give an interactive presentation addressing math anxiety and the research-based trend to "destress" mathematics through children's literature. This presentation will offer fun, easy-to-implement learning activities most helpful for teachers of kindergarten–grade 3.

Taryn J. Souders
Sleeping Bear Press, Ann Arbor, Michigan

Room 221 & 228

248

Mental Mathematics: Strategies for Teaching Number Facts and Beyond

(Pre-K–5) Session

Confidence with mental mathematics is essential for everyone. This session will describe proven strategies that help ensure success with number facts for all four operations. These strategies extend well to two-digit and greater numbers. They are successful, in part, because they make sense to students.

Calvin Irons
Queensland University of Technology, Brisbane, Queensland, Australia

Rosemary Irons
Queensland University of Technology, Brisbane, Queensland, Australia

Room 242

249

Differentiating Successfully for High-Ability and Gifted Math Learners

(3–5) Session

A classroom teacher and a gifted-education specialist will share instructional, logistical, and procedural management strategies, and projects that work with highly able and gifted math students. They will also share passion for teaching, commitment to differentiation, and firm belief in guiding students to assume responsibility for learning.

Becky Abernathy
School District of Clayton, Clayton, Missouri

Sharon Slodounik
School District of Clayton, Clayton, Missouri

Room 222 & 227

250

Visual Representation: A Stimulus for Understanding Mathematical Concepts

(3–5) Session

The presenter will share 3–5 classroom activities that illustrate the power of seeing crucial mathematics concepts, when students create visual representations. Technologies covered will be drawing, digital camera, PowerPoint, and computer drawing software. Content will focus on counting schemes, counting patterns, multiplication, and fractions.

Richard Lodholz
Consultant, School Mathematics: Teaching & Learning, Creve Coeur, Missouri

Room 260

251

Starting a Math Club in Elementary School

(3–8) Session

Inspire young students to love math! Learn ideas from the speaker's firsthand experience on how to start and maintain a math club, beginning in kindergarten. The speaker will share math club topics and suggestions on how to use older students as helpers.

Ann Perry
Saint Joseph's Academy, St. Louis, Missouri

Room 223–226

12:30 P.M.–1:30 P.M.

252

A Math Course for Exceptionally Bright Middle School Students

(6–8) Session

This session will address some of the unique issues involved in creating a math course for exceptionally bright middle school students. Horizontal enrichment versus vertical acceleration, assessment, scope, sequence, and communication with parents, will be some of the topics, with problem-solving exercises throughout.

Joe Lee
Parkway West Middle School, Chesterfield, Missouri

Room 265-266

253

Use Assessment to Facilitate Students' Learning, Interest, and Effort

(6–8) Session

Appropriate assessment can motivate the unmotivated, restore the desire to learn, and encourage students to keep learning. Participants will receive assessment strategies guaranteed to improve students' achievement and inspire effort. This session will explore the challenges and successes teachers experience using more rigorous assessments.

Suzanne Mitchell
Arkansas State University, Jonesboro, Arkansas

Room 264

254

Making Students' Thinking Visible

(6–12) Session

Research on effective classrooms shows that visible thinking weaves throughout teachers' planning and presentation, giving teachers a variety of teaching strategies. What are visible thinking's benefits? What classroom activities make students' thinking visible? Creating such activities is crucial to closing the achievement gap.

Don Balka
Saint Mary's College, Notre Dame, Indiana

Room 276

255

Designing a Pepsi Can: Modeling for High School or Calculus

(9–12, Higher Education) Session

The speaker will introduce the mathematical modeling process that uses an example of designing a Pepsi can. Solving the problem, which attendees can use to demonstrate modeling in a high school or college class, will involve algebra, geometry, measurement, and calculus standards.

Dung Tran
University of Missouri—Columbia, Columbia, Missouri

Room 274

256

Functions: Helping Students Develop Understanding

(9–12, Higher Education) Session

Many students have difficulty developing a powerful understanding of functions, despite functions' central role in mathematics. Participants will use methods for analyzing functions and their portrayal in current curricula and receive activities designed to improve students' conceptual understanding of functions.

Daniel J. Ross
University of Missouri—Columbia, Columbia, Missouri

Rooms 104

257

The Concept of Mathematical Maturity

(9–12, Higher Education) Session

The speaker will discuss mathematical maturity, which considers the transition from high school to college and the notion of survival in college. Passing on to graduate school entails yet another kind of mathematical maturity. Successfully engaging in teaching requires understanding how to identify mathematical maturity and how it develops.

Steven G. Krantz
Washington University in St. Louis, St. Louis, Missouri

Room 106

12:30 P.M.–1:30 P.M.

257.1

How "Faithful" Should I Be to My Mathematics Textbook?

(9-12, Research) Session

What does it mean to be "faithful" to a textbook curriculum? Is implementation "fidelity" really a virtue? In this presentation, I share results of a longitudinal study of curricular effectiveness and discuss how the "fidelity of implementation" was conceptualized, measured and related to student outcomes.

James E. Tarr
University of Missouri—Columbia, Columbia, Missouri

Room 267

258

Supporting the Preparation of Teachers through NCTM and Its Affiliates

(Preservice and In-Service) Session

NCTM has a wealth of programs and materials available in print and online to support teachers' preparation. This presentation will describe various ideas and solicit others from participants. Playing special game of NCTM-O will facilitate both information presentation and idea gathering from participants. Prizes are a distinct possibility.

Vena M. Long
University of Tennessee, Knoxville, Tennessee

Room 101

259

Understanding Elementary School Preservice Teachers' (PTs) Mathematical Reasoning

(Preservice and In-Service) Session

This session examines PTs' arguments as they engage in mathematical inquiry over the course of a semester. Using a guiding framework, attendees will identify important features of PTs' arguments, compare them over time, and discuss how PTs' methods of reasoning changed during the semester.

Michael H. Perkowski
University of Missouri—Columbia, Columbia, Missouri

Room 127

12:30 P.M.–2:00 P.M.

260

Read All about It: Connecting Manipulatives and Mathematics Literature

(Pre-K–2) Gallery Workshop

Many children's literature books provide opportunities for teachers to extend the mathematics, while developing positive attitudes and offering students opportunities to learn additional ideas and generate new solutions. Activities and materials will focus on number and operations, probability, geometry, and algebra.

