You’ve never seen Math like this before

TI-Nspire™ technology extends seamlessly across a suite of tools, including handhelds, software and apps, helping teachers integrate engaging content into math instruction. Colorful visuals allow students to make meaningful connections between abstract concepts and the real world. The ability to manipulate graphs, charts and geometry constructions increases student engagement and provides them with a deeper understanding of concepts. No matter what technology you’re using in the classroom, you can explore and discover relevant mathematics in the everyday world.

Stop by the TI booth #323 or visit education.ti.com/nspire.

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Some speakers on this program have elected to print their e-mail addresses as a means for individual correspondence with conference attendees. Unsolicited commercial e-mail or unsolicited bulk e-mail, whether or not that e-mail is commercial in nature, is expressly prohibited. Any use of e-mail addresses beyond personal correspondence is not authorized by NCTM.

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

Printed in U.S.A.
Welcome to Las Vegas!

We’re excited you came to celebrate the marvels of the world of mathematics at the NCTM 2013 Regional Conference & Exposition in Las Vegas. As the Battle Born State commemorates her 150th anniversary, we would be remiss not to remember that our own Las Vegas is steeped in the many wonders of mathematics both in our local economy as well as our architectural structures such as the Project City Center located on the “The Strip.” With the implementation of the Common Core State Standards and with new assessments on the horizon, we have an incredible opportunity to prepare all students for success in college and careers. It is our hope and expectation that your professional learning and network opportunities over these next two days at the conference will enrich each of you as we all seek to improve our tools for student sense-making of mathematics at any age, for each and every student.

Viva Las Vegas! There’s no shortage of world-class dining, shopping, shows, and attractions in our great city so whatever you’re in the mood for, you’ll find it. Some of the newest attractions in our city, such as the Mob Museum and the Neon Museum, are in downtown Las Vegas. We encourage you to visit them and witness the revitalization that has taken place in this neighborhood. There’s also no shortage of things to do on the famous Las Vegas Strip, ranging from fine art galleries and world-famous dancing fountains to a wax museum and thrill rides.

David Brancamp
Program Committee Chair
Nevada Department of Education
Carson City, Nevada

Kelly O’Rourke
Volunteer Committee Co-Chair
Lois Craig Elementary School
North Las Vegas, Nevada

Derek Fialkiewicz
Volunteer Committee Co-Chair
Cram Middle School
North Las Vegas, Nevada
The NCTM 2013 Regional Conference & Exposition officially begins with the Opening Session starting at 5:30 p.m. on Wednesday. Presentations on Thursday and Friday begin at 8:00 a.m. each day and are scheduled concurrently throughout the day.

We have made every attempt to provide adequate seating for participants at the Regional Conference & 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 silence your cell phone during all presentations.

**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 and Friday**

10:30 a.m.–12:00 noon
Miranda 1/2

**New Members 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.
Brasilia 2

**Professional Development**

**FOCUS OF THE YEAR 2013–2014**

This year’s Focus of the Year is Number and Operations: Be Radical and Get Real!

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**

**NUMBER AND OPERATIONS: BE RADICAL AND GET REAL!**

**THURSDAY, OCTOBER 24**

Plan one full day for the Focus of the Year topic, Number and Operations: Be Radical and Get Real! The strand begins with a morning Kickoff session and concludes with an end-of-the-day Reflection session. In between, choose from among a number of sessions exploring the topic, all marked with the symbol Learn↔Reflect. 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 is number sense, and how can you promote the development of number sense in your students? How are fluency and understanding related in the context of number and operations?
2. How can instructional decisions facilitate the development of strategies that are meaningful and transferable for operations on all numbers?
3. How are equity and diversity promoted by developing conceptual understanding of number?
4. How can the Standards for Mathematical Practice support the development of number sense and computational fluency?
5. How are you thinking differently about your learning and teaching of number and operations as a result of participating in the Learn↔Reflect sessions?

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.
Palma A/B/E/F

**Learn↔Reflect Reflection Session**

Thursday, 3:30 p.m.
Palma C/D/G/H
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 70 people. Exhibitors showcase their products and services away from the Exhibit Hall. Look for the symbol 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–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—Issues of interest to multiple grades and audiences

Tips for a Rewarding Regional Conference & Exposition

- Access available speaker handouts at www.nctm.org/plan.
- Become familiar with the layout of the conference facilities by reviewing the floor plans on pages 68–70.
- Visit the NCTM Bookstore for the latest NCTM educational resources and the Member Showcase to learn more about how NCTM can help you professionally and pick up free resources.
- Stop by the Information Booth for information on the local area.
- Wear comfortable shoes and clothes, and dress in layers.
- Turn off cell phones during presentations.
- 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 $10.

By registering and attending an NCTM conference, meeting, or other activity, participants grant NCTM the right to use their likeness or voice as recorded on, or transferred to, video, photographs, websites, electronic reproductions, audio files, and/or other media of such events and activities.

For Your Child’s Safety

Due to the size and nature of the NCTM 2013 Regional Conference & 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.

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 additional exhibitor workshop listings. Program Updates are available in the Registration Area.
Member Showcase

Make sure to stop by the NCTM Member Showcase located in the Exhibit Hall and let us help you learn more about how your NCTM membership can help you be more successful. A membership provides you access to lessons, teaching tips and strategies, research findings, and more. Classroom-ready activities, sample journals, and other materials will be available for you to take back and use immediately in the classroom.

Whether you are a new member, a current member, or thinking of joining, the NCTM Member Showcase is here to support you with your daily challenges!

Renew your membership or join NCTM for the first time on site and you will receive a free NCTM 2014 Annual Meeting t-shirt! While supplies last.

Bookstore

<table>
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<tr>
<th>Day</th>
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<tr>
<td>Wednesday</td>
<td>5:00 p.m. – 7:00 p.m.</td>
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<td>Thursday</td>
<td>7:00 a.m. – 5:00 p.m.</td>
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<tr>
<td>Friday</td>
<td>8:00 a.m. – 4:00 p.m.</td>
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Save 25 percent off the list price on all purchases made at the NCTM Bookstore in the Pavilion Exhibit Hall. Check out NCTM’s newest titles and bestsellers and find NCTM gear for yourself and for friends and family 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 Nevada 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 Nevada 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 Nevada are not valid for this regional conference.

The NCTM Bookstore is not equipped to handle shipping from the meeting site. The Rio All-Suites Hotel & Casino Business Center can assist you with your shipping needs.

Information Booth

The NCTM Information Booth will be in the Rio. Friendly staff can answer your questions about Las Vegas. They will also assist you with directions and local information, from transportation and historical sites to shopping and entertainment.

Networking Lounge

Prime location to meet up with colleagues between presentations! Whether you want to make connections with fellow conference goers, exchange teaching tips, or catch up with friends, you’ll find a comfortable spot in the Network Lounge to do so. Download the Conference App at www.nctm.org/confapp to receive alerts for scheduled networking meet-ups!

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 the Rio All-Suites Hotel & Casino Security.

First-Aid Station

There will be a first-aid station at the Rio during the NCTM conference. If you need medical services while in Las Vegas please check with the hotel concierge for the closest medical facilities.

Your Opinion Counts!

Thank you for attending the NCTM 2013 Regional Conference & 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 Regional Conference & Exposition planning process.
General Information

Exhibits

Be sure to make time in your schedule to visit the NCTM Exhibit Hall. To give you dedicated time to visit the exhibits, no presentations will take place from 4:00 p.m. to 5:00 p.m. on Thursday. Explore, try out, and purchase products and services to 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. Check out the list of exhibits and a map of the Exhibit Hall on pages 70–76. 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 are held on Thursday and Friday and offer a wide variety of topics. For exhibitor workshop offerings, look for presentations in this program book marked with the symbol or see the Program Updates.

Conference App

The NCTM conference app keeps you connected with the Regional Conference’s every aspect. The free app allows you to search sessions, speakers, and exhibits; view the Exhibit Hall floor plan; highlight your favorite presentations; and interact with your colleagues! Visit www.nctm.org/confapp for more information.

Tweet

Check out the @NCTM Twitter feed for conference coverage. Be a part of the conversation by adding the #NCTMVegas hashtag to your tweets and access the conference stream to see what conference attendees are saying about the conference.

Presentation Handouts

Attendees can access available electronic presentation handouts through the conference app and online planner. Handouts will be available until December 31, 2013.

Online Planner

The online planner is a great way for you to search the conference program book, set up your personal schedule, and download available presentation handouts. The online planner is continually updated with the latest program changes and presentation information. Visit www.nctm.org/plan to check it out.

All Year Long

When you return home, don’t forget to download NCTM’s Android or iOS app for free. The NCTM app gives users easy, efficient access to timely NCTM information throughout the year—from updates on new publications and best sellers to the latest information on upcoming conferences and professional development opportunities. Users can be up to the minute on NCTM activities, teaching tips, and classroom resources. The conference app also includes Facebook and Twitter feed updates. Visit www.nctm.org/nctmmobile for more information and to download the app.
HIGHLIGHT
Opening Session (Presentation 1): Game Changers: Rethinking the Way We Teach Math

CONFERENCE APP
Network onsite with attendees!
www.nctm.org/confapp

FACEBOOK
Interact with your colleagues!
www.nctm.org/facebook

TWITTER
Use Twitter to follow the Conference!
#NCTMVegas
www.twitter.com/nctm

REGISTRATION AND NETWORKING LOUNGE HOURS
5:00 p.m. – 8:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE HOURS
5:00 p.m. – 7:00 p.m.

FIRE CODE
We have made every attempt to provide adequate seating for participants at the conference, but for your safety and because of fire regulations, only those with seats will be allowed in meeting rooms. To comply with fire codes, we will have to ask persons sitting on the floor or standing to leave the room.
1

**Game Changers: Rethinking the Way We Teach Math**

 *(General Interest) Session*

What should effective and innovative math instruction look like, and how can teachers create ideal learning experiences for all students? This discussion, led by NCTM Board member Jon Wray, features the perspectives of four educators whose work is transforming curriculum design and delivery and changing the way students think about mathematics.

### Speakers

- **Karim Kai Ani**  
  Mathalicious, Alexandria, Virginia

- **Dan Meyer**  
  Stanford University, Stanford, California

- **Eric Westendorf**  
  LearnZillion, Washington, D.C.

- **Jon Wray**  
  Board of Directors, National Council of Teachers of Mathematics; Howard County Public Schools, Ellicott City, Maryland

---

**Tools, Ideas, and Activities to Make Your Job Easier!**

**INSPIRING TEACHERS. ENGAGING STUDENTS. BUILDING THE FUTURE.**

**Stop by the NCTM Member Showcase On Site**

We’ve got time-saving tips and resources to help you meet the challenges you face on a daily basis. Stop by to pick up…

- Classroom-Ready Activity Sheets
- Sample Journals
- Free Math Resources, Giveaways, and More!

Not a member or want to learn more about membership? Don’t worry; we can help you there too! Plus, when you join or renew on site, you’ll receive a **free t-shirt**.

**Stop by…**

- Wed. 5:00 p.m. – 7:00 p.m.
- Thurs. 7:00 a.m. – 5:00 p.m.
- Fri. 8:00 a.m. – 4:00 p.m.
HIGHLIGHTS

New Members and First Timers’ Orientation (Presentation 2)
Learn↔Reflect Kickoff Session (Presentation 27)
New and Preservice Teachers Workshop (Presentation 39)
NCTM President Session (Presentation 64)
Learn↔Reflect Reflection Session (Presentation 112)

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<td>27, 52, 53, 58, 59, 66, 68, 69, 74, 90, 92, 93, 96, 112</td>
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REGISTRATION HOURS

7:00 a.m. – 3:00 p.m.

EXHIBIT AND NETWORKING LOUNGE HOURS

8:00 a.m. – 5:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE HOURS

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Thursday

7:15 A.M.—7:45 A.M.

2 New Members and First Timers’ Orientation
(Preservice and In-Service) Session
New to NCTM? Join us to learn how to maximize your membership experience. From journals and online lessons, tools, and activities to networking and career-advancement opportunities, you’ll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.

Trudy Mitchell
Las Vegas Program Committee; bby Publications, San Diego, California

Peg Cagle
Board of Directors, National Council of Teachers of Mathematics; Vanderbilt University, Nashville, Tennessee

Brasilia 2 (Rio)

8:00 A.M.—9:00 A.M.

3 Math for All and ELL: Together
(General Interest) Session
What if we taught all students as if they were English language learners (ELLs)? How can we reach all students and close gaps? Learn how to ensure an equitable and high-quality mathematics education for all students regardless of culture, language, prior education, and socioeconomic status. The Common Core State Standards for Mathematical Practice will be modeled within the math content.

Miriam Almaguer Leiva
TODOS: Mathematics for ALL, Charlotte, North Carolina

Amazon F (Rio)

4 Preparing for CCSSM with Online Simulations
(General Interest) Session
Easily integrate interactive online simulations and labs that are fun, easy to use, and prepare students for the Common Core State Standards for Mathematics (CCSSM) rigorous technology expectations, as well as computer adaptive technological assessments. Also, find out how to use simulations to develop a deep conceptual understanding of challenging concepts through inquiry and exploration.

Jennifer V. Ranney
Clark County School District, Las Vegas, Nevada

Amazon D/E (Rio)

5 Tracking CCSSM Using Online Tools
(General Interest) Session
Discover how teachers can track their students’ progress on each standard in the Common Core State Standards for Mathematics (CCSSM) using free tools online. Grocery stores, banks, and cancer researchers, to name a few, track data using computers and databases. The online tools empower students and teachers, allowing them to use their independent and class time more effectively.

Cristina L. Heffernan
Worcester Polytechnic Institute, Massachusetts

Barbara Delaney
Bellingham Memorial Middle School, Massachusetts

Brasilia 1/4 (Rio)

6 Common Core Problem Solving: Fun and Easy
(Pre-K–2, Preservice and In-Service) Session
Learn how to meet Common Core State Standards for problem solving in just minutes per day at no cost to you. Incorporate a system of problem-solving strategies that will move your students from simple to complex, multistep problem solvers. Students will love the real-life applications. You will leave this session armed with ideas and examples.

Rena Pate
Primary Math Rules, Danville, Illinois

Palma C/D/G/H (Rio)

7 Brain-Appropriate Practices for the School-Age Child Learning Math
(Pre-K–5) Session
Come explore the role of the brain in learning. We will present brain science discoveries in a fun way by drawing on a balloon, using “braindoughs,” and playing body–mind games so you can experience what brain structures are activated during emotional and learning states.

Regina R. Lamourelle
Santiago Canyon College, St. Orange, California

Anne Hauscarriague
Santiago Canyon College, St. Orange, California

Chantal E. Lamourelle
Long Beach City College, California

Amazon P/Q (Rio)
8:00 A.M.–9:00 A.M.

8  Culturally Relevant Curriculum to Promote Students’ Mathematical Knowledge
(Pre-K–5) Session
We will discuss a study focused on reframing mathematics curricula and pedagogy for struggling students from diverse cultures. Learn how preservice and in-service teachers diagnosed students’ misconceptions and developed and used knowledge about students’ backgrounds for instructional purposes.

Sherri Cianca
Niagara University, Lewiston, New York

Brasilia 2 (Rio)

9  Sense Making during Discourse: Moving toward Mathematical Insight and Generalization
(3–5) Session
We will present strategies for moving students through the three stages of effective classroom discourse: explaining reasoning, analyzing other’s answers, and bridging to mathematical generalizations. Running a mathematical discussion can be challenging; we will cover specific approaches for accountability and motivation during discourse.

Claudia M. Bertolone-Smith
Douglas County School District, Minden, Nevada

Teruni Lamberg
University of Nevada, Reno

Jaguar (Rio)

10  Rethinking Professional Development: Focus on Coherence and Rigor of Mathematics
(6–8, Preservice and In-Service) Session
We will present a professional development program, Arizona Mathematics Partnership, supported by an National Science Foundation–funded Math and Science Partnership (MSP) project. The program emphasizes coherence and rigor in middle school mathematics for improving the teaching and learning of mathematics. You will have an opportunity to work through various mathematics activities.

April Strom
Scottsdale Community College, Arizona

Ted Coe
Scottsdale Community College, Arizona

Trey Cox
Chandler-Gilbert Community College, Arizona

Palma A/B/E/F (Rio)

11  Incredible Math Tasks! Developing the Standards for Mathematical Practice
(6–12) Session
Work through and receive a set of excellent, worthwhile math tasks with strategies for developing abstract reasoning and effective classroom discourse. We will focus on the development of all eight Common Core State Standards for Mathematical Practice in this engaging session. Leave with resources that can be used on Monday!

William Barnes
Howard County Public School System, Ellicott City, Maryland

Jennifer Novak
Howard County Public School System, Ellicott City, Maryland

Conga (Rio)

NCTM newbie?
Attend the New Members & First Timers’ Orientation to learn how to enhance your conference experience and maximize your membership’s benefits.

See page 10 for details.
12
Preparing for and Doing Great Mathematics Tasks

(6–12) Session
How do we motivate unmotivated students to engage in high cognitive tasks in mathematics? I will focus on researched motivational principles in learning mathematics along with aligned formative assessment strategies. These tools will motivate and engage students and give them the starting points, confidence, and desire they need to persist in doing such tasks.

Linda M. Fulmore
Education Consultant, Cave Creek, Arizona

13
Lesson Study and Transformation to Equity in High School Instruction

(9–12) Session
Using student work and video from four lesson study cycles, we will chronicle how teachers teach equitably. They use new instructional strategies intentionally and reflect on the student outcomes in their high school mathematics classes. Leave with protocols for enacting lesson study and looking at student work.

Katherine W. Kanim
New Mexico State University, Las Cruces, New Mexico
Gema Salcedo
Gadsden Independent School District, Anthony, New Mexico

14
Diagrammatic Reasoning Skills of Preservice Mathematics Teachers: An Investigation

(Higher Education, Research) Session
I will report on a study that explored a relationship between the geometric knowledge of preservice secondary mathematics teachers and their diagrammatic reasoning skills. In the course of this study, preservice mathematics teachers were presented with visual proofs of certain theorems and asked to “reason from the diagram.”