Georgia A. Cobbs
University of Montana, Missoula, Montana

Room 230

261

The Most Powerful Model You've Probably Never Heard Of

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

Are you frustrated with your students' lack of number sense? A tool from the Netherlands that can help you and your students is starting to make its way into the United States. This interactive session will focus on using a rekenrek, or arithmetic rack, to help teachers facilitate students' number-sense development.

Christina D. Tondevold
Mathematically Minded, Orofino, Idaho

Room 275

262

Expanding the Use of Tools in Spatial Measurement beyond Rulers

(Pre-K–5) Gallery Workshop

This session will engage participants in problems and activities that will lead to some primary issues in 1-D, 2-D, and 3-D measurement. The speaker will examine the ruler as a tool for 1-D measurement, along with available tools for 2-D and 3-D, by attending to some important ideas. Discussion will focus on ways of enhancing measurement lessons.

Jack Smith
Michigan State University, East Lansing, Michigan

Room 100

12:30 P.M.–2:00 P.M.

263

Stories That Count: Children's Literature in Math Class

(Pre-K–5) Gallery Workshop

A good math story captures children's interest, adds to their understanding, connects mathematics to their experiences or imagination, and demonstrates how math applies to everyday situations. This session explores the combination of both sound math concepts and good literature, exploring books that fill both requirements.

M. W. Penn
Author, New Haven, Connecticut

Room 120

264

Fractions, and Decimals, and Percents, Oh My!

(3–8) Gallery Workshop

Fractions underpin the development of proportional reasoning and are important for success in algebra and probability, but they can be difficult to teach and learn. Explore strategies for teaching conceptual understanding of fractions, decimals, and percents. It doesn't take a wizard to teach fractions—just a brain, heart, and courage!

Reneé Smith
Educational Services and Staff Development Association of Central Kansas, Hutchinson, Kansas

Room 103

265

Fractions and Operations: The Gate Keeper to Successful Mathematics Performance

(3–8) Gallery Workshop

Participants experience a manipulative fraction model that develops conceptual understanding of fractions and operations, enabling readiness for algebra and proportional thinking. The speaker will develop the concept of a fraction, connect the concept to symbolism, and suggest activities for practice, including operations with fractions.

Lloyd I. Richardson
University of Missouri—Columbia, Columbia, Missouri

Room 263

266

Keep Your Students Engaged by Connecting Fractions, Decimals, and Percents

(3–8) Gallery Workshop

It's time to get your students in shape. Increase flexibility among representations of fractions, decimals, and percents by using activities and games that promote meaningful connections. Stretch your students by incorporating concrete, pictorial, and abstract representations into all their workout routines.

Jeanine Haistings
William Jewell College, Liberty, Missouri

Susan Gay
University of Kansas, Lawrence, Kansas

Room 102

267

Mental Arithmetic and Estimation: So Easy, Even a Caveman....

(3–8) Gallery Workshop

This session will engage participants in strategies for mental arithmetic and estimation. it will also encourage multiple representations of whole and rational numbers to increasing students' confidence and achievement. The speaker will investigate integrating number fluency expectations with teachers' existing curriculum.

Kurt Killion
Missouri State University, Springfield, Missouri

Room 240

268

CRA: Algebraic Expressions, Solving Equations, and Order of Operations

(6–8) Gallery Workshop

Concrete-Representational-Abstract (CRA) lessons lead students to construct meaningful, enduring knowledge for basic algebraic ideas and symbols. Come away with engaging methods for helping students painlessly master the order of operations, the idea of variable, algebraic expressions, and solving one- and two-step equations.

Pamela S. Cornwell
Pattonville School District, St. Louis, Missouri

Room 124

12:30 P.M.–2:00 P.M.

269

Unpacking Geometry Problems from Boxes You Make

(6–8) Gallery Workshop

Participants will transform old greeting cards into boxes, useful for small-item storage, but more important, to discover real-life, challenging geometry concepts, make conjectures, and answer lingering questions. Prepare to be challenged!

Nicholas Restivo
Mathematical Olympiads for Elementary and Middle Schools, Bellmore, New York

Room 220

270

Making Mathematically Defined Objects with a Simple, Affordable 3–D Printer

(6–12) Gallery Workshop

Using function transformations, students from algebra to calculus create interesting, three-dimensional objects and actually print real, plastic models of them. The printing, which participants will do, is easily and inexpensively done with a simple chemical and a LCD projector. This activity is like nothing you have ever seen!

Joseph Muskin
University of Illinois at Urbana-Champaign, Champaign, Illinois

Adam R. Poetzel
University of Illinois at Urbana-Champaign, Champaign, Illinois

Room 232

271

Activities for Algebra 2

(9–12) Gallery Workshop

Participants will try activities that reinforce algebraic concepts such as functions, determining a parabola's equation, and comparing theoretical and experimental probability. They will work with the depreciation formula for cars, measuring the arc of an umbrella, and playing Rock, Paper, Scissors.

Claudia D. Maness
CORD Communications, Inc., Waco, Texas

Room 105

272

I've Turned It On, Now What? Getting Started with TI-Nspire

(9–12) Gallery Workshop

This session introduces new users to the world of the TI-Nspire learning handheld. Explore from the beginning, and participate in activities for Algebra 1 and above that you can bring back to students. Help them gain a deeper understanding through multiple representations. No experience necessary: it's easier than you think!

Sherry L. Everding
Cor Jesu Academy, St. Louis, Missouri

Aurelia K. Weil
Cor Jesu Academy, St. Louis, Missouri

Room 229

273

Preservice Teachers' Mathematics Content Knowledge, Confidence Levels, and Math Anxiety

(Preservice and In-Service) Gallery Workshop

The speaker will present study findings on preservice teachers' content knowledge, confidence levels, and math anxiety. The teachers in the study included a large percent of first-generation college attendees and speakers of other languages. In this population, reading ability in English, content knowledge, and anxiety interact in interesting ways.

Noureen A. Khan
University of North Texas Dallas, Dallas, Texas

Room 123

1:00 P.M.–2:00 P.M.

ew

274

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. Learn more about how the Common Core State Standards (CCSS) will affect what you teach. See how *GO Math!*@2012 addresses the CCSS in both content and mathematical practices. Learn strategies for developing mathematical practices in your students, and receive a set of concept readers.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 122

1:00 P.M.–2:00 P.M.

ew

275

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 125

2:00 P.M.–3:00 P.M.