Margaret Karrass
Borough of Manhattan Community College, City University of New York, New York

14.1 enVisionMATH Common Core: Lesson Structure That Successfully Implements the CCSSM

(Pre-K–5) Exhibitor Workshop
Explore the important qualities of a lesson, such as problem-based learning that engages students in the Common Core practice standards and the accompanying questioning strategies that support teachers, in order to make sense of concepts and develop proficiency.

Pearson
Upper Saddle River, New Jersey

14.2 Math Digital Learning

(3–8) Exhibitor Workshop
Think Through Math (TTM) provides unprecedented differentiation with a distinctive and powerful blend of highly adaptive instruction and just-in-time support. By providing adaptive lesson pathways that are uniquely personalized, TTM deepens understanding of critical mathematical concepts and improves higher-order thinking and problem-solving skills.

Think Through Math
Pittsburgh, Pennsylvania

15
Time In: Tools for Time Skill and Concept Development

(Pre-K–2, Preservice and In-Service) Gallery Workshop
An abstract measurement that children must be familiar with is time. Readiness activities that begin in kindergarten or preschool are necessary to understand how time is measured and how a clock is read. Explore innovative, classroom-tested, hands-on tools and ideas to develop and anchor such skills and concepts.

William R. Speer
University of Nevada, Las Vegas

8:30 A.M.–10:00 A.M.
8:30 A.M.–10:00 A.M.

16 Integrating the CCSS Mathematical Practices into your Daily Lessons
(Pre-K–5) Gallery Workshop
As teachers, our goal is to help students become mathematically proficient. Part of this objective requires that we teach our students how to reason and problem solve effectively. Are you thinking, “Easier said than done!” This session will help teachers understand how to integrate the Common Core State Standards (CCSS) for Mathematical Practice into their daily lesson planning.

Amber Evenson
McREL, Denver, Colorado

17 It’s All in the Process: Strategies for Addressing Reasoning—Elementary
(Pre-K–5) Gallery Workshop
Learn strategies for problem solving to assist students in making sense of problems, decontextualizing and contextualizing, and constructing viable arguments as they formulate their own ideas about the meaning of the problem and predict outcomes.

Tammy L. Jones
TLJ Consulting Group, Lebanon, Tennessee
Leslie A. Texas
Leslie Texas Consulting, Louisville, Kentucky

18 Letting Students Drive Their Way to Math Literacy
(Pre-K–5) Gallery Workshop
We will model and explain ways to move students from being passengers to drivers on their journey to math literacy using interactive learning and discussion in an elementary classroom. One focus will be on meeting the needs of diverse students in a Title I school.

Gayle J. Thyrring
Stafford County Public Schools, Virginia
Sara Frazier
Stafford County Public Schools, Virginia
Ruth Harbin Miles
Stafford County Public Schools, Virginia

19 Elapsed Time . . . Why So Much Confusion?
(3–5) Gallery Workshop
Let’s look closely at elapsed time to determine why students have so much difficulty with this concept. We will use traditional methods and analyze errors to conclude that this grade 3–5 concept is anything but elementary! We will compare traditional and reform models, and you will discover how reform models easily translate from concrete to pictorial.

Barbara Ann Spotts
Johnny’s Key, Trevorton, Pennsylvania

Miranda 5/6 (Rio)

Amazon R/S/T (Rio)

Involve and Inspire Your Students!

Mu Alpha Theta
National High School and Two-Year College Mathematics Honor Society

Miranda 7/8 (Rio)
20  
**A Dicey Situation**  
(3–8) Gallery Workshop  
Work through a variety of unusual dice activities that effectively build students’ understanding of chance.  
Ralph D. Connelly  
Faculty of Education—Brock University, St. Catharines, Canada

21  
**Three Dozen Games with Three Dozen Dice**  
(3–8) Gallery Workshop  
Who knew regular dice could be used to teach and practice operations, order of operations, fractions, place value, patterning, data management and analysis, probability, and more! Come prepared to play with easy-to-find regular spotted dice and learn three dozen ways to motivate and engage your students. Great for differentiation.  
Jane Felling  
Box Cars & One-Eyed Jacks, Edmonton, Canada

22  
**MathBreaks: Fun Games That Teach**  
(6–8) Gallery Workshop  
Try some math games that engage as well as teach. The criteria are that they are fun enough to entertain, yet educational enough that it is time well spent during class. These activities are chosen to be enticing breaks from your usual routine.  
Nina Chung Otterson  
The Hotchkiss School, Lakeville, Connecticut

23  
**Investigations and Activities in Algebra: Get Students Involved!**  
(6–12) Gallery Workshop  
Get involved with hands-on materials that provide practice on algebra ideas: order of operations, exponents, solving linear and quadratic equations, integer arithmetic, multiplying monomials and binomials, and many others. Materials provided.  
Don S. Balka  
Saint Mary’s College, Notre Dame, Indiana

24  
**Making the Functions Domain Meaningful in Algebra 1**  
(6–12) Gallery Workshop  
Wondering how to help your students make sense of the functions domain? This activity incorporates many of the functions standards in a way that will help your students connect the concept of a function to different representations and introduce your students to the functions explored in algebra 1: linear, quadratic, and exponential.  
Jenny Salls  
Washoe County School District, Reno, Nevada  
Carrie L. Hair  
Washoe County School District, Reno, Nevada

25  
**“Multitasking” through CCSS Using Learning Cycles**  
(6–12) Gallery Workshop  
“Multitasking” is an innovative way of thinking about instruction—recognizing that single tasks can address multiple Common Core State Standards (CCSS), while multiple tasks can solidify a single standard. We will examine a sequence of tasks illustrating a multitasking perspective for teaching and learning.  
Scott Hendrickson  
Brigham Young University, Provo, Utah

Pick up your copy of the Program Updates for additional presentations, cancellations, and other important information.
8:30 A.M.–10:00 A.M.

26 The Many Faces of Differentiation in Algebra
(9–12, Preservice and In-Service) Gallery Workshop
Investigate various types of differentiated material, discussing when, why, and how they can be used. Working from scenarios, we’ll create material. Some of the differentiation methods discussed include tiered activity sheets, graduated-difficulty problem sets, differentiated questioning, and different contexts or instructional mode. Support and challenge all!
Allan E. Bellman
University of California, Davis

Tropical A/B/C/D (Rio)

9:30 A.M.–10:30 A.M.

27 Learn➡Reflect Kickoff: Making Sense of Numbers—More Than Computation
(General Interest) Session
Numbers are foundational to understanding how the world operates. What can we do to help students understand numbers from both contextual and mathematical perspectives? How do we help students understand fractions, percents, rates, and ratios? And what is the role of irrational and complex numbers in engaging students in mathematical reasoning and sense making?
Gail Burrill
Past President, National Council of Teachers of Mathematics; Michigan State University, East Lansing

Palma A/B/E/F (Rio)

28 Making Math More Like Things Students Like: Video Games
(General Interest) Session
Students around the world are playing thousands of hours of video games every day, and in many cases, they’re enjoying those games more than they enjoy our math classes. Let’s look at several of the most popular video games of all time and pull out some lessons. As task designers, test givers, and classroom managers, what can we learn from those games?
Dan Meyer
Stanford University, California

Amazon F (Rio)

10:30 A.M.–12:00 P.M.

29 Beyond “Why?”: Exploring and Supporting Reasoning with Early Learners
(Pre-K–2) Session
What does reasoning look like for early learners? Children often come to us being able to reason about mathematics. How can we support children’s reasoning and ensure that it is not taught out of them? This session will explore reasoning in early learning settings, ways to support this reasoning, and tools and resources to help make connections.
Denise N. Trakas
Washoe County School District, Reno, Nevada

Brasilia 1/4 (Rio)

20: Now You See Me: Hiding Assessment as a Differentiated Center
(Pre-K–5) Session
Learn how to take the hiding assessment, finding the “start and change” unknown, and modify it to fully meet the differentiated needs of your students. We will define what the hiding assessment is, how it relates to math instruction, and how it can be differentiated and used as a center activity.
Lloyd Goldberg
Clark County School District, Las Vegas, Nevada
Lacey Peckham
Clark County School District, Las Vegas, Nevada
Ann Moody
Clark County School District, Las Vegas, Nevada

Amazon D/E (Rio)

31 Great Tasks to Encourage Your Students to Demonstrate the Practices
(3–5) Session
We will work with three tasks that revolve around interesting problems. The tasks are aligned with specific Common Core standards and practices and have multiple components. They start with a launch, progress to a core task, and include extensions. We will look at sample student work with a focus on number sense, geometry, and algebraic reasoning.
Connie S. Schrock
Emporia State University, Kansas

Brasilia 5 (Rio)
32  
**Teaching the Common Core to Students Who Struggle in Mathematics**  
(3–5) Session  
Students with disabilities often struggle in mathematical achievement. We will focus on the use of the concrete–semi-concrete–abstract model of teaching concepts to students who struggle in mathematics. You will apply content to video case studies that focus on the Common Core State Standards for Mathematics (CCSSM).

**Amy Lingo**  
University of Louisville, Kentucky

**Karen S. Karp**  
University of Louisville, Kentucky

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33  
**Matching Tasks with Goals for Student Learning**  
(6–8) Session  
Some mathematics tasks have the potential to engage students in complex forms of thinking and reasoning while others focus on memorization or the use of rules and procedures. Matching the appropriate level of cognitive demand to the appropriate task should be determined by the goal for student learning.

**Pamela H. Dallon**  
Alpine School District, American Fork, Utah

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34  
**Keeping It Real: Teaching Math through Real-World Topics**  
(6–12) Session  
How long does it take to burn off the calories in a Big Mac? In basketball, should you ever foul at the buzzer? We’ll explore a range of real-world lessons that teachers can immediately use to address the Common Core State Standards in a fresh, new way: one that fosters a rigorous understanding of math while also challenging students to think about the world more critically.

**Karim Kai Ani**  
Mathalicious, Alexandria, Virginia

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35  
**Dart Mathematics: Using Paper, Nerfs, Graphing Calculators, and SMART Boards**  
(9–12) Session  
Discover the math of playing darts with Nerf boards and technology simulations. We will look at the concepts of geometric area for squares, circles, and sectors, as well as geometric probability. We’ll use random numbers to locate dart hits on a coordinate plane and calculate experimental and theoretical probability.

**Kathleen Cage Mittag**  
Retired, University of Texas at San Antonio

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36  
**Students as Mathematicians: A (CCSS) Modeling Approach**  
(9–12, Higher Education) Session  
When we expect students to behave as mathematicians, they learn to address meaningful problems while developing the necessary mathematical tools in an environment of creative collaboration, modeling, and communication. I will share favorite modeling activities, helpful tips, and connections to the Common Core State Standards (CCSS).

**Greta Mills**  
Hanover High School, New Hampshire

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37  
**Our Force: Focusing on Retention and Combining Efforts**  
(Higher Education) Session  
Learn about the success of Our Force, an intrusive developmental mathematics advising intervention. Discuss best practices that can be implemented across community college campuses.

**Rosanne B. Benn**  
Prince George’s Community College, Largo, Maryland
38
BLAST: On-Demand Common Core Professional Development
(Preservice and In-Service) Session
BLAST (Bringing Learning and Standards Together) provides on-demand, open-source professional development modules that clarify the meaning of the Common Core State Standards for Mathematics (CCSSM). Modules contain information about assessment, instruction, questioning strategies, resources, and opportunities for collaboration.

Jo Imlay
Clark County School District, Las Vegas, Nevada

April Holloway
Clark County School District, Las Vegas, Nevada

38.1  
Cracking the Code of Algebra to Ensure Success for All
(3–8) Exhibitor Workshop
How does Hands-On Equations® enable 80 percent of inner-city fourth graders to succeed with such basic equations as $4x + 3 = 3x + 10$ in only three lessons? Come and discover how effective instruction can dramatically shorten the learning process and lead to higher levels of success. If algebra is a foreign language to your students, this session is for you!

Borenson and Associates, Inc
Allentown, Pennsylvania

38.2  
Pearson’s CMP3: Get Connected!
(6–8) Exhibitor Workshop
Experience CMP3, the newest edition of the inquiry-based Connected Mathematics Project. See new updated Common Core–aligned content and easy-to-use mobile tools. Find out how twenty-first-century social-networking technology connects CMP3 teachers and how students benefit from interactive digital student pages that allow for instant sharing.

Pearson
Upper Saddle River, New Jersey

39
New and Preservice Teachers Workshop
(General Interest) Session
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
Thursday

10:30 A.M.–12:00 P.M.

40  Building Strong Number Sense with Place Value for Pre-K–2
(Pre-K–2) Gallery Workshop
Explore how to build strong number sense with place value. Learn how to teach the concepts of place value from the conceptual level through abstraction. Experience literature, music, games, and hands-on manipulatives for this difficult area.

Kim P. Sutton
Arcata, California

41  Envisioning 1, 2, 3 . . .
(Pre-K–2) Gallery Workshop
When your students think of a number, what do they visualize? Explore techniques to draw students’ attention to the importance of being able to mentally picture what a number looks like. This will include subitizing and mental math strategies using tools such as dot cards, beaded measures, and ten-frames.

Carol A. Matsumoto
Retired, Seven Oaks School Division, Winnipeg, Canada

Angela Bubnowicz
Seven Oaks School Division, Winnipeg, Canada

42  Place, Properties, and Relationships: Getting to Addition and Subtraction
(Pre-K–2) Gallery Workshop
Help your students add and subtract in second grade by using place value, properties of operations, and the relationship between addition and subtraction. Earlier grades lay the foundation. Experience activities that will engage your students and make your life easier. Get activities ready to use on Monday.

Cynthia L. Schneider
Charles A. Dana Center, Austin, Texas

Mary Alice Hatchett
President, Texas Council of Teachers of Mathematics, Austin, Texas

43  A Hands-On Approach to Algebraic Thinking in the Elementary Classroom
(3–5) Gallery Workshop
Learn ways to introduce and use algebraic thinking in the grades 3–5 classroom. Join us for hands-on activities to explore concepts. You’ll walk away with materials and lesson ideas to develop students’ algebraic thinking.

Beverly J. Ferrucci
Keene State College, New Hampshire

Christina Anderson
Keene State College, New Hampshire

44  Reading Mathematics
(3–8) Gallery Workshop
Reading, writing, speaking, and listening in math? Consider how the Common Core State Standards for English Language Arts can help us improve our students’ conceptual knowledge of mathematics.

Amy Weber-Salgo
Washoe County School District, Reno, Nevada

45  Write Proofs! How the Logic in Games Develops Proof-Like Reasoning
(3–8) Gallery Workshop
Creating viable arguments (a Common Core State Standards expectation) is challenging for many students with special needs. We will show how we used games and strategy discussions to develop students’ critical thinking and oral and written communication. We will also share student work to trace the evolution of their writing, as well as games and lessons.

Antonia Marie Cameron
Metamorphosis Teaching Learning Communities, New York

Lauren O’Neill
New York City Department of Education, Brooklyn

Karine Kelley
New York City Department of Education, Brooklyn
46  **Algebraic Thinking and English Language Learners: Building Background and Success**  
(6–8) Gallery Workshop  
We will share algebraic thinking activities (aligned to the Common Core State Standards for middle school grades) accessible to English language learners (ELLS). These activities are helpful because they include building background and meaningful contexts, as well as many ways to engage students in the mathematics and using language.

**Rose M. Glasser**  
Jefferson County Public Schools, Louisville, Kentucky  
**Latricia Bronger**  
University of Louisville, Kentucky  
**Jennifer M. Bay-Williams**  
University of Louisville, Kentucky

47  **Integers on the Number Line: A CCSS Approach**  
(6–8) Gallery Workshop  
Come explore adding and subtracting integers on the number line. Learn approaches that are tactile, visual, and sense making and will help you move forward into a Common Core world. Activities are connected to the Common Core State Standards (CCSS) and the Standards for Mathematical Practice.

**Mark Goldstein**  
Center for Mathematics and Teaching, Los Angeles, California

48  **How Can I Solve It? Using Manipulatives for Deeper Understanding**  
(6–12) Gallery Workshop  
Come participate in sample lessons and problems that use algebra tiles to build a deep understanding of working with negatives, simplifying expressions, solving equations, and multiplying and factoring polynomials. Receive ideas and materials that you can use in your own prealgebra and algebra classrooms.

**Staci Shackelford**  
Whittier Union High School District, California

49  **Bowling for Rational Expressions**  
(9–12) Gallery Workshop  
Use tennis balls to bowl for rational expressions. You will also use an umbrella to determine the equation of a parabola and participate in a double-elimination rock–paper–scissors tournament to compare theoretical and experimental probability.

**Claudia D. Maness**  
Texarkana Arkansas School District

50  **You’ve Got To Move It! Transforming Mathematics**  
(9–12) Gallery Workshop  
Let’s get moving! Come explore various ways to excite your students to explore transformations in mathematics. Using the Common Core State Standards as a guide, we will collect data, use technology, and of course, move to discover properties of functions and create models to predict mathematical behavior.

**Jennifer M. North Morris**  
Professional Development Consultant, Tucson, Arizona

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**11:00 A.M.–12:00 P.M.**

51  **Engaging Students with Children’s Literature**  
(Pre-K–2) Session  
Children love stories. Using books to introduce the lesson will grab students’ attention and focus them on the day’s topic. Students will enjoy exploring patterning, graphing, and addition with literature as the starting point. I will offer lesson plans.

**Patty Morrison**  
Fresno Unified School District, California

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*Activities for Sense Making with the Mathematical Practices*

Max Ray, of the Math Forum at Drexel, shows what’s possible when students become active doers rather than passive consumers of mathematics. Self-confidence, reflective skills, and engagement soar as students discover different ways to approach problems.


![Book Cover](image1)

**Agents of Change**

*How Content Coaching Transforms Teaching and Learning*

How can teacher leaders cultivate an environment that will improve student learning in every classroom? Lucy West and Toni Cameron turn decades of experience designing and implementing coaching initiatives into a practical resource for transforming school culture and inspiring true learning.


![Book Cover](image2)

**Putting the Practices Into Action**

*Implementing the Common Core Standards for Mathematical Practice*

Susan O’Connell and John SanGiovanni provide practical activities to help you quickly integrate the eight Standards for Mathematical Practices into your existing math program. With classroom vignettes, sample activities, and helpful teaching tips, they bring the standards to life.