276

Albert Einstein Distinguished Educator Fellowship

(General Interest) Session

The Albert Einstein Distinguished Educator Fellowship is available to outstanding, current grades K–12 classroom teachers of science, technology, engineering, or mathematics with at least five years' teaching experience. Chosen candidates share their educational experiences and expertise at a national education policy level.

Kathryn Culbertson
Triangle Coalition for Science and Technology Education, Arlington, Virginia

Room 223–226

277

Are These the Right Standards for Preparing Future Mathematics Teachers?

(General Interest) Session

NCTM is currently revising the standards for mathematics teacher education programs. The revisions will become part of the NCATE program review process and other 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 276

278

Multiple Strategies for Solving One Problem: Do You Do It?

(General Interest) Session

School mathematics has focused on problem solving since the 1970s, when it was listed as one of ten basic skills, and again as NCTM's first recommendation for school mathematics in *An Agenda for Action*. Examine different strategies for solving a number of problems and discuss how to include this approach in your teaching.

L. Diane Miller
Middle Tennessee State University, Murfreesboro, Tennessee

Jacob Klerlein
Scholastic, Inc., New York City, New York

Rooms 241

279

Sociocultural Dynamics of Indian Mathematics Education: What Can We Learn?

(General Interest, Research) Session

In India, sociocultural dynamics play important role in mathematics teaching and learning practices. Lessons learned from Indian mathematics education would enrich mathematics teaching strategies for culturally and linguistically diverse students.

Rupam Saran
City University of New York, New York, New York

Room 106

280

The Best of Lola May

(Pre-K–5) Session

If you have heard Lola May present, you know that her talks were filled with practical, effective activities to enliven your classroom. Take a fresh look at those wonderful strategies! If you have never heard Lola speak, share in her legacy, add valuable teaching tools to your repertoire, and leave with activities ready for classroom use.

Martha E. Hildebrandt
Chatham University, Pittsburgh, Pennsylvania

Barbara Biglan
Chatham University, Pittsburgh, Pennsylvania

Room 267

2:00 P.M.–3:00 P.M.

281

Using Calculators and Other Educational Technology Effectively with Elementary School Children

(Pre-K–5) Session

The speaker will offer instructional strategies to develop and extend number sense and number operations. She will emphasize number patterns, place value, estimation skills, and the ability to solve word problems using real-life applications; and demonstrate effective calculator and technology implementations.

Donna L. Knoell
Consultant, Shawnee Mission, Kansas

Room 264

282

The Strip Model, Word Problems, and Students with Learning Disabilities (LDs)

(3–5) Session

This session presents the results of a teaching experiment, in which 21 students with LDs in grades 2–5 demonstrated extraordinary success solving addition and subtraction word problems using Singapore Math's strip-drawing heuristic. Come hear the approach and their story!

Robin O'Dell
Buffalo State College, Buffalo, New York

Elizabeth Wright
Daemen College, Buffalo, New York

Room 221 & 228

283

Interactive Model Building: Making Lesson Study Work at Your School

(3–5, Preservice and In-Service) Session

The speakers will examine how to improve practice by adapting lesson study, a process where teachers work together to plan, teach, and refine lessons. Share lessons learned from an innovative approach to field experiences, as well as tools to scaffold reflection and collaboration. Reflect on how to start collaborating to improve instruction.

Enrique Galindo
Indiana University Bloomington, Bloomington, Indiana

Lauren Rapacki
Indiana University Bloomington, Bloomington, Indiana

Vanashri Nargund
Indiana University Bloomington, Bloomington, Indiana

Room 101

284

Writing across the Mathematics Curriculum to Assess Conceptual Understanding

(3–8) Session

This session will focus on the benefits of using authentic and meaningful writing in the math classroom as an assessment tool and instructional strategy. The speakers will share and explain different writing strategies along with 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

Monica Cabarcas
Albemarle County Schools, Charlottesville, Virginia

Colleen Branche
Albemarle County Schools, Charlottesville, Virginia

Rooms 104

2:00 P.M.–3:00 P.M.

285

Creating a Classroom to Meet the Common Core Curriculum

(6–8) Session

Come learn the procedures implemented in a large middle school to help all teachers contribute students' mathematical learning. Learn activities that helped struggling students begin to enjoy mathematics and achieve more.

Connie Schrock
Emporia State University, Emporia, Kansas

Room 274

286

Five High-Interest, Real-Life Math Investigations

(6–8) Session

Students typically do not have opportunities to see the wondrous side of mathematics, because we often teach it as all scales and no music. Help students discover mathematical power: dramatically expose the danger of short-term loans, learn how much a hybrid car will save its owner, and investigate news media math mistakes and their consequences.

Ed Zacacro
Retired, Dubuque, Iowa

Room 127

287

Fostering Reasoning and Sense Making for All High School Students

(9–12) Session

NCTM has created a series of books focusing on reasoning and sense making for high school students. Participants will examine issues and activities from the books, which focus on making mathematical reasoning and sense making a reality for diverse students, such as low-performing, gifted, bilingual, disabled, and other groups.

Marilyn E. Strutchens
Auburn University, Auburn, Alabama

Room 242

288

Refocusing College Algebra at an Open-Enrollment, Historically Black College or University

(9–12, Higher Education) Session

Often students feel that mathematics does not relate to real life. The speakers will discuss their experience in refocusing college algebra to give them a more positive attitude and the ability to use math practically. They will share examples of classroom activities, group projects, successes and challenges so far, and future directions for the course.

Ann Podleski
Harris-Stowe State University, St. Louis, Missouri

Jonathan Corbett
Harris-Stowe State University, St. Louis, Missouri

Room 231

289

What Does It Take to Make a Convincing Proof Argument?

(9–12, Higher Education) Session

This presentation will identify high school and college students' struggles, misconceptions, and mathematical knowledge needed to construct mathematical proofs. Technological tools such as GeoGebra, virtual manipulatives, and The Geometer's Sketchpad will show different ways to make a proof more convincing.

Ruthmae Sears
University of Missouri—Columbia, Columbia, Missouri

Room 222 & 227

2:30 P.M.–3:30 P.M.

290

Math Poems, Stat! Mathematical Poetry for Probability and Statistics

(General Interest) Session

Participants will explore a variety of math poems about probability, statistics, and related content; compose at least one poem; and discuss how to implement and assess such an instructional strategy.