![Book Cover](image3)

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11:00 A.M.–12:00 P.M.

52 In the Beginning!
(Pre-K–2) Session
A strong numeracy foundation is crucial for mathematics. Just as a house requires a strong foundation to remain erect, students require a deep and solid conceptual understanding in mathematics. Perceptual, figurative, and abstract progressions are significant stages students need to move from a unitary to a composite way of thinking.

Beth Miracle Meiman
Kentucky Center for Mathematics, Highland Heights

53 Mastering Mental Mathematics: Number Facts and Beyond
(Pre-K–5) Session
Mental math should be a major goal of all mathematics programs. It is used every day and is essential for high school math. I will use pictorial representations to show how to achieve that goal, beginning with strategies to master basic number facts for all four operations. These strategies are then extended to examples beyond the facts.

Calvin Irons
Queensland University of Technology, Brisbane, Australia

54 Teaching the Tough Topics: Number Sense, Fact Fluency, and Fractions
(Pre-K–5) Session
Is there a way to teach computational skills that develops number sense, leads to fact fluency, prepares students for word problems, and helps visual learners become abstract thinkers? Join Grapes of Math author and Kakooma inventor Greg Tang as we apply model-drawing strategies to arithmetic. You’ll wonder why math isn’t always taught this way!

Greg Tang
Scholastic, New York, New York

55 Math + Technology = Learning
(3–5, Preservice and In-Service) Session
You’ll learn how to use technology in clever ways for teaching and learning mathematics. See how math lessons can be enlivened and enhanced through the integration of resources and tools found on the Internet, the iPad, and the classroom computer. You’re guaranteed to leave with many ideas you can use tomorrow with your students!

Tammy G. Worcester
ESSDACK, Hutchinson, Kansas

56 Beyond the Textbook: Math Activities That Enrich and Extend
(3–8) Session
Discover a variety of low- or no-cost math games and activities that will challenge your students and sharpen their math skills. Learn math and logic games to add to your math repertoire and build your classroom game center. Discuss examples of tiered activities and variations that make some well-known games more challenging.

Daniel M. Rosenberg
The Pegasus School, Huntington Beach, California

57 Every Day Is Mathematical
(3–8) Session
We all know that March 14 is Pi Day, and many of us celebrate October 10 as Metric Day. But is it possible to find a mathematical connection to every day of the year? This session will show you how to motivate students and review important numerical concepts in a fun and engaging way. Yes, every day is mathematical!

Rita H. Barger
University of Missouri–Kansas City
58 Ratios: Graphing on the Cartesian Coordinate Plane
(6–8) Session
Fraction as ratio can be represented through graphing. This visual representation makes working with rational numbers accessible to all students. Students will see the relation of ratios to slope, thus making the transition to algebraic thinking seamless.
Anne M. Collins
Lesley University, Cambridge, Massachusetts
Palma A/B/E/F (Rio)

59 Making the Connection between Mathematics and Forensic Science
(9–12) Session
Topics from forensic science are ideal for introducing students to real-world applications in mathematics. Data will be used to explore relationships among height, shoe size, and stride length to determine the height of a source of blood spatter at a crime scene and to recreate accident scenes. We’ll analyze data using the TI-84 Plus.
Mary Wagner-Krankel
St. Mary’s University, San Antonio, Texas
Brasilia 5 (Rio)

60 Using Clickers to Spark the Discussion
(9–12, Higher Education) Session
Clicker question use in classrooms has grown rapidly, but how does a teacher effectively integrate them into instruction? While clicker questions provide feedback, they are significantly more useful in engaging students in discussion. We will examine in-depth what makes a good question using examples from precalculus and calculus.
Brandon Milonovich
Syracuse University, New York
Helen M. Doerr
Syracuse University, New York
Collin Bruce
Syracuse University, New York
Brasilia 1/4 (Rio)

61 New Standards for Preparing Future Mathematics Teachers
(Higher Education, Preservice and In-Service) Session
NCTM has revised the standards for NCATE’s program review process. Examine new standards, content addenda, and rubrics for the preparation of secondary, middle-grades, and elementary math specialists. Explore how these changes will affect the review process leading to national recognition of programs by NCATE and CAEP.
Judy O’Neal
National Council of Teachers of Mathematics, Reston, Virginia
Coco A/B (Rio)

62 Growing the Common Core in a Rural State
(Preservice and In-Service) Session
Montana’s size and sparse population calls for a unique, multi-phase approach to supporting rural teachers as they implement the Common Core State Standards content. In this session we describe a blended approach where workshops, online learning modules, mentoring, and public lessons are used in preparing “seed teachers” to enact the Common Core in grades 4–7.
Jennifer Luebeck
Montana State University, Bozeman, Montana
Georgia A. Cobbs
The University of Montana, Missoula, Montana
Amazon P/Q (Rio)

62.1 CCSS Math Practices? Trust CPM’s Twenty Years of Writing Experience
(6–12) Exhibitor Workshop
Try some lessons and take home samples of CPM’s Core Connections series (2013). The third generation of CPM blends CCSS content and practice standards in a coherent sequence from 6th grade through algebra 2. Course elements include problem solving, mathematical thinking, problem-based lessons, and mathematical discourse in a student-centered format.
CPM Educational Program
Sacramento, California
Tango (Rio)
11:00 A.M.–12:00 P.M.

62.2 Addressing CCSS for High School Mathematics
(9–12) Exhibitor Workshop
Learn how the Discovering Mathematics series exemplifies the CCSS. With a strong emphasis on the Standards for Mathematical Practice for algebra and geometry, the series helps bring all students to mastery while making math meaningful for all learners. You’ll also get a sneak peek at the new edition of Discovering Algebra!
Kendall Hunt Publishing Company
Dubuque, Iowa

65 Building Formative Assessment Practices to Support the Common Core
(Pre-K–2) Session
Understanding of number is crucial to students’ development in mathematics. Explore formative assessment as a tool for building the level of number understanding necessary for mathematical proficiency. Focus will be on multiple assessment practices dealing with major concept areas in elementary mathematics.
David Pugalee
University of North Carolina at Charlotte
Brasilia 2 (Rio)

12:30 P.M.–1:30 P.M.

63 Improving Teaching Practice through Mathematics Video Clubs
(General Interest) Session
Teachers and administrators can start their own video-analysis clubs, similar to traditional book clubs, to support and improve professional practice in mathematics. I’ll discuss the implications for professional learning communities, department-wide professional development, and new teacher induction programs.
Patrick Robert McGuire
University of Colorado Colorado Springs

66 Build Number Sense with Visual Models and Games
(Pre-K–2) Session
Be more efficient and selective about time devoted to number. Explore number relationships by using visual models, including dot cards, ten-frames, number lines, grids, and hundred charts. Leave with classroom-ready games and strategies, based on the Common Core State Standards, to help you enhance number sense and build confidence in your students.
Laura L. Choate
Fallbrook Union Elementary School District, California
Amazon D/E (Rio)

64 NCTM President Session: It’s Raining Rich Problems!
(General Interest) Session
A rich problem is the umbrella for incorporating standards of practice with mathematics content in the elementary grades. Here are some practical suggestions to turn this vision into practice.
Linda M. Gojak
President, National Council of Teachers of Mathematics; John Carroll University, University Heights, Ohio

67 Mathematics Specialists: Increasing the Odds for Success
(Pre-K–5) Session
Successful mathematics specialists improve their odds for success by partnering with the principal and supporting teachers’ professional growth. Get practical guidance for operating as an elementary mathematics specialist, as suggested by successful specialists who have collaborated on a new NCTM publication.
Vickie L. Inge
University of Virginia, Charlottesville, Virginia
Conga (Rio)
71 Multiple Models for Fraction Division: Higher-Level Thinking in CCSS
(6–8) Session
The Common Core State Standards (CCSS) require students to be able to interpret and create meaning for fraction division. Students need multiple models to flexibly make sense of the division of fractions and their resulting quotients. We will explore different models and how students can create and internalize understanding of the interpretations.

Robert M. Afonso
Boston University, Massachusetts

Laura Kyser-Callis
Boston University, Massachusetts

Amazon P/Q (Rio)

72 STEM: Silos or a Farm?
(6–12) Session
Common Core, Standards for Mathematical Practice, Literacy in Science, Next Generation Science Standards. How can anyone do it all? We will focus on how science, technology, engineering, and math (STEM) can be used to frame a unified vision of purpose (the farm) while still maintaining the integrity of the individual content areas (silos).

Diana L. Suddreth
Utah State Office of Education, Salt Lake City

Amazon N/O (Rio)

73 Exploring Flipped Classrooms
(9–12, Higher Education) Session
Learn about the flipped classroom. Explore findings from recent research conducted in two lower-level undergraduate mathematics content courses, and discuss classroom and online implications for implementing a flipped classroom.

Shannon M. Guerrero
Northern Arizona University, Flagstaff

Chris Lamb
Northern Arizona University, Flagstaff

Melissa Beal
Northern Arizona University, Flagstaff

Jaguar (Rio)
Removing Barriers to Reasoning and Sense Making
(9–12, Preservice and In-Service) Session
In the grades 9–12 curriculum there are a number of common “shortcuts” that misrepresent mathematics. We will discuss how they limit students’ ability to reason and make sense of mathematical concepts and how teachers can avoid using these shortcuts and help their students build conceptual understanding.
Daniel R. Ilaria
West Chester University, Pennsylvania

Teaching Look 4s: Tools and Resources Focused on the Mathematical Practices
(General Interest) Exhibitor Workshop
The eight Common Core math practices provide purpose for change and require shifts in classroom practice. Instructional shifts are an opportunity to focus on observable teaching skills. This session provides an overview of coaching resources to support teachers, as you talk about specific skills that develop desired academic behaviors in students.
Pearson
Washington, D.C.

A Tool to Develop Students’ Number Sense
(Pre-K–2) Gallery Workshop
Are you frustrated with students’ lack of number sense? A tool from the Netherlands can help. Explore using a rekenrek (aka MathRack) to help facilitate students’ development of number sense.
Christina Tondevold
Mathematically Minded, Orofino, Idaho

Supporting Understanding of Number and Operations with Graphic Organizers
(Pre-K–2) Gallery Workshop
Graphic organizers help all students explore relationships between addition and subtraction. Explore student understanding of equality, numbers, fact families, number combinations, missing addends, and word problems. You will receive the graphic organizers and lesson ideas.
Allison J. Davis
Chandler Unified School District, Arizona
Socorro H. Tapetillo
Chandler Unified School District, Arizona

Developing Fact Fluency
(Pre-K–5) Session
We will highlight research findings related to math fact fluency and provide you with ideas for classroom tasks that can support students’ development of fluency in basic math facts.
Sam Strother
Developing Mathematical Thinking: Center for School Improvement at BSU, Boise, Idaho
Sarah Appleton
Caldwell School District, Idaho

Looking for lessons, activities, and teacher resources? Check out www.nctm.org
12:30 P.M.–2:00 P.M.

**78**

**Pattern and Place-Value Connections**
*(Pre-K–5) Gallery Workshop*

Explore engaging activities and instructional strategies using pattern to help students in grades 1–3 develop place-value understanding and number sense. Take home ready-to-implement ideas to guide your students to conceptual understanding. See aha moments happen in your classroom.

**Susan Kunze**  
Bishop Unified School District, California

**Michelle Kubiak**  
Bishop Unified School District, California

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**79**

**Make It Real—Make It Stick!**
*(3–5) Gallery Workshop*

Teaching mathematics to children goes way beyond a textbook or program. It involves surveying your class to discover students’ interests and designing projects that meet their needs. Learn about real-world projects that will make your students ask for more! Hands-on activities, make it-take it, and handouts provided.

**Dacia Jones**  
Durham Public Schools, North Carolina

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**80**

**Understanding Operations with Fractions through Hands-On Activities**
*(3–8) Gallery Workshop*

Experience activities that show you how to use manipulatives and questioning to teach fractions, equivalent fractions, and operations with fractions. Division of fractions will finally make sense! Activities are based on a progression through the three stages of learning—concrete, pictorial, and abstract—and focus on students making sense of the math.

**Barbara Schallau**  
East Side Union High School District, San Jose, California

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**81**

**Mathematics and Rational Art**
*(6–8) Gallery Workshop*

We will discuss various artists and how their artwork can be used to reinforce instruction on converting between fractions, decimals, and percents. I will give brief backgrounds on the artists, and you will create your own artwork while finding the percentage of your work painted various colors. We’ll use water-based paints.

**David W. Thomas**  
Jefferson County Public Schools, Louisville, Kentucky

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**82**

**Technology + Choice = Success**
*(6–8) Gallery Workshop*

Do you long to hear your students say these three little words, “I love math”? Come discover how hands-on lessons infused with technology and choice have transformed our students into highly motivated, engaged, successful learners. Highlighted technology includes TI technology, math in movie clips, SMART Board, Google Earth, and Voki avatars.

**Melissa Jackson**  
Deptford Township Schools, New Jersey

**Meredith A. Howell**  
Deptford Township Schools, New Jersey

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**83**

**Rethinking Geometry: Why Transformations?**
*(6–12) Gallery Workshop*

The high school Common Core State Standards for Mathematics call for students to understand congruence and similarity in terms of transformations. Why is this important to do? How does this change the content we teach in geometry, including how we think about proofs? We will work several examples chosen to help us think about answers to these questions.

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

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(Day: Thursday)
12:30 P.M.–2:00 P.M.

84
Are Your Questions Meaningful? The Influence of CCSSM and Technology
(9–12) Gallery Workshop

Technology can make many school mathematics questions seem pointless. Should we ban technology? Instead, how might we change our questions? Explore problems motivated by the Common Core State Standards for Mathematics (CCSSM) that build understanding with technology: teach factoring with CAS? Explore infinite series? Use recursive and iterative processes? Bring your tech tools, and explore with us!

Roger Day

Tami S. Martin
Illinois State University, Normal

Lambada (Rio)

85
Be More Than a One Hit Wonder in Your Classroom
(9–12) Gallery Workshop

Have you ever done a great activity in your classroom only to realize later that it was just a fun activity rather than a learning experience? A great activity by itself is a one hit wonder. This workshop will help you learn how to implement a sequence of rich tasks to maximize your students’ reasoning and sense-making skills.

Janet M. Sutorius
Mathematics Vision Project, Salt Lake City, Utah

Travis Lemon
Mathematics Vision Project, Salt Lake City, Utah

Amazon K/L/M (Rio)

86
The Perfect Math Marriage: Edmodo and the Mathroom Teacher
(Preservice and In-Service) Gallery Workshop

Edmodo is a secure, social learning platform for teachers, students, schools, and districts. It provides a safe and easy way for your class to connect and collaborate, share content, and access homework, grades, assessments, and notices. Edmodo allows teachers to share content easily, and free apps for iPhones and Androids makes Edmodo mobile!

Shonda K. Brooks
St. Landry Parish School System, Opelousas, Louisiana

Miranda 1/2 (Rio)

2:00 P.M.–3:00 P.M.

87
Coaching Tools to Support CCSS Content and Mathematical Practices
(General Interest) Session

A dual focus on the content and mathematical practices of the Common Core State Standards (CCSS) leads to mathematically proficient students. We will share tools (resources, templates, and activities) for mathematics coaches, leaders, and teachers that can support professional development efforts to ensure all students become mathematically proficient.

Jennifer M. Bay-Williams
University of Louisville, Kentucky

Maggie B. McGatha
University of Louisville, Kentucky

Beth Kobett
Stevenson University, Baltimore, Maryland

Jaguar (Rio)

88
Implementing the Mathematical Practices: Does Your Classroom Look Like This?
(General Interest) Session

Let’s examine sample lessons and examples of student work and discourse, all of which demonstrate students’ use of the Common Core State Standards for Mathematical Practice in action. We’ll discuss recommendations and share participant input on the challenge, “How do I support and expand the mathematical behaviors of my students?”

Henry S. Kepner
Past President, National Council of Teachers of Mathematics; University of Wisconsin-Milwaukee

Amazon F (Rio)

89
Math Misconceptions . . . Does “Altogether” Mean Add?
(Pre-K–2) Session

Come and discuss common math misconceptions and why they may exist. You will leave this session with activities to help correct some of the most common errors that have been found in K–grade 2 math lessons. These activities will lead to a deeper understanding of math for the student, as well as the teacher.

Jean Bingham
Central Elementary, Barbourville, Kentucky

Amazon N/O (Rio)
Are You Ready for Some Number Interventions?

(Pre-K–5) Session

Are you looking for strategies to develop flexible student thinkers with an understanding of number? Explore three effective components promoting an awareness of number that we’ve adopted as we transitioned to the Common Core State Standards for Mathematics. We will share home–school connections, school-based interventions, and after-school program ideas.

Kelly Krownapple
Howard County Public School System, Columbia, Maryland
Karen Simcock
Howard County Public School System, Columbia, Maryland

Using Discourse to Increase Number Sense

(Pre-K–5) Session

Learn strategies to develop and encourage mathematical discourse and increase students’ number sense, reasoning, and problem-solving skills.

Lisa J. Drakulich
Clark County School District, Las Vegas, Nevada
Bethany Farmer
Clark County School District, Las Vegas, Nevada
Ruby Mora
Clark County School District, Las Vegas, Nevada

Engaging Activities + Effective Instructional Strategies = Numerically Nimble Students

(3–5) Session

Improve students’ numeric competence with strategies that promote greater sense making and participation. Discover more effective ways to differentiate instruction and efficiently implement the Common Core State Standards. Generous handout includes engaging activities to enhance mathematical reasoning as students improve their number sense and computation skills.

Leigh Childs
San Diego County Office of Education, California

Examining the Fanatical Fraction Focus in the Common Core

(3–8) Session

There is little doubt that implementing the Common Core State Standards for Mathematics in grades 3–8 poses a great challenge to all. This challenge can be viewed as an opportunity to improve mathematics instruction. I will demonstrate strategies, activities, and technology that can enhance the teaching and learning of number sense and rational numbers.

Eric Milou
Rowan University, Glassboro, New Jersey

With CCSSM, Mathematics Coaches Need Professional Development, Too!

(3–8) Session

Mathematics coaches need professional development to increase their mathematics content and coaching knowledge to increase their effectiveness. Engage in hands-on activities in Common Core State Standards for Mathematics (CCSSM) number and operations content that teachers have difficulty teaching and in activities to increase your own coaching knowledge.

John Sutton
RMC Research Corporation, Denver, Colorado
Arlene P. Mitchell
RMC Research Corporation, Denver, Colorado
Clare E. Heidema
RMC Research Corporation, Denver, Colorado

Challenging All Students, Even Gifted Ones, without Going Crazy

(6–12) Session

Learn how to create manageable enrichment activities you can use to support and challenge all students’ mathematical learning. Walk away with strategies for developing engaging activities that push not only gifted but all students into higher-order thinking while supporting both the Common Core State Standards and reasoning and sense making.

Carrie L. Hair
Washoe County School District, Reno, Nevada
Jenny Salls
Washoe County School District, Reno, Nevada
2:00 p.m.–3:00 p.m.

96 \textcolor{red}{\textbf{LCR}}

Mathematical Modeling with Fantasy Football

(6–12) Session

Fantasy football provides a rich source of data for mathematical reasoning. We’ll explore how to develop a mathematical model for drafting and maintaining an expert-beating fantasy football team using the concepts of addition, division, mean, median, standard deviation, and more! Attention will also be given to testing the model to improve it.

Benjamin Galluzzo
Shippensburg University of Pennsylvania

Dave I. Kennedy
Shippensburg University of Pennsylvania

Brasilia 5 (Rio)

97

Residuals in the Common Core

(9–12) Session

In the Common Core State Standards, students are expected to analyze residuals. This topic is new to the curriculum in many states and can be implemented at any level in grades 9–12. We will explore ways to teach residuals with both a hands-on activity and with technology.

Sharon Taylor
Georgia Southern University, Statesboro

Kathleen Cage Mittag
Retired, University of Texas at San Antonio

Brasilia 2 (Rio)

98

Wait, I Don’t Have to Come to Class? Awesome.

(Higher Education) Session

Why do we make students sit through topics they are already familiar with? Learn a different method for college algebra: students attend class only for topics they are not proficient with. This approach allows those who need extra help to get it. Explore details of the class and results, as well as suggestions for implementation.

Paula R. Stickles
Millikin University, Decatur, Illinois

Coco A/B (Rio)

2:30 p.m.–4:00 p.m.

98.1 \textcolor{red}{\textbf{CW}}

Making Elementary Math Journals Fold-tastic!

(Pre-K–5) Exhibitor Workshop

Cut, fold, and more, in this hands-on workshop as you transform basic classroom materials into Notebook Foldables that are sure to make your student math journals fold-tastic. Depart with a mini-composition book made on site that is filled with immediately usable ideas.

Dinah-Might Adventures
San Antonio, Texas

Amazon B/C (Rio)

98.2 \textcolor{red}{\textbf{CW}}

Walk the Number Line for Research-Based Results

(Pre-K–5) Exhibitor Workshop

Elementary learners need a number line for powerful concepts like multiples, regrouping, making change, elapsed time, rounding, factoring, and fractions! You will be amazed by Kim Sutton’s unique strategies for K–5 and ready for action on Monday morning using the most important visual!

Creative Mathematics
Arcata, California

Tango (Rio)

99

Developing Mathematical Concepts and Oral Language Strategies for Primary Students

(Pre-K–2) Gallery Workshop

Learn research-based strategies to help students in the primary grades develop oral language skills and build conceptual understanding. Experience hands-on manipulative activities and games. Children’s literature will illustrate how math concepts may be applied in real-world situations.

Susie Whisnant
Math Teachers Press, Minneapolis, Minnesota

Caryl Pierson
Math Teachers Press, Minneapolis, Minnesota

Amazon R/S/T (Rio)
2:30 P.M.—4:00 P.M.

100
Get Your Math Tool Box Together for Pre-K–2
(Pre-K–2) Gallery Workshop
Join us for this make-and-take math tool box session!

Kacey Edgington
WCSD, Reno, Nevada

Jane Bantz
WCSD, Reno, Nevada

101
Tackling the Twelve Problem Situations in Common Core Table 1
(Pre-K–2) Gallery Workshop
We’re expected to give students a variety of problem situations for adding and subtracting. Explore the meaning of each situation through thematic examples, a variety of hands-on and reasoning solution strategies, and creating a set of situation problems. You’ll be ready to teach K.OA-1 and -2, 1.OA-1, and 2.OA-1.

Patty E. Smith
Educational Resources Group, Charleston, South Carolina

102
Which One of These Things Doesn’t Belong?
(Pre-K–2) Gallery Workshop
Explore methods of teaching classifying. Focal points will be use of the question “Which one of these things doesn’t belong?” as well as children’s books and manipulatives (insects, people, etc.) to teach use of objects’ traits to categorize items, number sense, critical-thinking skills, and set concepts.

Michael D. Hardy
Saint Xavier University, Chicago, Illinois

103
It’s the Praxis That Counts
(Pre-K–2, Preservice and In-Service) Gallery Workshop
Explore the importance of using the same practices in professional development as we expect teachers to use in their own classrooms. We will model a session using the Common Core State Standards for Mathematical Practice to increase teachers’ understanding of the complexities of number sense and of effective ways to develop and support it in students.

Mary Hynes-Berry
Erikson Institute, Chicago, Illinois

Rebecca Itzkowich
Erikson Institute, Chicago, Illinois

104
Concept Games for Common Core Mathematical Practices
(3–5) Gallery Workshop
Games are tremendous motivators for students. Participants in this session will be actively involved in concept games that make student thinking visible.

Ted H. Hull
LCM: Leadership, Coaching, Mathematics, Pflugerville, Texas

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

Ruth Harbin Miles
Consultant/Trainer at LCM: Leadership, Coaching, Mathematics, Washington, D.C.

105
The Power of Context: Making Sense of Multiplication and Division
(3–5) Gallery Workshop
How can context help students understand multiplication and division more deeply? Explore the power of context by examining a variety of multiplication and division story problems and connecting the context to computational strategies that support conceptual understanding of operations.

Andria Disney
University of Montana, Missoula
**106**

**Exceptional, Free Online Resources for Teaching Probability**

*(3–8) Gallery Workshop*

NCTM’s Illuminations (http://illuminations.nctm.org) has a treasure trove of excellent resources for the middle grades, including lesson plans, online activities, and math strategy games. Immerse yourself in Illuminations lessons, play an online math strategy game, and discuss how all these resources can be used in your classroom to get students excited about probability!

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

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**107**

**Fifty Types of Pi: An Irrational Exploration**

*(3–8) Gallery Workshop*

Explore a hands-on approach to introducing your students to the concept of pi as an irrational number, part of circle equations, and a ratio. Experience a unique and wide variety of activities to bring pi alive in your classroom, including the celebration of Pi Day (March 14). Handouts, materials, and ready-to-use activities provided.

**Brianne Tuzzolino**
AD Henderson University School, Boca Raton, Florida

**Cecil Phibbs**
AD Henderson University School, Boca Raton, Florida

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**108**

**Potpourri of Integer Activities**

*(3–8) Gallery Workshop*

Make the Common Core State Standards come alive in your classroom. Integers are frequently a challenge to students and teachers. The games and activities that I present are designed to make integers fun and easily understood. Join us to walk the plank, play integer golf, and a loop game and have lots of fun with many other hands-on activities.

**Steve Tiller**
Cashion Public Schools, Oklahoma

**Jan Sands**
KESAM Inc., Oklahoma City, Oklahoma

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**109**

**Using Investigations and Manipulatives in Geometry**

*(6–12) Gallery Workshop*

Use manipulatives such as hinged mirrors, rubber bands, and Patty paper, as well as investigations, to develop geometric concepts. The concepts include similarity and triangle congruence, transformations, central angles and polygons, area and heights of triangles. The activities incorporate the Common Core State Standards for Mathematical Practice.

**Glenda A. Wilkins**
Retired, San Bernardino City USD, California

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**110**

**Developing Combinatorial Reasoning with Engaging Hands-On Activities**

*(9–12) Gallery Workshop*

Solve several problems with combinations (and permutations), some with very surprising results. Then complete two activities that can be used to enhance student learning. The first uses playing cards; the second, dice. Students will become very engaged in the learning process with these activities.

**James R. Matthews**
Siena College, Loudonville, New York

**Jenny K. Tsankova**
Roger Williams University, Bristol, Rhode Island

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**111**

**Applying Interactive Technology to Mathematics**

*(General Interest) Session*

Learn about practical and realistic ways to integrate interactive technologies into mathematics, including interactive whiteboards, mobile applications, software, and free Web-based programs. Technologies content will focus primarily on number operations, algebraic thinking, and algebra.

**Shannon Michelle Stone**
Jefferson County Public Schools, Louisville, Kentucky

**Leah L. Dix**
Jefferson County Public Schools, Louisville, Kentucky
Thursday

3:30 P.M.–4:30 P.M.

**112 Learn↔Reflect Reflection Session**  
(General Interest) Session

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

**Denise Trakas**  
Washoe County School District, K–6 Mathematics Program Coordinator, Reno, Nevada

**Amy Salgo**  
Northwest RPDP Washoe County School District, Reno, Nevada

**Carol Long**  
Southern Nevada Regional Professional Development Program, North Las Vegas

**Jenny Salls**  
Washoe County School District, Reno, Nevada

Palma C/D/G/H (Rio)

**113 Vital Signs for Helping Students Succeed in a Competitive World**  
(General Interest) Session

The M in STEM, mathematics, drives the other three components: science, technology, and engineering. Student “vital signs” can alert leaders to examine which policies provide the greatest impact. I will provide STEM ideas critical to helping states move aggressively to raise expectations and helping students succeed in a competitive world.

**Suzanne Mitchell**  
National Council of Supervisors of Mathematics, Denver, Colorado

Palma C/D/G/H (Rio)

**114 Workshops? Institutes? Conferences? . . . Why Professional Learning Communities?**  
(General Interest) Session

The most common professional development models are workshops, institutes, and conferences. However, a growing interest in more innovative models, such as the professional learning community, has arisen. Come learn how a professional learning community model we instituted in ten middle schools has found success in ushering in change.

**Trey Cox**  
Chandler-Gilbert Community College, Arizona

Coco A/B (Rio)

**115 Improving Number Fluency: A Minute to Win It**  
(Pre-K–2) Session

Games are one of the most effective ways for children to practice number fluency. See how games engage children in a playful yet serious math practice, eliminating the need for tedious pencil-and-paper drills. Explore ideas for assessment using a game format.

**Brenda E. Rubacha**  
Sequoia Pathway Academy, Maricopa, Arizona

Amazon P/Q (Rio)

**116 Ignite All Tiers in an Inclusive Intervention Model**  
(3–5) Session

We increase the likelihood of meeting the needs of all students in a classroom by using frameworks for learning: three-part lessons that use a multisensory approach integrated with instructional technology and correlated with the Common Core State Standards. Our daily objective is to engage, explore, assemble, and challenge. You will receive lessons to adapt.

**Rudy V. Neufeld**  
Thames Valley Schools, London, Canada

**Maria Dufek**  
Clark County, Las Vegas, Nevada

Brasilia 1/4 (Rio)

Access the Conference App for program updates, conference networking, and exhibit info.
117 Reasoning about Fractions: Using Number Lines to Understand Fraction Comparison
(3–8) Session
Explore the big ideas of fraction comparison and quantitative reasoning as well as students’ common misconceptions about these topics and related Common Core State Standards recommendations. Using the number line model and strategies to help build quantitative reasoning, we will focus on helping students reason about and compare fractions.

Nadine Bezuk
San Diego State University, California

118 Middle School Investigation Using NCTM Illuminations
(6–8, Preservice and In-Service) Session
Get involved in some of the investigation activities posted on NCTM’s Illuminations website (and a few other favorite investigations). Try out Barbie Bungee, Equations of Attack, and more! I’ll include connections to the new Common Core State Standards and Standards for Mathematical Practice.

Katie A. Hendrickson
Athens Middle School, Ohio

119 Creating Cramer’s Rule: An Investigation into Solving Systems of Equations
(6–12) Session
Discuss a lesson developed to introduce Cramer’s rule for solving a system of linear equations with two variables to eighth-grade algebra students. We will share both teachers’ and students’ experiences. We will also discuss the importance of making connections among mathematical concepts and ideas for students’ learning of mathematics.

Gorjana Popovic
Illinois Institute of Technology, Chicago
Adrienne Pavek
Conrady Junior High, Hickory Hills, Illinois
Bernadette Skobel
Conrady Junior High, Hickory Hills, Illinois

120 Data, Regression, and Stats, Oh My!
(9–12) Session
Learn ideas to help you integrate statistics across the curriculum. To go along with NCTM’s focus on statistics, experienced AP Statistics teachers will share lessons and activities and clear up some misconceptions in statistics.

Todd J. Sikora
Adlai E. Stevenson High School, Lincolnshire, Illinois

121 Learning Mathematical Concepts through Context with Pictures
(9–12) Session
Now our graphing calculators have pictures. How do we use them in effective ways that promote concepts through context? We will use bridges, fountains, Ferris wheels, and other images to explore function graphs, transformations, parametric relations, conics, regression, area under a curve and more!

John J. Diehl
Retired, Hinsdale Central High School, Illinois

122 Improving Preservice Elementary Teacher Candidates’ Mathematics Lesson Proposals
(Higher Education) Session
New elementary teacher candidates often propose lessons that center on memorizing definitions, formulas, and algorithms. But NCATE/NCTM Standards for initial preparation of math teachers call for a “commitment to learning with understanding.” See examples of candidates’ work as they grow in teaching for understanding.

Linda A. Arnold
Tusculum College, Knoxville, Tennessee
NCTM Introduces MOTO for K–2
A New RtI Digital Series for Kindergarten through Second Grade

Use the books’ active learning tasks to help students who struggle to understand and retain mathematical concepts

Collect all 7 books!
- Clockwise: Learning Time with the MOTO Family
- What Comes Next? Making Patterns with the MOTO Family
- Shapes and Sizes: Learning Geometry with the MOTO Family
- One Foot, Two Feet: Measuring with the MOTO Family
- Everybody Counts: Learning to Count with the MOTO Family
- It All Adds Up! Learning to Add and Subtract with the MOTO Family
- Bits and Pieces: Sorting and Representing Data with the MOTO Family

Books are available on iTunes, Google Play, and Amazon. Also available in Web-based format on the NCTM website.

To learn more about this exciting new series go to www.nctm.org/moto.

Track your students’ progress on Teacher Connect

The Teacher Connect website allows teachers to:
- Track and comment on the progress of each student
- Correlate each chapter of every book to the CCSSM
- Buy a Teacher Code to access Teacher Notes for each page of every book, which guides teachers on how to get the most out of each page and task.
- Access extensive teacher resources such as problem extensions, instructional techniques, and downloadable classroom activity sheets
- Be able to employ effective RtI instructional strategies and tasks

Teacher Connect is available exclusively through NCTM’s website:
www.nctm.org/moto

Visit the NCTM Bookstore to see the MOTO display and look for the daily schedule for MOTO sessions in the Bookstore!
HIGHLIGHTS
New Members and First Timers’ Orientation (Presentation 123)
New and Preservice Teachers Workshop (Presentation 160)
NCTM Board Hot Topic: Embracing the Common Core (Presentation 172)

ICON

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REGISTRATION HOURS
7:00 a.m. – 3:00 p.m.

EXHIBIT AND NETWORKING LOUNGE HOURS
8:00 a.m. – 4:00 p.m.

BOOKSTORE AND MEMBER SHOWCASE HOURS
8:00 a.m. – 4:00 p.m.

FIRE CODE
We have made every attempt to provide adequate seating for participants at the conference, but for your safety and because of fire regulations, only those with seats will be allowed in meeting rooms. To comply with fire codes, we will have to ask persons sitting on the floor or standing to leave the room.
7:15 A.M.–7:45 A.M.

123
New Members and First Timers’ Orientation
(Preservice and In-Service) Session
New to NCTM? Join us to learn how to maximize your membership experience. From journals and online lessons, tools, and activities to networking and career-advancement opportunities, you’ll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.

Trudy Mitchell
Las Vegas Program Committee; bby Publications, San Diego, California

Peg Cagle
Board of Directors, National Council of Teachers of Mathematics; Vanderbilt University, Nashville, Tennessee

8:00 A.M.–9:00 A.M.

124
PRIME2: Mathematics Education Leadership Imperatives
(General Interest) Session
Principles and Indicators for Mathematics Education Leadership (PRIME2) provides clear, research-based guidance on how to raise achievement in mathematics for every student and effectively implement the Common Core State Standards for Mathematics (CCSSM) in every classroom. This agenda includes systemic change in curriculum, instruction, assessment, and professional culture aligned with CCSSM.

Lynn Columba
Lehigh University, Bethlehem, Pennsylvania

Kit Norris
Educational Consultant, Boston, Massachusetts

Suzanne Mitchell
National Council of Supervisors of Mathematics, Denver, Colorado

125
Reengagement: A Close Look at One Formative Assessment Strategy
(General Interest) Session
Reengagement is grounded in the effective and intentional use of student thinking to improve learning. In this session, teachers will explore this strategy and experience a reengagement task. While it is not a familiar strategy it has been inspiring for teachers as they discover that a new stance on assessment can support and advance learning.

Valerie Lynn Mills
Oakland Schools, Waterford, Michigan

126
The Illustrative Mathematics Project
(General Interest) Session
Illustrative Mathematics was started as a way to bring meaning and clarity to the Common Core State Standards by illustrating them with mathematical tasks. We will look at current progress as well as long-term goals and plans for this project.

Kristin Umland
University of New Mexico, Albuquerque

Ellen Whitesides
Institute for Mathematics and Education, University of Arizona, Tucson

127
Problem Solving: Don’t Remove the Thinking!
(Pre-K–5) Session
Primary-age children often rely on the grab-numbers-and-compute strategy to solve story problems, which does not promote mathematical understanding. We’ll share instructional strategies teachers have employed to turn K–grade 2 students from problem performers into problem solvers.