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

Room 120

2:30 P.M.–3:30 P.M.

ew 291

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 classsroom discussion centered on the Every Day Counts digital whiteboard curriculum, learn ideas for reinforcing, building, and masstering the Common Core in just ten minutes, every day.

Houghton Mifflin Harcourt
Boston, Massachusetts

Room 122

292

Itching for New Mathematics Applications? Try Scratch Puzzle Piece Programming!

(6–12) Session

Come experience Scratch, a free, research-based programming language that encourages creative application of mathematics. Students of all ages can learn by designing games and projects. The presenter will include an overview of Scratch, online resources, and content specific to high school geometry and probability. No programming experience needed.

Amanda Thomas
University of Missouri—Columbia, Columbia, Missouri

Room 265-266

2:30 P.M.–4:00 P.M.

293

CSI: Concept Skill Interventions

(Pre-K–2) Gallery Workshop

Attendees will examine informal assessments to determine students' misconceptions. They will also engage in math center activities that provide strategic interventions and meaningful challenges to young learners, building concepts to fluency.

Tolene Pitts
Partnership Institute for Math and Science Education Reform (PIMSER), Lexington, Kentucky

Room 232

293.1

Helping Teachers Reflect on Early Place-Value Concepts

(Pre-K-2) Gallery Workshop

The speaker will share activities using an invented number system that help teachers understand students' struggles learning early place-value concepts. These activities help teachers identify the big ideas of place value and how to develop these ideas in their grades K–2 classrooms.

Jo Ann Cady
University of Tennessee, Knoxville, Tennessee

Room 124

294

Noticing Numeracy Now (N^3): Focusing on Children's Mathematical Thinking

(Pre-K–2) Gallery Workshop

This presentation will focus on ways of detecting children's numeracy skills and how teachers can attend to, interpret, and respond appropriately to students' mathematical thinking. The speakers will share the N^3 module with the audience.

Molly Fisher
University of Kentucky, Lexington, Kentucky

Jonathan Thomas
Northern Kentucky University, Highland Heights, Kentucky

Edna O. Schack
Morehead State University, Morehead, Kentucky

Room 102

295

RtI: Ready to Inspire

(Pre-K–2) Gallery Workshop

Response to Intervention (RtI) requires thoughtful planning to ensure that all students have opportunities to learn and succeed in the classroom. This interactive workshop will include hands-on activities and games, with references to children's literature, that will make you ready to inspire your students in the classroom.

Donna Long
Houghton Mifflin Harcourt, Indianapolis, Indiana

Room 260

2:30 P.M.–4:00 P.M.

296

Developing the Essential Strategies for Computation

(Pre-K–5) Gallery Workshop

Use simple visual aids and models to help students form a mind picture that links to the thinking strategy. This session will demonstrate using these aids and show how to generalize and extend the thinking strategies beyond the number fact range.

James L. Burnett
ORIGO Education, Saint Charles, Missouri

Room 229

297

It's Not Just a Numbers Game

(3–5) Gallery Workshop

This presentation will introduce teachers to a game for students that encourages number sense and computational skills. The activity is based on a game show played throughout Europe. Participants will also discuss modifiying the activity to support students' development of computational fluency.

Ryan Fox
University of Georgia, Athens, Georgia

Room 220

298

Math in Motion: Origami in the Classroom, Grades 3–8

(3–8) Gallery Workshop

Discover in this hands-on workshop how to teach the big ideas of basic math skills, geometry, and more! Learn the most proven, practical techniques to build a deeper understanding of math concepts and vocabulary. Unfold teacher-friendly strategies to encourage and bring out the joy and wonder of learning mathematics, where every child counts!

Barbara E. Pearl
La Salle University, Philadelphia, Pennsylvania

Francis Collins
La Salle University, Philadelphia, Pennsylvania

Room 105

299

Fantastic Flexible Foldables for the Middle School Classroom

(6–8) Gallery Workshop

Help your middle school students create irresistible math tools that they cannot put down. Participants will make five different styles of foldable learning tools using paper, scissors, and glue. Projects can be folded and unfolded to reveal facts and questions about geometry, integers, fractions, and factors. Assessment options will be included.

Carol J. DeFreese
Fort Zumwalt School District, O'Fallon, Missouri

Room 230

300

Math Lessons for a World of Seven Billion

(6–8) Gallery Workshop

World population will reach 7 billion in late 2011, offering a teachable moment to help students understand large numbers, growth patterns, and vital statistics that shape the global family. Engage in several hands-on activities that use math concepts and skills to understand social studies and science content. Receive a free CD-ROM of activities.

Karen Kaul
Retired, St. Louis, Missouri

Room 275

301

Using Tiles and Games to Teach Math in Grades 6–8

(6–8) Gallery Workshop

Participants will use Integer Tiles, play games, and do activities to enhance learning math concepts. The Integer Tiles will introduce and practice integers and their operations. The games will deal with integers, order of operations, graphing. and writing.

Lonnie Bellman
College Preparatory Mathematics Educational Program, Sacramento, California

Christine Mikles
College Preparatory Mathematics Educational Program, Sacramento, California

Room 123

2:30 P.M.–4:00 P.M.

302

Just How Perfect Are Perfect Numbers, Anyway?

(6–12) Gallery Workshop

Although Euclid and Pythagoras knew a good bit about perfect numbers, Pascal could tell you much more. With today's computers, why have we still not even found the fiftieth one? Find out the many ways perfect numbers generate connections. And what is the Missouri connection? Bring your graphing calculator.

Chip Day
St. Louis Community College, Ferguson, Missouri

Room 240

303

Missed Opportunities to Make Sense in Middle and Secondary School Mathematics Classes

(6–12) Gallery Workshop

This session will explore some concepts and procedures from arithmetic, algebra, geometry, and statistics that may allow students to make more sense of the mathematics they encounter.

Paul Rahmoeller
Jefferson Junior High School; University of Missouri—Columbia, Columbia, Missouri

Room 263

304

Mathematical Models of Falling Dominoes

(9–12) Gallery Workshop

Participants will investigate the dynamics and mathematical models of toppling dominoes, including the optimum distance that dominoes topple at the fastest rate, a "domino chain reaction," and a "domino effect cannon." Use various technologies to collect and analyze data. Finally, the speaker will review literature on the classic problem.