Tara D. Zuspan
Lincoln Public Schools, Nebraska

Susie K. Katt
Lincoln Public Schools, Nebraska
8:00 A.M.–9:00 A.M.

128 Standards vs. Conceptual Understanding
(Pre-K–5) Session
Explore how to address the Common Core State Standards for Mathematical Practice and the content standards, as well as how to balance them with the conceptual understanding that needs to take place developmentally.
Craig Willmore

Brasilia 5 (Rio)

129 Real-World Reasoning in the Middle School Mathematics Classroom
(3–8) Session
The Common Core State Standards call for students to reason and construct arguments. We’ll show you research on teachers' implementation of real-world reasoning and problem solving in the middle school classroom. We’ll also present authentic applications to classroom practice and sample lesson plans in the areas of graphing and data analysis.
Diana L. Moss
University of Nevada, Reno
Heather Glynn Crawford-Ferre
University of Nevada, Reno
Stephanie Vega
University of Nevada, Reno

Palma A/B/E/F (Rio)

130 Using Powerful Openers and Closers to Facilitate Effective Discourse
(3–8) Session
Research shows that well-designed openers and closers lead to higher levels of student engagement and achievement. Learn how they can also be a platform for addressing the Common Core State Standards for Mathematical Practice. Leave this session with a variety of opener and closer styles that incorporate manipulatives, good questioning, and technology that you can use immediately.
Meagan B. Susi
Educational Consultant, Middletown, Connecticut
Robyn Silbey
Robyn Silbey Professional Development, Gaithersburg, Maryland

Amazon N/O (Rio)

131 Use Engaging Problem-Solving Tasks and Math Projects
(6–8) Session
Encourage students to collaborate using a variety of math problems and tasks. Learn how to get students to listen to each other and share their understanding of math problems. We’ll share ideas about how to ask good questions to promote critical thinking and to motivate students. We’ll include application problems and creative projects that are relevant to middle school students.
Edna F. Bazik
National Louis University, Chicago, Illinois
Elizabeth Masslich
Cedarburg High School, Wisconsin

Amazon D/E (Rio)

Join us at the
2014 Regional Conferences
Indianapolis, Indiana • October 29–31
Richmond, Virginia • November 12–14
Houston, Texas • November 19–21
8:00 A.M.—9:00 A.M.

132
Reclaiming Lost Ground: Research-Based Interventions for Underprepared Algebra Students
(6–12) Session
Today, all students must succeed in algebra, including those who are 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 succeed.

Diane J. Briars
Diane J. Briars, Pittsburgh, Pennsylvania

James Lynn
University of Illinois at Chicago

Brasilia 1/4 (Rio)

133
The Mathematics of Angry Birds
(9–12) Session
Angry Birds is an engaging game, but also a rich source of mathematical learning. We will use it to explore initial velocities, angles, parametric equations, tangents, and regression. We will be using screen captures and video tracking to actually plot and model paths.

Ismael Zamora
Hinsdale South High School, Darien, Illinois

John J. Diehl
Retired, Hinsdale Central High School, Illinois

Conga (Rio)

134
Resequencing Calculus: An Early Multivariate Approach
(9–12, Higher Education) Session
The Resequencing Calculus project is ordering topics so that content needed for upper-level STEM courses is moved to the first two courses of the three-course sequence. Discuss piloting efforts, next steps, and transfer and AP credit challenges. (Support provided by NSF grants DUE 1225566 and 0836676.)

Joe A. Stickles
Millikin University, Decatur, Illinois

Coco A/B (Rio)

135
Preparing for Your Institution’s NCATE Program Review
(Higher Education, Preservice and In-Service) Session
Get the latest information on preparing mathematics education program reports for NCATE accreditation based on the 2012 NCTM NCATE Standards. Learn how to navigate the NCATE/CAEP program review process and prepare required documents under the new standards. Explore new report templates, new program standards, and learn how to avoid mistakes.

Judy O’Neal
National Council of Teachers of Mathematics, Reston, Virginia

Jaguar (Rio)

135.1 ew
Meeting the Practice Standards Using Models from Math in Context®
(3–8) Exhibitor Workshop
The CCSSM Practice Standards ask students to “model with mathematics.” Students are expected to identify quantities and map relationships using math tools including diagrams, two-way tables, and formulas. Participants will explore models from MiC that can be used to analyze situations and draw conclusions, and will receive a free Number Tools® workbook.

Encyclopaedia Britannica
Chicago, Illinois

Amazon B/C (Rio)

135.2 ew
Pearson High School Math and the Common Core
(9–12) Exhibitor Workshop
Learn how this blended print and digital curriculum (grades 9–12) not only engages students but also infuses Common Core Standards and Mathematical Practices throughout each lesson to ensure all learners acquire the critical knowledge and skills necessary to succeed in college and in their careers.

Pearson
Upper Saddle River, New Jersey

Tango (Rio)
8:30 A.M.–10:00 A.M.

**136**
**Reaching All Learners in the Mathematics Classroom**
(Pre-K–2) Gallery Workshop
How do you reach every student during a math lesson? When do you use direct instruction? Partners or small groups? This interactive workshop will include hands-on activities that have been used in the classroom, with suggestions for differentiated instruction. All activities incorporate children’s books.

_Donna J. Long_
Houghton Mifflin Harcourt, Boston, Massachusetts

**137**
**Shuffling into Math**
(Pre-K–2) Gallery Workshop
Play card, dice, and domino games that help your primary students achieve success in numeration, operations, place value, patterning, and graphing. Explore excellent take-home ideas, game boards, student samples, and more to help you teach the Common Core State Standards. These activities are great for regular, English as a second language, Title I, and after-school programs.

_Allison Riddle_
Davis Unified School District, Salt Lake City, Utah

**138**
**Teaching and Reinforcing Fact Fluency through Games**
(Pre-K–2) Gallery Workshop
Learn about fact fluency, grade-level expectations, and how to build fact fluency with students. The ability to recall basic math facts fluently is necessary for students to attain higher-order math skills. Practice by playing many games built to create and reinforce fact fluency.

_Misha Quarles_
Dysart Unified School District, Surprise, Arizona

**139**
**Math Matters: Games, Puzzles, and Diversions to Stimulate Reasoning**
(Pre-K–5) Gallery Workshop
Bring excitement to your classroom and stimulate your students to think using games designed to integrate problem solving, analyzing, and basic skill development. In this hands-on session, you will play games you can use in your classroom tomorrow. All these experiences will develop your students’ inductive reasoning in number, geometry, and probability.

_John Hinton_
Long Island University (CW Post) Campus, Brookville, New York

_Lisa M. Hall_
Lakeside Elementary School, Richmond, Virginia

**140**
**Waves of Change**
(Pre-K–5) Gallery Workshop
New instructional practices require teachers to respond to a broader range of academic needs. How can we possibly reach all our students when they are academically diverse, have special needs, and are English language learners? One answer? Use fun math games! You will receive several ready-to-use games.

_MaryAlice Hatchett_
Texas Council of Teachers of Mathematics, Austin

**141**
**Games That Make You Think**
(3–5) Gallery Workshop
Play newly developed games that take it to the next level—targeting grades 3–5 Common Core State Standards for Number and Operations—and foster the use of the Standards for Mathematical Practice. Learn to differentiate instruction to support and challenge the full range of learners within the framework of a game and the follow-up class discussion. Walk away with ideas and game pieces.

_Gail E. Gerdemann_
Oregon State University, Corvallis

_Kathleen Barta_
Teacher to Teacher Publications, Lake Oswego, Oregon
142
**NASA: Distance–Rate–Time Mathematics in Air Traffic Control**
(6–8) Gallery Workshop
NASA Smart Skies: predict and solve real-world air traffic conflicts using a hands-on experiment, web-based simulator, print-based instructional materials, and mobile app. Students apply problem-solving and proportional-reasoning skills as they explore distance–rate–time relationships at the algebra and prealgebra levels. Materials are free online.

*Rebecca Green*
NASA, Moffett Field, California

*Gregory Condon*
NASA, Moffett Field, California

143
**Solving Ratio Problems Using Methods Specified in CCSSM**
(6–8) Gallery Workshop
The Common Core State Standards for Mathematics (CCSSM) 6.RP.3 requires students to reason about ratio problems using methods such as "tables of equivalent ratios, tape diagrams, double number line diagrams, or equations." How can these tools be used to promote students’ understanding of how to solve ratio problems? We will explore this question while solving ratio problems using these methods.

*Karen R. Heinz*
Rowan University, Glassboro, New Jersey

144
**Common Core: Same Standards, New Name—Or Is It?**
(6–12) Gallery Workshop
This time it’s different. Come learn how teaching the standards has changed. We will discuss how to include the Common Core State Standards for Mathematical Practice in your content to improve student achievement.

*Jodi Cunningham*
Valley High School, Las Vegas, Nevada

145
**NASA’s Supernova Mathematics**
(6–12) Gallery Workshop
Find out what a flip book and a supernova have in common. Then, apply your knowledge to solve a supernova mystery. Take activities back to your classroom to help teach your students about proportional reasoning, linear models, measurement, and interdisciplinary connections. Free NASA materials!

*Janet Lynne Moore*
NASA/Illinois State University, Bloomington

146
**Tools for Addressing the Common Core Mathematical Practices**
(6–12) Gallery Workshop
The Common Core State Standards for Mathematical Practice emphasize conceptual thinking and mathematical reasoning. In other words, math activity sheets simply will not prepare students for success. I will provide you with experience using practical, classroom-ready tools that can be used at all grade levels to make the shift from repetition to reasoning.

*John Brunsting*
Silver Strong and Associates, Ho Ho Kus, New Jersey

147
**Improving Secondary Mathematics Teacher Preparation: The MTE-Partnership**
(Preservice and In-Service) Gallery Workshop
The Common Core State Standards (CCSS) provide a common vision for secondary mathematics across the states, opening up new possibilities for collaboration. The Mathematics Teacher Education (MTE) Partnership is a national partnership of universities and K–12 districts with the goal of ensuring that secondary mathematics teacher candidates are prepared to meet the requirements of CCSS.

*W. Gary Martin*
Auburn University, Alabama

*Marilyn E. Strutchens*
Auburn University, Alabama
8:30 A.M.–10:00 A.M.

148
Access to Real Math for Students with Severe Disabilities
(General Interest) Session

Access to grade-level standards for students with severe disabilities raised expectations. How have higher expectations increased achievement and changed the delivery of math instruction? As an experienced educator, I will show you how proven math methodologies plus accessibility help educators get serious about math instruction for students with the most to gain.

Karen Ross-Brown
AbleNet, Inc., Roseville, Minnesota

Coco A/B (Rio)

151
Transferring Literacy Teaching to Mathematics Teaching
(Pre-K–2) Session

Are you a pre-K–grade 2 teacher who loves teaching reading but hasn’t fallen in love with teaching math? We will connect four qualities of literacy teaching to mathematics teaching.

Jane Bantz
WCSD, Reno, Nevada

Kacey Edgington
WCSD, Reno, Nevada

Brasilia 2 (Rio)

9:30 A.M.–10:30 A.M.

149
Inquiry-Based Learning
(General Interest) Session

What does inquiry-based learning (IBL) look like? How do teachers implement it? Answers to these questions, including specific examples, will be discussed. I’ll also share a model for IBL within mathematics courses for elementary school teachers and anecdotal evidence for using this model to increase conceptual understanding.

Jessica Audet de la Cruz
Assumption College, Worcester, Massachusetts

Amazon N/O (Rio)

150
Mathematical Language: The Core for Mastering Concepts
(Pre-K–2) Session

Supporting children to develop deep understanding of mathematical concepts from all strands requires us to appropriately model the language of mathematics. Use language as the bridge for support with stories, concrete resources, and pictorial representations. Explore language stages to facilitate meaning making for mathematical concepts.

Rosemary Reuille Irons
Queensland University of Technology, Brisbane, Australia

Conga A/B (Rio)

152
From STEM to STEAM: Arts and Creativity in Mathematics
(Pre-K–5) Session

Young students need to be excited about math. They need to be fully engaged in creating math models, making up math stories, doodling and sketching, and using multiple means of expression to think about math. Let’s work together to get the arts—artistic expression and creative thinking—into our everyday math instruction.

Stuart J. Murphy
Independent Author, Boston, Massachusetts

Amazon F (Rio)

153
Aligning Assessments to CCSSM
(3–5) Session

I will focus on formative and summative assessments that align to the Common Core State Standards for Mathematics (CCSSM) for grades 3–5. Dig deeper into how to assess the depth and breadth of the standards to determine mastery of a skill.

Tracy Gruber
Nevada Department of Education, Carson City

Palma A/B/E/F (Rio)

Stay connected!
Check us out on Twitter and Facebook.
9:30 A.M.–10:30 A.M.

154
(3–8) Session
We will explore strategies for creating rich mathematical conversations around pictures designed to embody math concepts. You will see the potential of using pictures to evoke rich mathematical thinking for all students in your classroom. I will share examples to show the power of the strategy and show how to create visuals.

Amy L. Lin
Halton District School Board, Burlington, Canada

Brasilia 1/4 (Rio)

155
Making Memories in the Math Classroom
(3–8) Session
I will present math magic activities in a spirit of play, emphasizing mathematics’s beauty and fun. Learn hands-on activities for immediate classroom use to enhance the NCTM Standards and motivate students to become active learners. Come prepared to have fun.

Charles Sonenshein
Wright State University, Dayton, Ohio

Brasilia 5 (Rio)

156
Using Tasks to Enrich Learning for Gifted Students
(6–12) Session
Gifted students learn new mathematical concepts quickly, often faster than their fellow classmates. Come see how a mathematical task can be used to deepen the learning of gifted students and keep them engaged while other students have time to master the concepts.

Sharon Christensen
Alpine School District, American Fork, Utah

Valerie Chambers
Alpine School District, American Fork, Utah

Amazon P/Q (Rio)

157
The Effective Use of Dynamic Geometry Software
(9–12) Session
A group of grades 9–12 geometry teachers learned to use dynamic geometry (DG) software effectively in their classrooms after participating in professional development sponsored by an NSF-funded project. We will discuss examples of how they engaged students in experimenting and forming, testing, and proving conjectures with DG tools.

Zhonghong Jiang
Texas State University, San Marcos

Amazon D/E (Rio)

158
Transitioning to the Common Core State Standards
(9–12) Session
I will focus on the Common Core State Standards for Mathematics, their coherence across grade levels, and rigor in concepts, procedure, and application. I will also examine the Common Core changes to classroom content instruction, evaluate consequences of the process, apply the Standards for Mathematical Practice, and discuss high school conceptual themes.

Robert D. Cherry
Professional Development Alliance, Joliet, Illinois

Palma C/D/G/H (Rio)

159
Barcodes and Matrices: What They Have in Common
(9–12, Higher Education) Session
Explore barcode reading, an application dependent on matrix mathematics and technology. Matrices are required to handle large data sets. I will emphasize experiential learning opportunities for students and cross-disciplinary problem-solving methods.

Susan G. Helser
Mott Community College, North Branch, Michigan

Jaguar (Rio)
9:30 A.M.–10:30 A.M.

159.1 FV
Do Story Problems Scare the Daylights Out of Your Students?
(3–8) Exhibitor Workshop
For many students, story problems set off a panic alarm: How does one translate an abstract story problem into an even more abstract algebraic equation? Attend this session to learn how Hands-On Equations® enables students to represent and solve story problems visually using game pieces, including age and consecutive number problems.
Borenson and Associates, Inc
Allentown, Pennsylvania

159.2 FV
Making Secondary Math Journals Fold-tastic!
(6–12) Exhibitor Workshop
Cut, fold, and more, in this hands-on workshop as you transform basic classroom materials into Notebook Foldables that are sure to make your student math journals fold-tastic. Depart with a mini-composition book made on site that is filled with immediately usable ideas.
Dinah-Might Adventures
San Antonio, Texas

10:30 A.M.–12:00 P.M.

160
New and Preservice Teachers Workshop
(General Interest) Session
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

161
Diving to Deeper Levels of Math Talk in K–2 Classrooms
(Pre-K–2) Gallery Workshop
Student discourse must be academically productive to move students to a deeper understanding of mathematical concepts. Observe students talking about math, explore levels of math talk, and learn strategies that encourage more effective instructional discussions in K–2 classrooms.
Susie K. Katt
Lincoln Public Schools, Nebraska
Tara D. Zuspan
Lincoln Public Schools, Nebraska

Do Word Problems Scare the Daylights Out of Your Students?
Friday, October 25
9:30 a.m. - 10:30 a.m.
Amazon BC

A class set of Hands-On Equations will be raffled at this session!
Cannot attend? Visit us at Booth 509.
10:30 A.M.–12:00 P.M.

162

Addressing Common Core State Standards through Literature and Technology
(Pre-K–2, Preservice and In-Service) Gallery Workshop

Explore ways to engage students through literature- and technology-infused activities. Work through field-tested activities based on popular children’s literature. All activities directly address the Common Core State Standards.

Adam Goldberg
Southern Connecticut State University, New Haven

163

Three Great Tasks Integrate Mathematical Practices and Common Core Content
(Pre-K–5) Gallery Workshop

Explore tasks to help our youngest math learners attack the mathematical practices and integrate Common Core Content Standards. Two years of implementation have polished these tasks. Leave with three tasks per grade level, rubrics, teacher evaluation forms, directions, and professional learning community implementation hints.

Jeanne M. Chmelik
Glen Ellyn SD #41, Illinois

164

Getting Real about Fractions
(3–5) Gallery Workshop

Are fractions really numbers? Do they work like “regular numbers”? These are questions students ask—learn how number lines and manipulatives help students figure out the truth about fractions. They’re really numbers, and they make sense! Examine various models for understanding fractions and strategies for teaching operations with fractions.

Sara D. Moore
ETA hand2mind, Vernon Hills, Illinois

165

Making Our Base-Ten System Concrete and Comprehensible
(3–5, Preservice and In-Service) Gallery Workshop

The foundation of mathematics is a conceptual understanding of our base-ten system. Such groundwork includes identifying numerals used in base ten, connecting symbolic representations of the number ten with concrete representations, and switching bases to more fully understand the challenges students face in the classroom.