Hector Lopez
Rutgers University, New Brunswick, New Jersey

Room 103

305

T^6 = Tom's Top Ten Teaching Techniques with Technology

(9–12) Gallery Workshop

This session will demonstrate how to use graphing calculators more effectively in the classroom. Using features of the graphing calculator, the speaker will focus on teaching techniques that stimulate interest, help motivate, and engage students in visualizing and making meaningful mathematical connections. Calculator programs will be shared.

Thomas Beatini
Glen Rock High School, Glen Rock, New Jersey

Room 100

3:30 P.M.–4:30 P.M.

306

How Is the Common Core Different from Past State Standards?

(General Interest) Session

The speaker will report differences in grades K–8 expectations between the Common Core and past state standards documents: (1) shifts in grade levels (GLs) that expect fluency, (2) an expansion or contraction in the number of GLs that teach given topics, (3) increased or decreased emphasis on specific content, and (4) a change in the expected types of reasoning.

Dawn Teuscher
Arizona State University, Mesa, Arizona

Shannon Dingman
University of Arkansas, Fayetteville, Arkansas

Lisa Kasmer
Grand Valley State University, Allandale, Michigan

Room 106

307

I Count from Zero, with the Human Calculator

(General Interest) Session

Scott Flansburg, the Human Calculator, has been teaching math with his astonishing skills for more than twenty years. A best-selling author, he earned this nickname because of his remarkable skills at computing in his head with calculator speed and accuracy.

Scott Flansburg
3P Learning/Mathletics, New York, New York

Room 127

3:30 P.M.–4:30 P.M.

308

Looking at Class through the Looking Glass

(General Interest) Session

Online calculator and problem-solving videos can mirror and enhance classroom content. Using educational video design principles, tools like the Tablet PC or SMART Board, and resources like YouTube or TeacherTube, instructors can create quality mathematical videos that students will watch over and over again.

Ellen Smyth
Austin Peay State University, Clarksville, Tennessee

Rooms 241

309

Solving for *X*'s and Why's: Brain Research into Practice

(General Interest, Research) Session

This session will show participants practical ways, based on brain research of how students learn and process information, to embed research into their classroom.

Kevin D. Judd
Whizz Education, Seattle, Washington

Room 101

310

When Am I Gonna Use This in My Real Life, Anyway?

(General Interest) Session

Sound familiar? If you are a math teacher, then you have no doubt heard this question countless times throughout your career. Why should your students learn math? Looking for some new, fresh responses? Join us for some reflection and laughter as we role-play a slew of serious and humorous responses to this million-dollar question.

Adam R. Poetzel
University of Illinois at Urbana-Champaign, Champaign, Illinois

Room 221 & 228

311

The Arithmetic Rack: A Tool for Numerical Understanding

(Pre-K–2) Session

Subitizing, compensating, adding and subtracting, communicating, and representing are concepts developed in primary school classrooms. This presentation will explore contexts and activities in a meaning-centered learning environment using the rekenrek, or arithmetic rack, as a tool to develop young mathematicians' number sense.

Jenine Loesing
Columbia Public Schools, Columbia, Missouri

Room 222 & 227

312

Activities for Students' Success

(Pre-K–5) Session

This session will include problem-based mathematics activities that engage elementary school students in doing mathematics. You will leave with the materials needed for students' success.

Janet Stramel
Fort Hays State University, Hays, Kansas

Room 242

313

You Can't Always Get What You Want, Unless It's Assessed

(Pre-K–5) Session

We are often surprised that students do not think and perform in mathematics as well as we hope.For example, they might grab a pencil or calculator just to solve 302–296. Using the Common Core State Standards as an example, learn how to turn any standards into rubrics that improve learning's assessment, monitoring, and reporting.

Tim Hudson
Parkway School District, St.Louis, Missouri

Room 231

3:30 P.M.–4:30 P.M.

314

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 or two-digit numbers, subtracting a negative, the area of a trapezoid, algebraic thinking, and more. A CD and lesson plans will be distributed.

Rudy V. Neufeld
Neufeld Learning Systems, Inc., London, Canada

Room 276

315

Generating Students' and Teachers' Excitement for Mathematical Problem Solving

(3–8) Session

A "problem" is not one if it has an easy solution. Real problems must challenge appropriately, have multiple solution paths, and lead students to understand mathematical concepts better. Participants will discover ways for themselves and their students to become better problem solvers while preparing for any assessment.

Nicholas J. Restivo
Mathematical Olympiads for Elementary and Middle Schools, Bellmore, New York

Room 223–226

316

Mathematics Assessment: Beyond Quizzes and Tests

(6–8) Session

The speaker will share real-life, creative math application projects that engage students in meaningful math thinking and make connections to other disciplines. Use math vocabulary strategies, graphic organizers, extended-response questions, journaling, and portfolios. Assessment rubrics and math Web sites will be included.

Edna F. Bazik
National-Louis University, Lisle, Illinois

Room 264

317

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 to elicit enthusiastic, whole-class participation, raise achievement, and prepare students for success in algebra and beyond.

William J. Glee
Project SEED, Berkeley, California

Daniel Mulligan
Project SEED, Berkeley, California

Room 274

318

Newton Says, "Wear Your Seat Belt!"

(6–12) Session

Perfect for preteen and teen drivers, this lesson combines algebra and physics principles to support the importance of wearing a seatbelt in a moving vehicle. Discussion includes reading and interpreting charts and graphs, calculating formulas, and integrating of laws of force, motion, and energy. Bring a calculator.

Sherrie L. Wisdom
Lindenwood University, Saint Charles, Missouri

Rooms 104

319

Using Technology to Increase Students' Achievement

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

The speakers will focus on using cellphones, social networks, and electronic flashcards to increase students' use of mathematics outside the classroom.