Stacy K. (Keller) Boote
University of North Florida, Jacksonville

166

Exploring Algebraic Reasoning in a Geometric Context
(3–8) Gallery Workshop

Come and explore how geometry-based models can help students develop algebraic reasoning as defined by patterns, equality, and change.

Kay A. Wohlhuter
University of Minnesota, Duluth

167

Visual Algebra: Concept Development Using Pattern Blocks
(3–8) Gallery Workshop

With the current focus on testing, using manipulatives for concept development too often disappears at the intermediate level. In this hands-on session, learn how to use pattern blocks to explore, develop, and display algebraic thinking for fourth-, fifth-, and sixth-grade students.

Pat Ballew
High Flyers Educational Enrichment, Los Angeles, California

Thank you to all of the volunteers who have helped make this conference a success!
10:30 A.M.–12:00 P.M.

168
Survival-Master Math: Solving Engineering Challenges through Gaming and Construction
(6–8) Gallery Workshop
Play with the NSF-funded Survival Master video game for PC, employing algebra, measurement, and geometry while applying the heat flow formula to build an Arctic emergency shelter. Then translate concepts from game to workshop by constructing a scale shelter and testing its ability to bear loads and contain heat. Depart with game and lesson materials!
Camille McCue
Pea Brain Education, Las Vegas, Nevada

169
STEM and CCSS: How Do Science and Math Go Together?
(6–12) Gallery Workshop
Learn ways to incorporate the Common Core State Standards (CCSS) by team teaching with your science colleagues. This hands-on session includes activities and labs for you to teach math through interdisciplinary concepts. We will explore the STEM content areas and present ideas to connect through novels with English language arts, social studies, and foreign language.
Carrie Herron
Galway Central School, New York
Jim Reynolds
Galway Central School, New York

170
Breaking Tradition: Transforming Teaching Using Common Core and Integrated Pathways
(9–12) Gallery Workshop
Have you ever heard the complaint that algebra 2 students show up unprepared? Find out how the state of Utah has transitioned to the integrated pathway model, and hear why teachers are embracing the change. We will share strategies, progressions, and resources for successful implementation.
Joleigh Honey
Salt Lake City School District, Utah
Barbara B. Kuehl
Salt Lake City School District, Utah

11:00 A.M.–12:00 P.M.

171
Let’s Give Them Something to Talk About
(9–12) Gallery Workshop
The Common Core State Standards put forth a vision of classrooms transformed into learning communities that are a collective effort to create meaning and make connections. We will offer strategies for changing class discussions from teacher-led question-and-answer sessions to mathematical discourse in the context of learning about functions.
Barbara B. Kuehl
Salt Lake City School District, Utah
Travis Lemon
Alpine School District, American Fork, Utah

172
NCTM Board Hot Topic: Embracing the Common Core: An Opportunity, Not a Burden
(General Interest) Session
The Common Core presents an unprecedented opportunity for mathematics education in this country. Participants will have an opportunity to learn about NCTM’s efforts and to share their own successes and challenges. It is up to us to take ownership and make it happen!
Peg Cagle
Board of Directors, National Council of Teachers of Mathematics; Vanderbilt University, Nashville, Tennessee
Linda M. Gojak
President, National Council of Teachers of Mathematics; John Carroll University, University Heights, Ohio

173
The Art of Teaching Mathematics!
(General Interest) Session
Come be inspired! Student motivation is not a cause but a consequence of achievement. The “art” of teaching mathematics lies within a keen understanding of your own disposition toward either a fixed or growth mindset about mathematics learning and effective lesson design tools.
Timothy Kanold
Loyola University, Chicago, Illinois
174 Exploring the Common Core
(Pre-K–5) Session
Experience engaging activities to explore how the Common Core State Standards will build deeper mathematical understanding for the students in your classroom. Discover how to incorporate the eight Standards for Mathematical Practice into everyday classroom instruction.

Eldean Whimpey
Pearson, Chandler, Arizona

Brasilia 5 (Rio)

175 Reaching beyond the Classroom to Promote Mathematics Understanding
(Pre-K–5) Session
See how to organize, plan, and implement two math programs that extend mathematics beyond the walls of K–grade 5 classrooms. I will share resources, examples, and ideas to create a family math night and math club. Both programs are standards based and facilitated by teacher candidates.

Beth A. Moore
Franklin College of Indiana

Amazon D/E (Rio)

176 Mathematical Problem Solving: The Thinking Sport
(3–5) Session
Create a lively math classroom proving mathematical challenges daily. Speak the language of mathematics to ensure that students learn communication and cooperation. Develop a climate of healthy frustration where students keep their minds in motion. Involve all students in meaningful math from starters to independent tasks.

Marcy Cook
Self-employed, Newport Beach, California

Brasilia 2 (Rio)

177 Writing: A Tool to Organize and Clarify Mathematics Concepts
(3–5) Session
Through the powerful tool of writing, students have the opportunity to express their understanding of math concepts in their own words by synthesizing information, organizing and clarifying their thinking, and combining separate ideas into a new whole. Writing helps students with solving problems, identifying patterns, and using precise vocabulary.

Lynn Columba
Lehigh University, Bethlehem, Pennsylvania

Amazon N/O (Rio)

(3–8) Session
What is mathematical inquiry? Are word problems the only choice? The best choice? How does my choice or design of math tasks support my students’ ability to think mathematically and communicate that thinking? What is the value of all this inquiry? So many questions! Come, and join us as we inquire about mathematical inquiry together!

Susan Ann Davidson
Ottawa Catholic School Board, Canada

Palma C/D/G/H (Rio)

179 Yes We Can! Overcoming 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! We will examine the research to explore sources of anxiety in grades 3 to 8 and demonstrate emotional learning tools to calm student fears, take a fresh look at troubling material, and develop positive attitudes.

Jennifer Rising
Council of Presidential Awardees in Mathematics, Chicago, Illinois

Brasilia 1/4 (Rio)

Mingle, explore, and learn in the Exhibit Hall and Networking Lounge!
Great Math at Your Doorstep

Join us in Indianapolis, Richmond, or Houston for NCTM’s 2014 Regional Conferences & Expositions, our signature fall math education events. Sharpen your skills, acquire new techniques, and learn from innovative practitioners and experts in the field. Gain practical solutions to the challenges you face in your classroom, school, or district every day.

- Participate in hands-on workshops and collaborate with like-minded educators.
- Collect free activities to engage and excite your students.
- Explore an exhibit hall packed with excitement, learning, and giveaways.
- Test the latest education resources and learn from industry leaders.

Whether you’re a classroom teacher, administrator, new teacher, or math coach, there’s something for you at NCTM’s Regional Conferences.

Visit www.nctm.org/meetings for up-to-date information and follow us on
**180**
**Writing in Geometry at the Secondary Level**
*(6–12) Session*
Learn how different forms of writing can be infused into geometry lessons and what purposes writing can serve in the geometry classroom. The main points of discussion will address how different types of writing can provide assessment information for both teacher and student.

*Sharon K. O’Kelley*
Francis Marion University, Florence, South Carolina

*Palma A/B/E/F (Rio)*

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**181**
**Using NASA Press Releases to Develop Integrated STEM Lessons**
*(9–12) Session*
NASA press releases, integrated space math problems, and NASA videos bring standards-based learning to life with topics such as habitability, astrobiology, and climate change. Sten Odenwald, SpaceMath@NASA creator, will cofacilitate this session. You’ll receive STEM modules and other resources in a LiveBinder.

*Sharon Bowers*
National Institute of Aerospace/Virginia Beach City Public Schools, Hampton, Virginia

*Sten Odenwald*
National Institute of Aerospace, Hampton, Virginia

*Amazon P/Q (Rio)*

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**182**
**Teachers Employing Applied Mathematics to Engage Students (TEAMES)**
*(9–12, Higher Education) Session*
Learn about the TEAMES project at Claremont Graduate University, an applied mathematics master’s degree for teachers. Explore applied mathematics problems typical of the program, and discuss the relative benefit of an application focus.

*Christopher S. Brownell*
Claremont Graduate University, California

*Ilene Foster*
Claremont Graduate University, California

*Coco A/B (Rio)*

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**183**
**Learning Assistants Become Teachers: Developing Teachers and Leaders**
*(9–12, Preservice and In-Service) Session*
Math students can help slightly younger students learn. Serving as learning assistants, secondary students relearn math in more depth while mentoring other students. We will share good mathematical tasks, including reasoning and sense making, that will increase learning in your secondary math classrooms while encouraging your best students to choose a math-teaching career.

*David Erickson*
The University of Montana, Missoula

*Lee Brown*
Missoula County Public Schools, Montana

*Jaguar (Rio)*

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**183.1**
**Formative Assessment and Hands-On Instruction for RtI and CCSS Success!**
*(General Interest) Exhibitor Workshop*
The Moving with Math Learning Management System is the RtI solution that reaches pre-K–12 students struggling with math and prepares them for success with the CCSS. Assessment and instructional strategies using the C-R-A methodology will be shared to demonstrate how easy Moving with Math makes it to differentiate instruction and reach all students!

*Math Teachers Press, Inc.*
Minneapolis, Minnesota

*Tango (Rio)*

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**183.2**
**The Houghton Mifflin Harcourt Personal Math Trainer (Grades K–12)**
*(3–8) Exhibitor Workshop*
A demonstration of this exciting new digital component that provides adaptive personalized assessment, intervention, and practice. The Personal Math Trainer presented by Tyrone Holmes, National Math Specialist at HMH, includes learning aids to improve the understanding of math concepts including videos, guided examples, and step-by-step solutions.

*Houghton Mifflin Harcourt*
Boston, Massachusetts

*Amazon B/C*
184
Directed Intervention: Build a Community Tutoring and Mentoring Program
(General Interest) Session
Response to intervention (RtI) may require more than the classroom teacher or the most effective cohort group can provide. The Oak Ridge High School math department and some retired teachers and administrators have created a program that invites community members to participate as tutors and mentors within the school to provide one more layer of RtI.

Karla F. Mullins
Oak Ridge Schools, Tennessee
Sandy Christen
Oak Ridge Schools, Tennessee

185
Great Math Lesson = Presidential Award + $10,000
(General Interest) Session
Teachers from the region who have earned a Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) share their experiences as part of an exciting network of educators. These teachers will discuss high-quality lessons and teaching practices. Learn how the PAEMST application process can showcase your effective-teaching talents.

Sandra Trevino
Triangle Coalition, Washington, D.C.
Marilyn Suiter
National Science Foundation, Arlington, Virginia

186
Identifying and Building Common Core Fluencies for Mathematics
(General Interest) Session
To become twenty-first-century learners and thinkers, students must see the connections between arithmetic and algebra. I will focus on building foundational fluencies so that struggling students can leverage fact knowledge, deepen understanding of fundamental concepts, and feel prepared for the more rigorous curriculum they will face.

Jan Scott
Scholastic Inc., New York, New York

187
Connecting Tactile and Tablet Technology for Early Math Learners
(Pre-K–2) Session
Students who receive daily opportunities to work with, play with, and investigate numbers grow in mathematical thinking, confidence, and enthusiasm. Learn how a variety of virtual manipulatives used on touchscreen tablets builds conceptual understanding and fluency in number sense, place value, and operations for young children.

John L. Schacter
San Jose State University, California

188
Number Lines: A Gift from CCSSM
(3–5) Session
The Common Core State Standards for Mathematics (CCSSM) emphasize the number line as it connects components of our number system. The same number line serves as a valuable problem-solving tool with the additional benefit of making students’ thinking visible. Come join us in this interactive session featuring activities to use in your classroom.

Kit Norris
Educational Consultant, Southborough, Massachusetts

189
Understanding the Equals Sign = Algebraic Success
(3–8, Research) Session
Many students with math difficulties enter their first-year algebra course with an inadequate understanding of fundamental topics necessary to develop a coherent, conceptual understanding of algebra. I will present results from a study on the effects of an intervention focused on equality and equations for students with math difficulties.

Jason A. Miller
Anne Arundel County Public Schools, Annapolis, Maryland
12:30 P.M.–1:30 P.M.

190
Visual Vocabulary: Are They Getting the Picture?
(3–8) Session
Your students seem to understand math concepts during hands-on activities but don’t test well. Is vocabulary the problem? Math terms with multiple meanings could be muddying the waters. Learn how using powerful visuals, mnemonics, and easy strategies to intentionally focus on vocabulary during math instruction can make a huge difference!

Sandra White
Independent consultant–Retired Teacher, Shallowater ISD, Texas

Theresa Star Tefertiller
Independent Consultant–Retired Teacher, Klein, Texas

191
Direct Variation Is Not a Slippery Slope
(6–8) Session
We will present a series of carefully designed activities that help students make sense of slope as a constant rate of change. We will also make the connection between slope and direct variation. Applications discussed include skate ramps, TV screens, and protein shakes, as well as inverse variation.

Laurie Boswell
The Riverside School, Lyndonville, Vermont

192
From Arithmetic to Algebra: An Interactive Bulletin Board
(6–8) Session
Research shows that students often struggle with critical topics such as operations with fractions, variable expressions, and integers as they move from arithmetic to algebra. I will introduce the use of a daily discussion bulletin board that enables students to develop a deep understanding of these critical concepts.

Andy Clark
Retired, Portland Public Schools, Oregon

193
High-Leverage Actions Ensure All Your Students Are Common Core Ready
(6–12) Session
What are the most important actions to take now to ensure that all your students are prepared for the 2015 Common Core State Standards (CCSS) assessments? I will highlight key content and mathematical practices that students need to know and demonstrate, along with research-based instruction and assessment practices and strategies to build students’ proficiency in both.

Diane J. Briars
President-elect, National Council of Teachers of Mathematics; Independent Consultant, Pittsburgh, Pennsylvania

194
Differentiated Response to Learning CCSS Mathematics
(9–12) Session
What is needed to implement the Common Core State Standards (CCSS) to ensure learning for all students? See how one high school district implements required response to intervention and creates a differentiated response to learning algebra to meet the needs of all students. You will walk away with multiple-entry point tasks and assessment strategies that provide access to content.

Mona Toncheff
Phoenix Union High School District, Arizona

195
Engaging Your Math Students via Technology
(Higher Education, Preservice and In-Service) Session
Engage your students in math class via technology, including various Web 2.0 tools and social media. Enhance class discussions with Twitter, increase learning time via screencasts and voice threads, and engage students with collaborative tools like Poll Everywhere. Come learn how to use technology in your class!

Diana S. Perdue
Rimwe Educational Resources LLC, Petersburg, Virginia
12:30 P.M.–1:30 P.M.

195.1 CW
Conquer Times Tables in ONLY 3 WEEKS—Guaranteed!
(3–8) Exhibitor Workshop
Conquer Times Tables in ONLY 3 WEEKS—Guaranteed! If class average isn’t 90% on final test—100% refund. Research-based—MULTI-SENSORY—all four learning styles—for ALL students. No training! MULTI-SENSORY sister products to add, subtract, divide, and do ClockWise fractions and equivalency. More information at www.rhymesntimes.com or www.clockwisemath.com and at 888-684-6376.

Rhymes ‘n’ Times
Lewisville, Texas

Tango (Rio)

195.2 CW
Implementing the CCSS Integrated Pathway for High School Mathematics
(9–12) Exhibitor Workshop
Review resources that support the Common Core Integrated Pathway for high school mathematics. Discuss strategies for the transition from traditional instruction to a problem-based model of teaching and learning. Explore activities that address the eight Mathematical Practices. Participants will receive sample materials to try in their classrooms.

Walch Education
Portland, Maine

Amazon B/C (Rio)

12:30 P.M.–2:00 P.M.

196
Engaging Students in Number Sense, Geometry, Problem Solving, Reasoning, and Discourse
(Pre-K–5) Gallery Workshop
Explore strategies, including use of manipulatives, to develop number sense, place value, estimation, geometry, and problem solving. See the power of mathematical discourse to develop concepts, reasoning, and mathematics vocabulary. Experience hands-on activities.

Donna L. Knoell
Self, Shawnee Mission, Kansas

Amazon R/S/T (Rio)

197
Four Types of Addition Facts That Help Develop All Others
(Pre-K–5) Gallery Workshop
Four types of addition facts can help students develop fluency with all their addition facts: doubles, +0, make a 10, and 10 + something. Explore activities that build these four types of facts as well as connections to all other addition facts.

Christina Tondevold
Mathematically Minded, Orofino, Idaho

Brasilia 3 (Rio)

198
Hands-On Approach to Teaching Decimal and Fraction Concepts
(3–5) Gallery Workshop
Are your students having a hard time understanding rational numbers? Come learn some hands-on activities that will increase your students’ understanding of rational numbers. We will be using number lines, cards, and dice to explore ways to build an understanding of decimals and fractions.

Wendy J. West
Fairfax County Public Schools , Warrenton, Virginia

Miranda 7/8 (Rio)

199
Moving Forward with Metric
(3–8) Gallery Workshop
Milligrams of medicine, 5K races, 2-liter soft drinks. Metric is here! Learn methods to teach and see the metric system. Hands-on. Meet standards. Classroom activities aligned with Common Core State Standards. Have fun! Handouts and materials provided.

Donna L. Monck
Rock Christian Academy, Easton, Pennsylvania

Tropical E/F/G/H (Rio)
12:30 P.M.–2:00 P.M.

200
Now Serving: Literature and Mathematical Practices at the Math Factory
(3–8) Gallery Workshop
Join us at the math factory for a delicious mathematical treat that blends imagination, literature, and all the Common Core State Standards for Mathematical Practice into whimsical, hands-on activities ready to be served in the classroom. Characters and themes from R. Dahl’s Charlie and the Chocolate Factory are ingredients for inspiration.

Donna Christy
Rhode Island College, Providence

Christine Payson
North Cumberland Middle School, Rhode Island

201
Math Snacks: Teach the Mathematics Practices Using Animations and Games
(6–8) Gallery Workshop
Math Snacks are free animations and games developed with support from the National Science Foundation to teach middle-level math conceptually. We will demonstrate how the animations and games can be used with hands-on classroom activities and written work to develop student understanding of ratio, proportion, number line, coordinate plane, number sense, and scale factor.

Karen M. Trujillo
New Mexico State University, Las Cruces

Kerry McKee
New Mexico State University, Las Cruces

Valeria Holguit
New Mexico State University, Las Cruces

202
What Does It Mean to Be Human?
(6–8) Gallery Workshop
How do we keep middle school children interested in math and science? We let them play with robots! Students read the book The Adoration of Jenna Fox and discuss in math and science classes what it means to be human. In small groups, the students then help a robot they create navigate through a coordinate plane with obstacles.

Daniel Lawrence Fisher
Berkeley Preparatory School, Tampa, Florida

Nicole Ackerson
Berkeley Preparatory School, Tampa, Florida

203
The Golden Ratio in the Human Body
(6–12) Gallery Workshop
We will use measuring tapes to estimate the length of various body parts and submit our findings via classroom navigator system. The data will be aggregated and returned using the same system. We will analyze slope and line of best fit to find the golden ratio and then look at examples in the real world.

Deobra Solomon
Retired Teacher, Reno, Nevada

204
Algebra 1 and 2 Activities from Automotive, Manufacturing, and Construction
(9–12) Gallery Workshop
Participate in and receive engaging hands-on classroom activities spanning many career paths. These activities highlight the Common Core State Standards for Mathematical Practice and cover math topics such as linear equations, systems of equations, quadratics, and exponents. See how project-based activities can increase learning and provide relevance.

Tom W. Moore
Thompson R2J Schools, Loveland, Colorado

A big thank you to our exhibitors, sponsors, volunteers, and speakers!
12:30 P.M.–2:00 P.M.

205  Statistical Inference through Simulation
(9–12) Gallery Workshop

Using hands-on techniques and technology to conduct simulations, we will explore concepts of statistical inference. These simulations (randomization tests) provide more flexibility in the hypotheses our students can test and allow them to focus on conceptual understanding and statistical thinking.

Paul L. Myers
Georgia Institute of Technology, Atlanta, Georgia

Tropical A/B/C/D (Rio)

206  Using Super Mario with Falling Objects and Quadratics
(9–12, Preservice and In-Service) Gallery Workshop

Work on a series of problems that model the motion of falling objects using the Super Mario character. Mario’s adventures are used to model quadratic systems as well as quadratic-linear systems of equations. We’ll use the graphing calculator as a tool for solving these systems.

Jack Burke
Fiorello H. LaGuardia High School of Music and Art and Performing Arts, New York, New York

Amazon H (Rio)

207  The Art of Problem Posing
(Preservice and In-Service) Gallery Workshop

Problem solving should be at the heart of the mathematics we teach. So math teachers at all levels should use high-level, challenging problems in their teaching as much as possible. But where do these problems come from? We will give you several strategies for creating your own math problems and perhaps change your views about the “typical” math problem!

Brian P. Beaudrie
Northern Arizona University, Flagstaff

Barbara Boschmans
Northern Arizona University, Flagstaff

Amazon I/J (Rio)

2:00 P.M.–3:00 P.M.

208  Differentiating Professional Development in Elementary Mathematics
(General Interest, Research) Session

Every teacher does not need to participate in the same mathematics training! Find out why we should be differentiating our professional development for our teachers, and look at ideas for how to make it happen.

Amy Weber-Salgo
Washoe County School District, Reno, Nevada

Coco A/B (Rio)

209  Get Your Math Class Rockin’
(Pre-K–2) Session

Teach number sense, place value, time, money, counting, shapes, fractions, math facts, skip counting, and so much more, with the power of easy-to-use songs, games, and activities. Join us for a fast-paced session that will add to your students’ understanding of math concepts, help raise test scores, and energize your classroom. Prizes! Handouts!

Ronald J. Brown
Intelli-Tunes, Red Bluff, California

Nancy J. Brown
Intelli-Tunes, Red Bluff, California

Brasilia 1/4 (Rio)

Hear what’s new from Exhibitors—attend an Exhibitor Workshop. Look for the symbol throughout the program book.
210 Patterns: Where Do They Go from Here?  
(Pre-K–5) Session

How does the pattern work we do connect to more sophisticated mathematical ideas? We will explore repeating and growing patterns as a foundation for algebraic thinking and later mathematics, including operations and functions. Come prepared to look at patterns in multiple ways. You may even learn some modular arithmetic!

Kim A. Markworth  
Western Washington University, Bellingham, Washington

211 Reasoning and Proof through Student Discourse  
(3–5) Session

We will look at a fourth-grade classroom where students explore the meaning of key mathematical concepts through conversation, debate, and reasoning. Learn about key social and socio-mathematical norms that support the learning environment. Receive sample lesson plans, and see sample video.

Michele Heron  
Kent State University at Stark, North Canton, Ohio

212 Math Happens When Children Wonder about What They Read  
(3–8) Session

Literature can ignite students’ minds and lead to mathematical understanding. The author of How Much Is a Million? and other books shows how books can inspire children to ask questions and solve problems. He shares impressive student work, including extensions of his books and remarkable efforts to confirm or disprove the author’s math.

David M. Schwartz  
Author, Oakland, California

213 Scaffolding Basic Math Skills for Special Populations  
(3–8) Session

I will show you supplemental differentiated teaching techniques that support basic math skills necessary for student success in math computation. The techniques take into account the needs of struggling students such as English language learners and students with special needs.

Michael S. Padeken  
Clark County School District, Las Vegas, Nevada

214 Fast Facts and Fractions  
(6–8) Session

Four out of three students struggle with fractions! And the other 50 percent struggle with the times tables. See how I helped my intervention students master all fraction operations and master their multiplication facts. This simple approach is ready for immediate implementation. You will receive a comprehensive handout.

Brad S. Fulton  
Enterprise Elementary School District, Redding, California

215 Investigating Geometric Transformations and Congruence  
(6–12) Session

The Common Core State Standards include geometric transformations in understanding geometric congruence and similarity. They are no longer treated as an isolated topic. Let’s explore the connection between transformations, congruence and similarity, and real-world applications of these concepts.

Keith Krone  
Boise State University, Idaho

Gwyneth Hughes  
Boise State University, Idaho
2:00 P.M.–3:00 P.M.

216
STEM Investigations in the High School
(6–12) Session
Come see four STEM investigations that can inspire in-depth student involvement in science, technology, engineering, and mathematics. Learn how these investigations were developed, and explore how you and your students could create more.
David A. Young
Fayetteville Public Schools, Arkansas

Brasil 2 (Rio)

217
Hands-On Individualized Project: From Graphing Lines to Finding Derivative Functions
(9–12, Higher Education) Session
Students begin by creating four unique lines that they will use throughout the project. The project is broken into many parts and allows students to explore linear algebra, discover the family of polynomials, graph rational functions, understand asymptotes, apply limits to infinity and beyond, and understand the definition of the derivative in both forms.
Seth Blum
Manhattan International High School, New York, New York

Jaguar (Rio)

218
SKyTeach at Western Kentucky University: Teacher Preparation for STEM Disciplines
(Higher Education) Session
SKyTeach is an innovative teacher preparation program for science and mathematics majors. Preparation occurs through a field-based model of intensive mentoring and coaching by master teachers to develop exemplary teachers in STEM disciplines. Participate in inquiry-based lesson vignettes that are the hallmark of SKyTeach.
Martha Day
Western Kentucky University, Bowling Green, Kentucky
Les L. Pesterfield
Western Kentucky University, Bowling Green, Kentucky

Amazon N/O (Rio)

2:00 P.M.–3:00 P.M.

219
Pedagogical Judgment and Instructional Choices for Building Effective Mathematics Classrooms
(Preservice and In-Service) Session
Teachers make thousands of instructional choices, big and small, that define students’ learning opportunities. Examine three high-leverage practices of math teachers (management of homework, public record of work to guide mathematical discourse, and assessment and evaluation of and for reasoning and sense making) to become more adept at making the right moves.
Peg Cagle
Board of Directors, National Council of Teachers of Mathematics; Vanderbilt University, Nashville, Tennessee

Conga (Rio)

2:30 P.M.–4:00 P.M.

220
Stages of Early Arithmetic Learning and Struggling Students
(Pre-K–2) Gallery Workshop
Identify the stages young children go through in acquiring early arithmetic learning, and then learn techniques for struggling learners in these stages. Leave with materials to use with students.
Lois A. Williams
Independent Consultant, Scottsville, Virginia

Tropical A/B/C/D (Rio)
Thinking Strategically: Connecting Addition and Subtraction  
(Pre-K–2) Gallery Workshop

By the end of grade 2, students are expected to explain why addition and subtraction strategies work. Three strategies lead students to the connections between the two operations and supply the underlying reasoning to the basic facts. We can extend these to multidigit computation. Let’s arm our students with meaningful strategies.

Rob Nickerson  
ORIGO Education, St. Charles, Missouri

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Camping In: Math Style  
(Pre-K–5) Gallery Workshop

Are you hiking through the world of mathematics looking for great ideas? Join us and camp in math style! Hike to math trail posts (stations), complete rich problems in your camp journal, and earn your camp badges. Fill your backpack with great ideas for the classroom or a family math night. Handouts and s’mores provided!

Kelli Shrewsberry  
Teaching & Learning Collaborative, Columbus, Ohio

Jessica Cahill  
South Western City Schools, Grove City, Ohio

Phyllis Bates  
TLC Consultant, Columbus, Ohio

---

“Let’s Get Physical” with Math on the Floor!  
(3–5) Gallery Workshop

In this very active session, you will see how easy it is to teach math concepts through physical movement on a large 100-square floor grid. I’ll address number patterns, operations, larger numbers, money, and fractions and share tips on how to make your own large floor grid. Bring a camera and come prepared to move through math!

Wendy E. Hill  
Retired Elementary Teacher, Mississauga, Canada

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Modeling Common Denominators with Rectangles, Number Lines, and Smiley Faces  
(3–5) Gallery Workshop

Learn to use rectangles and number lines to model common denominators so that two different denominators can work together on the same whole. These faithful models are friendly to use and accessible to all children. Experience the models, see samples of student work, and take handouts you can use on Monday morning.

Jennifer Wood Synold  
bby Publications at University of West Alabama, Livingston

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CCSSM Progression: Grades 6–8 Expressions and Equations  
(6–8) Gallery Workshop

Build on the Common Core State Standards for Mathematics (CCSSM) progressions from K–grade 5 Operations and Algebraic Thinking to grades 6–8 Expressions and Equations. Use the properties of operations to manipulate algebraic expressions and produce different but equivalent expressions.

Lisa D. Scott  
Lisa Scott Mathematics Education Consulting, Billings, Montana

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Modeling Lessons That Teach Concepts of Linear Functions  
(6–12) Gallery Workshop

Come and model situations designed to increase concept development of and fluency with linear functions. We will discuss links to the Common Core State Standards for expressions, equations, statistics, and functions, as well as the Standards for Mathematical Practice. Receive lesson plans.

Shelley Kriegler  
Center for Mathematics and Teaching, Los Angeles, California
2:30 P.M.—4:00 P.M.

227 Preparing for Calculus throughout the Grades 6–12 Curriculum
(6–12) Gallery Workshop
Explore ways to preview calculus concepts in grades 6 through 12. Use problem-solving and critical thinking skills to preview calculus concepts that are already in your current curriculum. Learn how to preview integrals, derivatives, inflection points, and more.

Terry Walsh
Retired, Loveland, Colorado

230 Forensic Photography: CSI for the Eccentric(ity)
(9–12) Gallery Workshop
Our brain convinces us from experience that a round conference table observed from a distance actually has a circular tabletop. However, in a 2-D photograph taken from that perspective, the perimeter looks elliptical. Finally, a practical use of eccentricity. Learn to use photos forensically to deduce camera angles, lengths, and distances.

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

3:30 P.M.—4:30 P.M.

229 Alternative Assessments in Geometry
(9–12) Gallery Workshop
Definitely not your traditional paper-and-pencil tests. These assessments include a scavenger hunt, photo search, and origami. Content assessed includes the special segments of a triangle with points of concurrency, transformational geometry, and areas of regular and nonregular polygons. Consider bringing your laptop with Geometer Sketchpad.

Janet C. Kagan
Hononegah High School, Rockton, Illinois

232 A Mathematical Carnival
(General Interest) Session
Step right up! Enter the wonderful world of recreational mathematics. I will model enthusiastic teaching and present mathematics in a spirit of play. You will learn activities that enhance the NCTM Standards and motivate students to become active learners. Come prepared to experience the beauty and fun of mathematics.

Charles Sonenshein
Wright State University, Dayton, Ohio
### 233
**Teaching Effectively Using the Standards for Mathematical Practice**

*(General Interest) Session*

What are some ways you can naturally integrate the Standards for Mathematical Practice into the Common Core State Standards and NCTM Process Standards? I will offer insights on how to do this, as well as share strategies from my book *Whole Class Mathematics Discussions: Improving In-Depth Mathematical Thinking and Learning.*

_Teruni Lamberg_
University of Nevada, Reno

_Brasilia 1/4 (Rio)_

### 234
**Gaining Insight into Kindergarteners’ Algebraic Thinking**

*(Pre-K–2) Session*

Learn how symbolic tools and designed artifacts facilitate development of algebraic thinking and sociomathematical authority in young children. Through learning basic mathematics, exploring solutions, investigating physical materials, self-validating, and using symbolic tools and designed artifacts, young children develop algebraic thinking.

_Rupam Saran_
City University of New York, New York

_Brasilia 5 (Rio)_

### 235
**Building a Community of Mathematicians**

*(Pre-K–5) Session*

Learn strategic ways to build a community of mathematicians and establish norms for a positive mathematical environment. I will emphasize the need for inquiry-based instruction as it relates to the Common Core State Standards. Learn various ways of engaging students during math instruction.

_Carla M. Kolodey_
Jefferson County Public Schools, Louisville, Kentucky

_Amazon N/O (Rio)_

### 236
**Developing Mathematical Thinking, Reasoning, Discourse, and Real-Life Problem Solving Proficiency**

*(3–8) Session*

I will discuss the importance of developing effective discourse to build mathematical concepts, reasoning, and vocabulary. We will actively engage in real-life problem solving. I will offer strategies to identify the question, eliminate nonrelevant information, and translate information into a mathematical equation. Handouts provided.

_Donna L. Knoell_
Consultant, Shawnee Mission, Kansas

_Palma A/B/E/F (Rio)_

### 237
**Engaging Real-World Investigations for Skill Development**

*(3–8) Session*

When will I ever use this? Resolve this common question with engaging real-world investigations. We will articulate a four-step approach to math teaching that supports the Common Core State Standards for Mathematical Practice: concrete–representational–abstract–real-world. You will receive sample problems and learn how they are being applied.

_Arjan Khalsa_
Conceptua Math, Petaluma, California

_Lauri Susi_
Conceptua Math, Petaluma, California

_Amazon P/Q (Rio)_

### 238
**Archimedes’ Box**

*(6–8) Session*

Over two thousand years ago, Archimedes created the stomachion or “stomach turner,” a puzzle consisting of fourteen polygons that can be arranged in a twelve-by-twelve square such that all the vertices are integer points. Rather than creating bellyaches, teachers can use it to present and explore topics to increase geometric understanding.

_Don S. Balka_
Saint Mary’s College, Notre Dame, Indiana

_Brasilia 2 (Rio)_
3:30 P.M.—4:30 P.M.

239  
Navigating Ratios and Proportional Relationships in CCSSM  
(6–8) Session  
Learn to navigate the Common Core State Standards for Mathematics (CCSSM) ratios and proportional relationships content standards with a learning trajectory for ratio, proportion, and percent. Use descriptor resources from turnonccmath.net and engage in vertical team discussions of conceptual development and instructional coherence across grades 6–8.

Jennifer Nickell  
North Carolina State University, Raleigh

Alan Maloney  
North Carolina State University, Raleigh

Conga (Rio)

240  
Mathematical Curves in the Real World: Fun(ctional) Learning  
(6–12) Session  
Conic sections, spirals, catenaries, cycloids, fractals, and other mathematical curves will be presented in many different ways (humorous and real). You will see hands-on activities, computer and calculator applications, and free online videos. Focus of talk: connections within mathematics and science. Come learn why there really aren’t any parabolic trajectories on Earth!

Scott D. Oliver  
A. E. Stevenson High School, Lincolnshire, Illinois

Amazon D/E (Rio)

241  
Voting for Better Reasoning in a Math Classroom  
(6–12) Session  
The mathematics of voting is easily approachable by any secondary student, is rich with deep thinking, and offers numerous opportunities for writing and communicating individual thinking. This topic, often overlooked, fits nicely within the Common Core State Standards framework and enhances writing and literacy in the math classroom.

Allen Jacobson  
Davis School District, Farmington, Utah

Palma C/D/Gi/H (Rio)

242  
Computer Gaming: Mathematics Applications to Engage Students  
(9–12, Higher Education) Session  
Using Matlab, we will create computer games that include animation, audio, and video, emphasizing hands-on experiential learning opportunities for students. Explore cross-disciplinary problem-solving methods that combine mathematics and technology.

Susan G. Helser  
Mott Community College, North Branch, Michigan

Coco A/I/B (Rio)

243  
Using Web 2.0 Tools to Enhance Mathematical Thinking  
(Higher Education, Preservice and In-Service) Session  
Web 2.0 technology tools (Facebook, Twitter, blogs, wikis, and journals) can be used to enhance the mathematical thinking and reflection of teacher candidates. We will present strategies for increasing student-to-instructor communication, student-to-student communication, and reflective thinking.

Jennifer Carter McCain  
Morehead State University-Ashland, Kentucky

Sherry Lynn Stultz  
Morehead State University, Kentucky

April D. Miller  
Morehead State University, Kentucky

Jaguar (Rio)

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A list of Partner Affiliates in the conference’s region and the Affiliates-at-Large appears below. To join one of these groups, e-mail the Affiliate contact for membership information. NCTM has more than 200 Affiliates throughout the United States and Canada. For a list of all organizations affiliated with NCTM and information on how to join, please see the Affiliate Directory on the NCTM website.