Patrick J. Flynn
Olathe School District, Olathe, Kansas

Michael McDonald
Olathe East High School, Olathe, Kansas

Room 267

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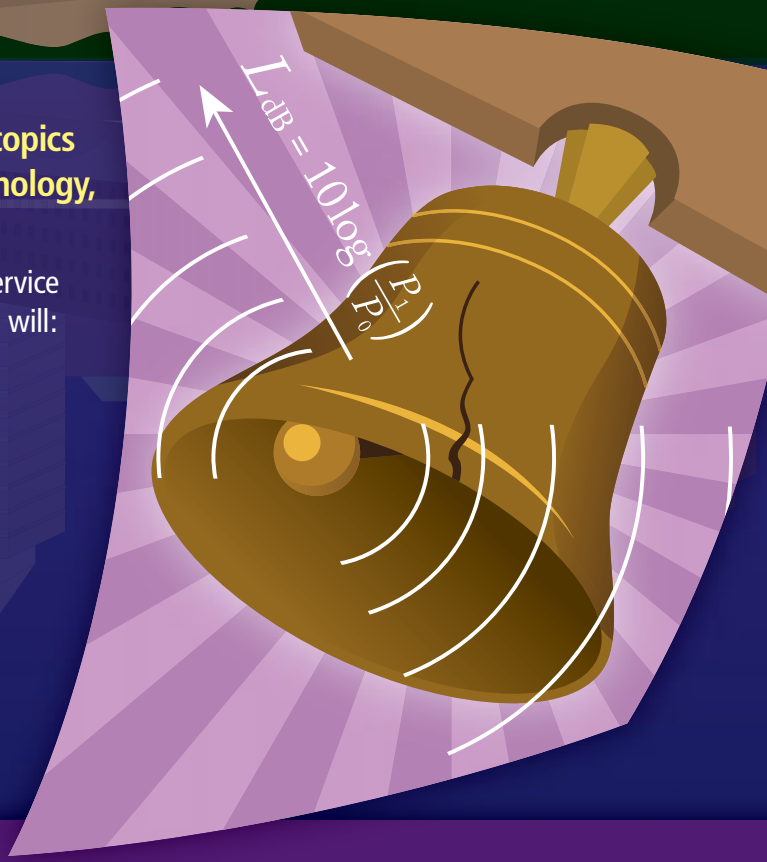
- And more!



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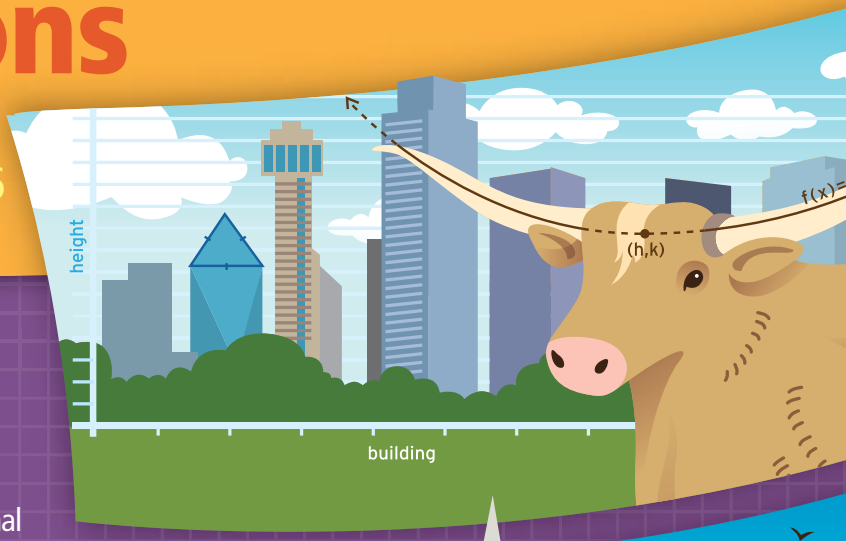

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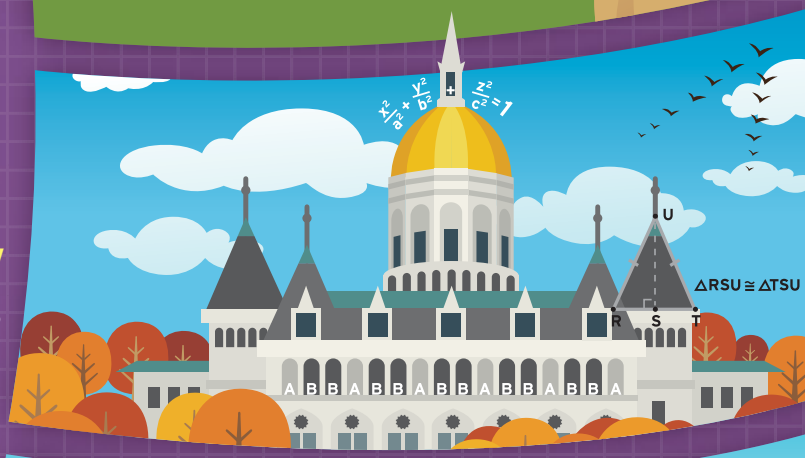
- And more!

Whether you're a classroom teacher, coach, administrator, preservice teacher, or math specialist, this conference has something for you.



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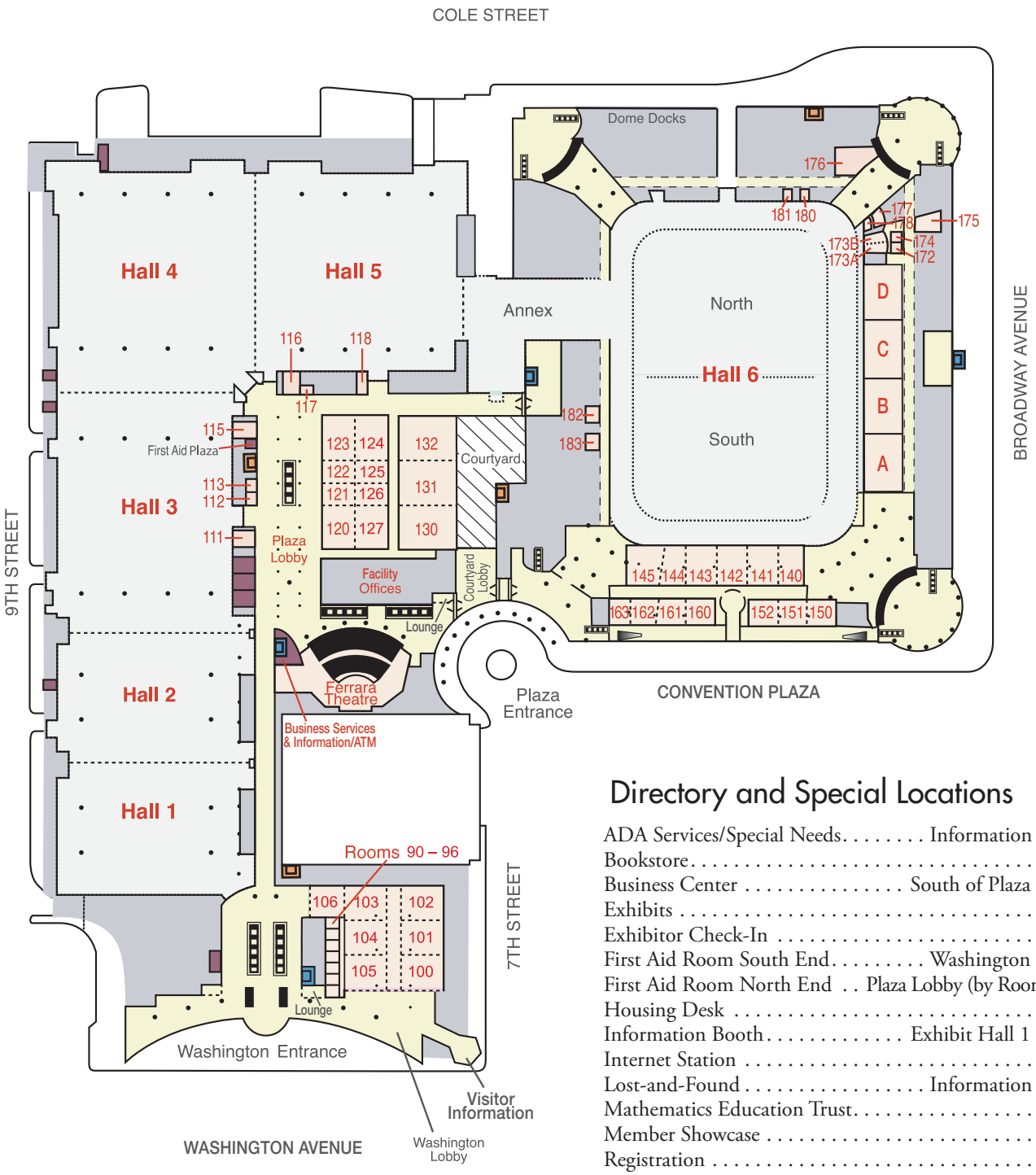

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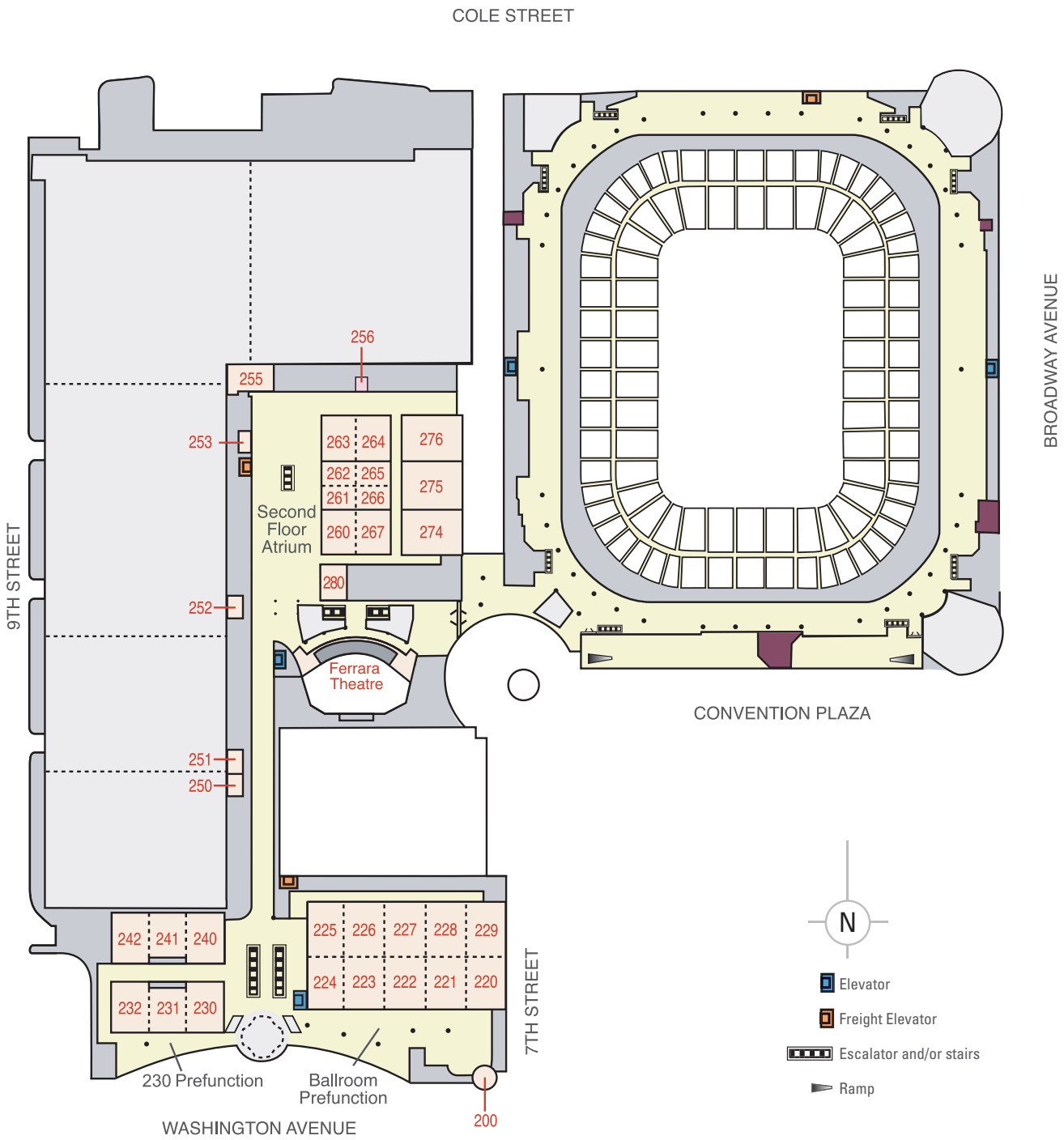

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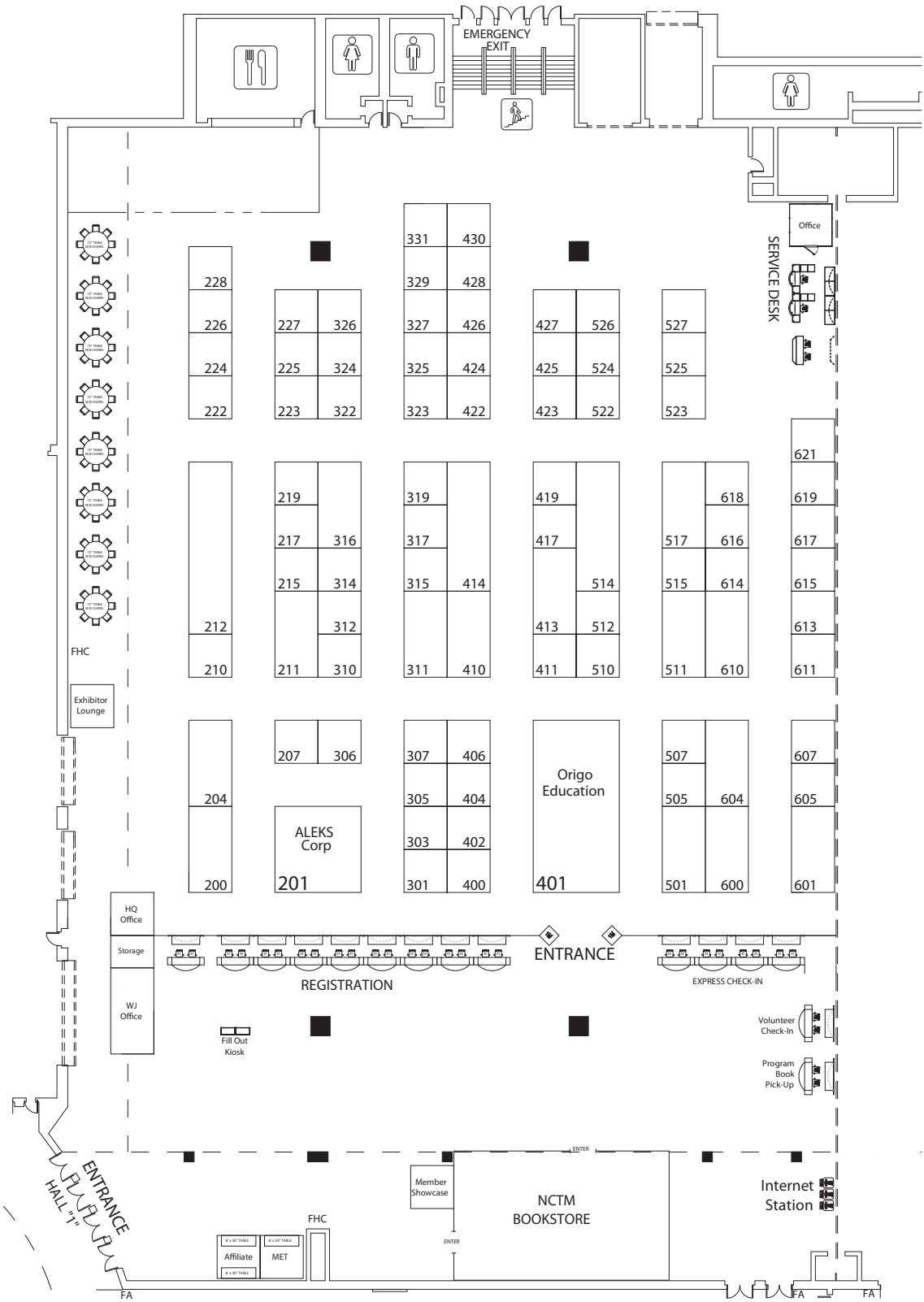

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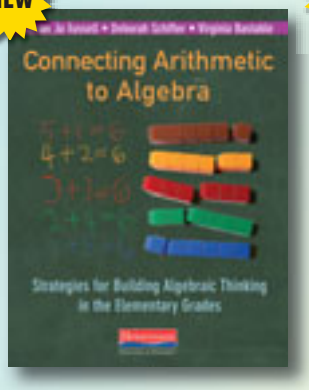

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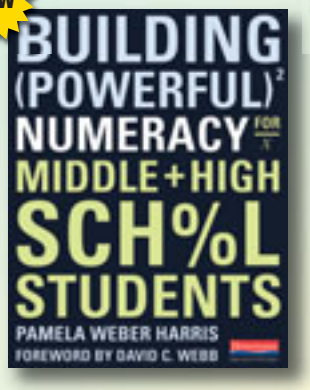

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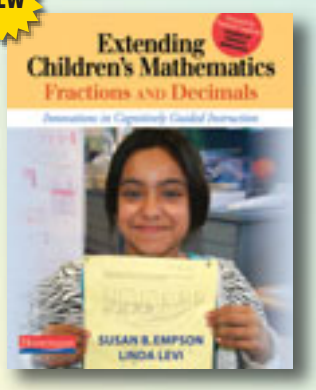

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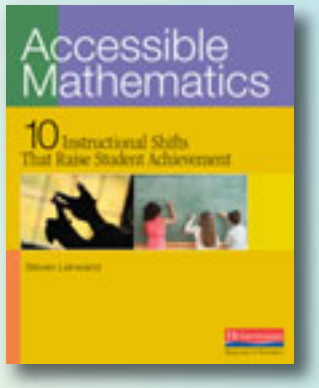

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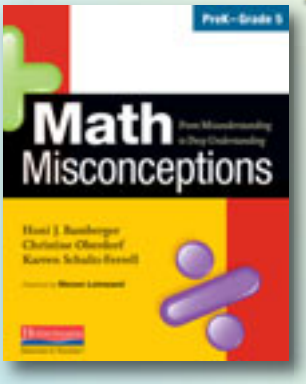

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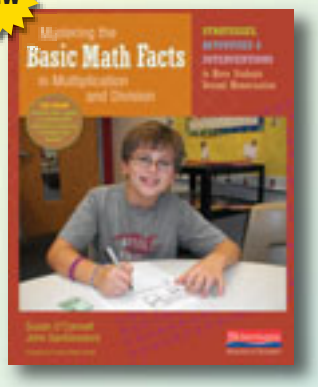

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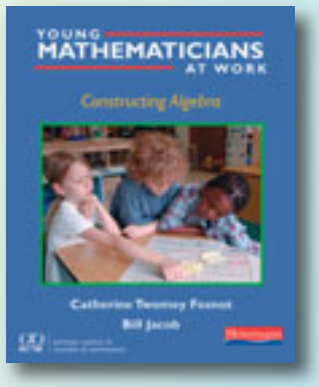

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