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About the Host Organization

The Nevada Mathematics Council (NMC) is made up of members from each of the three NCTM regional partner affiliates (Northern Nevada, Southern Nevada and Great Basin Mathematics Councils) across Nevada totaling over 350 members. NMC Board Members are comprised of a minimum of two members of each of the three NCTM regional affiliates, two state mathematics specialists, and two higher education representatives. The Board currently has a total of 16 members. Board meetings for NMC are conducted mostly through phone conferences, but the council does meet twice a year for face-to-face meetings (once in southern Nevada and once in northern Nevada). The face to face meetings occur near the regional mathematics conferences in the state to enable NMC board members to present at the two conferences as well as conduct affiliate business. NMC provides a statewide mathematical perspective whereby ideas, activities and learning about various mathematics initiatives are shared with each representative affiliate.
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Ascend Math® is a research-based instructional resource in which students have been proven to achieve two or more grade level gains in a six-month period. This web-delivered individualized intervention resource identifies skill gaps, prescribes targeted instruction, and motivates students to achieve their maximum performance and potential.

**Bedford, Freeman & Worth & W.H. Freeman & Company**
- **Booth:** 200
- **New York, New York**
- **Ph:** 212-375-7154

Bedford, Freeman & Worth (BFW) Publishers is the most trusted source for innovative high school mathematics resources. We publish the best-selling books and media resources for AP® Statistics and Calculus and for CCSS-based Modeling and Statistics and Probability courses. Please stop by booth #200 in Las Vegas to receive complimentary copies and to see our digital resources demonstrated.

**Big Ideas Learning, LLC**
- **Booth:** 212
- **Erie, Pennsylvania**
- **Ph:** 877-552-7766
- [www.bigideasmath.com](http://www.bigideasmath.com)

Big Ideas Learning, LLC was founded to create instructional materials that provide a coherent math curriculum to support world-class mathematics education. Using the findings of mathematical and pedagogical research, the Big Ideas Math program creators focused on introducing fewer topics at each grade level. The goal of the program is to provide a narrower and deeper course of study that leads students to mastery of each benchmark as they progress from grade to grade.

**Borenson**
- **Booth:** 509
- **Allentown, Pennsylvania**
- **Ph:** 610-398-6908 800-993-6284
- [www.borenson.com](http://www.borenson.com)

Borenson and Associates seeks to make math concepts visual and intuitive for elementary and middle school students. The popular Hands-On Equations program for learning basic algebra has now been used by more than a million students. In addition, since 1990 more than 50,000 teachers of grades 3–8 have attended the popular Making Algebra Child’s Play workshop. Hands-On Equations products are available for the interactive whiteboard and as Android and IOS apps.

**Box Cars & One-Eyed Jacks Inc**
- **Booth:** 409
- **Edmonton, Alberta Canada**
- **Ph:** 866-342-3386
- boxcarsandoneeyedjacks.com

Come visit our booth to find our award winning math game resources. the widest selection of cards, dice, multi-sided dice, dominoes and math game books K–12. All resources are correlated to the Common Core. Award-winning workshops and a team of great consultants. We are doing several workshops at the conference.

**Britannica Digital Learning**
- **Booth:** 417
- **Chicago, Illinois**
- **Ph:** 800-621-3900-7059 800-621-3900-7059
- [www.info.eb.com/math](http://www.info.eb.com/math)

Recently updated to completely align to the Common Core, Britannica’s Mathematics in Context (MiC) is a standards-based, NSF-funded curriculum for middle grades that is available in pdf, print, and an interactive digital format. With its modular design and embedded science context MiC is perfect for use in a STEM program or as math supplement. SmartMath is a fun Web-based K–8 tool for adaptive math practice. Britannica Mathematics: innovative products with the assurance of Britannica quality!

**Casio America, Inc.**
- **Booth:** 501
- **Dover, New Jersey**
- **Ph:** 973-361-5400
- [www.casioeducation.com/home/](http://www.casioeducation.com/home/)

Casio Provides a Total Math Solution for Teachers by offering the latest calculator technology, research-based curriculum with a Common Core focus and customizable professional development. Our newest graphing calculators have large high resolution color displays and intuitive Icon based menus. Casio technology is user friendly and designed to help students understand and excel in math and science. Casio’s award-winning technology is affordable and models are available for every grade level.

**Center for Mathematics and Teaching, Inc.**
- **Booth:** 210
- **Sherman Oaks, California**
- **Ph:** 310-310-4948
- [www.mathandteaching.org](http://www.mathandteaching.org)

The Center for Mathematics and Teaching is dedicated to creating instructional materials for middle school students through algebra and supporting their teachers with professional development. Our consumable materials have been specifically written to address the content and practices of the Common Core State Standards in mathematics.

**Continental**
- **Booth:** 419
- **Elizabethtown, Pennsylvania**
- **Ph:** 800-233-0759
- [www.continentalpress.com](http://www.continentalpress.com)

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teaching now! Powerful tools that can help improve your Mathematics and are both entertaining and of these materials are exclusive to Creative ers use in many of their presentations. Many supplies and manipulatives that our present- Creative Mathematics offers books, music, United States, Canada and internationally. years of teacher training workshops in the consulting company that has provided 23 Creative Mathematics is a leading educational www.creativemathematics.com Arcata, California Booth: 414 Creative Mathematics Booth: 414 Arcata, California PH: 707-826-2965 www.creativemathematics.com Creative Mathematics is a leading educational consulting company that has provided 23 years of teacher training workshops in the United States, Canada and internationally. Creative Mathematics offers books, music, supplies and manipulatives that our presenters use in many of their presentations. Many of these materials are exclusive to Creative Mathematics and are both entertaining and powerful tools that can help improve your teaching now!

D

Damand Promotions
Booth: 423 Poway, California PH: 858-663-5129 www.Damand.com

The Parent’s Homework Dictionary is designed to empower parents with knowledge to help their children succeed in school. This book comes in 10 languages with chapters in all the major subject areas including a major focus on math (K–10). Each book has free online worksheets to help students stay sharp during the summer months.

Didax Inc

We’ll be showcasing new math resources, many aligned to the Common Core State Standards. Stop by and check out our new math manipulatives, resource books, games, and more! Features also include Kathy Richardson’s K–2 assessment program—Assessing Math Concepts.

Dinah-Might Adventures, LP

Dinah-Might Adventures, LP is an educational publishing and consulting company owned by Dinah Zike, Author/Speaker. Her books are known for their innovative ways to use Foldables® in teaching all subjects and grade levels. She also offers professional development at the Dinah Zike Academy, a unique trainer of trainers facility in Texas.

E

EAI Education

EAI is a leading manufacturer and distributor of math manipulatives, resource books, trade-books, interactive whiteboard software, games, puzzles, and calculators for all grade levels.

EPS Literacy and Intervention
Booth: 202 Cambridge, Massachusetts PH: 617-547-6706 800-225-5750 epsbooks.com

EPS Literacy and Intervention provides K–12 blended learning solutions to help at-risk and on-level students build proficiency in reading and math. From screening, to instruction and intervention, progress monitoring, reporting and professional development, we offer an integrated approach to address the Common Core State Standards and RTI. Please visit epsbooks.com or call 800-225-5750.

ETA hand2mind

ETA hand2mind supports P–12 educators in their quest to inspire and champion learning by doing with research-based, hands-on solutions. Innovations in mathematics, science, and literacy provide instructional curriculum, custom-kit options, manipulatives, interactive digital applications, and teacher coaching and development.

ExploreLearning
Booth: 204 Charlottesville, Virginia PH: 866-882-4141-224 www.explorelearning.com

ExploreLearning develops two best-of-breed online solutions that help students succeed in math and science: ExploreLearning Gizmos, the world’s largest library of highly interactive simulations for math and science in grades 3–12; and ExploreLearning Reflex, the most powerful math fact fluency program ever developed. Both have been recognized by the SIIA CODiE Awards as Best K–12 Instructional Solution (Gizmos in 2009, Reflex in 2012) in addition to many other accolades.

FACEing MATH
Booth: 411 Hemet, California PH: 951-492-8341 www.FACEingMATH.com

FACEing MATH sells standards-based supplemental math workbooks that are a unique blend of math and art. The workbooks are all written by classroom teachers and range from first grade through high school algebra 2.
Frog Publications
Booth: 305
San Antonio, Florida
Ph: 800-777-3764

Frog Publications is a publisher of educational materials, primarily used at the elementary level, with products that include: Systematic reinforcement programs, individualized educational plans, response to intervention, differentiated instruction, terrific, ready-to-use learning centers, take-home parental involvement program, daily review, critical thinking and dual language! All Frog games use the same easy-to-learn rules. Students needing different levels or skills can practice together!

H
Hewlett-Packard
Booth: 217
San Diego, California
Ph: 619-677-8049
www.hp.com/go/calculators

HP creates new possibilities for technology to revolutionize your classroom, bringing mathematics to life and engaging students in participatory learning. With the new HP Prime graphing calculator, students can intuitively manipulate complex graphs and geometric images on its full-color, multi-touch screen.

Hooda Math
Booth: 514
Saint Louis Park, Minnesota
Ph: 612-437-9977
www.hoodamath.com

Hooda Math has over 20 free math apps for iPhone, iPad, Android, and Kindle. Visit their booth to try them out. For over five years they have been providing free online math games and tools at www.hoodamath.com. New this year, Hooda Math is proud to introduce www.hoodagames.com that works on all mobile browsers, no downloading required.

Houghton Mifflin Harcourt
Booth: 215
Boston, Massachusetts
Ph: 617-351-5344
www.hmhco.com

HOUGHTON MIFFLIN HARCOURT is a global learning company committed to changing lives by fostering passionate, curious learners. Among the world’s largest providers of pre-K–12 education solutions and one of the its longest-established publishing houses, HMH combines cutting-edge research, editorial excellence, and technological innovation to improve teaching and learning environments.

I
It’s About Time
Booth: 324
Mt. Kisco, New York
Ph: 914-273-2233
www.iat.com

It’S ABOUT TIME is a leading educational publisher of middle and high school inquiry-based science and math programs supported by the National Science Foundation. Our challenge-driven programs increase student achievement because they motivate and engage, develop critical thinking, give students the skills to work collaboratively, and the ability to apply what they have learned.

IXL Learning
Booth: 516
San Mateo, California
Ph: 650-372-4349
www.ixl.com

IXL is a math practice website completely aligned to all state standards and the Common Core. IXL offers unlimited questions in pre-K–geometry in a fun, visually-stimulating format that students love. Plus, teachers can view detailed reports on students’ progress and trouble spots—including complete question histories for individuals.

J
Johnny’s Key
Booth: 403
Trevorton, Pennsylvania
Ph: 570-809-2840
www.johnnyskey.com

Johnny’s Key, founded in 2010, has helped thousands of teachers and students understand/model difficult math concepts such as elapsed time, making change, subtraction with regrouping, ratio/proportion, equality, and ordering of numbers, fractions, decimals, and percents. Founder Barbara Sports provides Professional Development to teachers nationwide on topics such as How to Take Charge of Your Own Professional Development, What Math Class Should Look and Sound Like, and Questioning Strategies.

K
Kendall Hunt Publishing Company
Booth: 314
Dubuque, Iowa
Ph: 563-589-1075
kendallhunt.com/prek12

Kendall Hunt offers a complete, Common Core–aligned mathematics solution for grades pre-K–12. With a strong focus on the CCSS Mathematical Content and Mathematical Practice standards, our programs are designed to help students develop both procedural skills and conceptual understanding. Stop by booth 314 to see what’s new for 2014 and get a sneak peek at digital Math Trailblazers, Math Intervention for the Common Core State Standards, and our new edition of Discovering Algebra!

L
The Learning Carpet-TLC, Inc.
Booth: 508
Huntsville, Ontario Canada
Ph: 705-789-8912
www.thelearningcarpet.com

The Learning Carpet, with its associated number and pattern cards, clockhands, and symmetry lines, is a highly effective classroom tool to approach concepts kinesthetically in grades K–5. Children move on the carpet, developing an understanding of numerical patterns, tens and ones, operations, time, money, geometry, nonstandard measurement, data management and mapping.
Learning Wrap-Ups

Booth: 315
Layton, Utah
Phone: 801-497-0050
learningwrapups.com

Learning Wrap-Ups is the publisher of Learning Wrap Ups and Learning Palette. These unique products provide self-correcting learning tools specifically designed to develop automatic recall of basic math facts and to assist in the mastery of important Common Core skills covering the primary mathematical strands.

Lone Star Learning

Booth: 313
Lubbock, Texas
Phone: 806-281-1424
store.lonestarlearning.com

Lone Star Learning is a curriculum development company offering unique, easy-to-use visuals and interactive bulletin boards that give students specific practice needed to achieve mastery in math, science, and language arts. We strive to decrease teacher effort while increasing student success with our innovative products!

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Booth: 412
Baltimore, New York
Phone: 516-781-2400

Mathematical Olympiads for Elementary and Middle Schools is a not-for-profit corporation dedicated to stimulating enthusiasm, fostering creativity, and strengthening intuition in mathematical problem solving. Using monthly contests, teachers and teams of up to 35 students explore mathematical concepts while developing flexibility in non-routine problem solving. Last year more than 5,000 teams in grades 4–8 throughout the and worldwide participated.

Math Solutions

Booth: 322
Sausalito, California
Phone: 800-888-9092

Founded in 1984 by Marilyn Burns, Math Solutions is dedicated to improving students’ learning of mathematics by providing the highest-quality professional learning services and resources to educators. Over the past 30 years, Math Solutions has partnered with hundreds of schools and districts, focusing primarily on teachers’ professional development and classroom instruction with on-site courses and coaching. Math Solutions also publishes more than 90 award-winning book and video resources.

Math Teachers Press

Booth: 201
Minneapolis, Minnesota
Phone: 800-852-2435
www.movingwithmath.com

The Moving with Math Learning Management System for Pre-K–12 offers a blended learning approach for RTI. Using the C-R-A Model (Concrete-Representational-Abstract), all lessons include embedded professional development, assessments to monitor and measure progress, and instructional strategies to easily differentiate instruction. Lessons and assessments are correlated to CCSS, NCTM, and state Standards. All programs are supported by scientific research and meet the needs of ELL and Special Education.

McGraw-Hill Education/ALEKS Corporation

Booth: 209
Irvine, California
Phone: 714-245-7191

McGraw-Hill Education is proud to welcome ALEKS as the newest addition to the McGraw-Hill family! ALEKS offers an adaptive online math learning solution for grades 3–12. Backed by decades of research, ALEKS uses powerful artificial intelligence to precisely assess each student’s knowledge and deliver personalized instruction on the topics each student is most ready to learn. ALEKS avoids multiple-choice for true mastery-based learning and is correlated to Common Core and state standards. McGraw-Hill offers CCSS-aligned pre-K–12 math curricula designed to support every classroom. In addition to ALEKS, other innovative programs from McGraw-Hill include Everyday Mathematics, The Geometer’s Sketchpad, Tinker Plots, Number Worlds, Glencoe Math, and CINCH Learning.

MIND Research Institute

Booth: 318
Irvine, California
Phone: 888-751-5443
www.mindresearch.net/

MIND is a neuroscience and education nonprofit that applies its distinctive visual approach to the development of math instructional software. MIND helps local schools create a blended learning environment to create a culture of critical thinkers for the next generation of STEM leaders. MIND®’s Math programs reach 500,000 students and 21,000 teachers in 1,780 schools.

Mountain Math/Language, LLC

Booth: 415
Ogden, Utah
Phone: 801-475-1963

Mountain Math/Language is the supplier of supplemental spiral review programs in math, language, science, and U.S. History. Products are available as bulletin boards, centers, games, and online. Common Core products also available.

Music Notes

Booth: 413
Long Beach, California
Phone: 310-916-8295
www.MusicNotesOnline.com

Music Notes is an educational music company founded by two middle school teachers in Los Angeles. Our goal is to increase student engagement in school by providing high-quality educational songs and music videos to educators and their students. With over 200,000 views online, our Common Core–aligned songs and videos are sure to keep students rocking in their seats while remembering important math concepts.

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Nasco is proud to supply innovative teaching methods, hands-on manipulatives, interactive whiteboard materials, and real-life problem-solving projects for elementary, middle school, and secondary math programs. We have products for the Common Core State Standards and STEM initiatives. Nasco can also provide custom kits to meet the individual needs of educators.
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London, Ontario Canada
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www.neufeldlearning.com
Neufeld Learning Systems provides browser-based technology solutions and customized professional development for reaching all learners and teachers of mathematics. UMath X “goes deep” to address Common Core content with diagnostic tests for kindergarten to algebra 1. UMath X provides strand specific assessments and student reports to guide instruction and next steps.

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Booth: 218
Puyallup, Washington
PH: 253-845-7738 877-794-9366
www.qwizdom.com
Qwizdom maximizes learning outcomes by creating a fun and engaging environment with award-winning curriculum aligned to Common Core and state standards. District-wide reporting gives you instant, precise data at all levels, from school to teacher to student. Our solutions are easy to use and to implement because they grow with you, regardless of your technology landscape. Use with any web-enabled device or our low-cost student response systems.

Race 2 Achieve
Booth: 513
Philadelphia, Pennsylvania
PH: 267-437-3753
race2achieve.org
Race 2 Achieve is a FREE Common Core-aligned supplemental curriculum that focuses on how NASCAR® team Hendrick Motorsports utilizes key concepts found in algebra II, and trigonometry in real-world scenarios. The curriculum is project-based and includes a complete and flexible toolkit. Sign up for your FREE kits at race2achieve.org.

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Wisconsin Rapids, Wisconsin
PH: 715-424-3636
www.renlearn.com
Accelerated Math™ helps you give students personalized practice that is aligned to your textbook and linked to your state standards, ensuring math success. Plus, the software helps you easily manage the daily math activities of a wide range of students who are all working at their own levels and pace.

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New York, New York
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Scholastic, the world’s largest publisher and distributor of children’s books and a leader in educational technology, has been a partner with America’s schools for over 90 years. Our new math intervention program, MATH 180, launched this school year, is designed for struggling students in grades 6 and up. Using breakthrough technology, MATH 180 builds students’ confidence and competence in mathematics, while providing teachers with an ecosystem of support to ensure success.

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Singapore Math Inc® is a company dedicated to bringing the highest-quality educational resources to the U.S. and Canada. These resources include a range of selected core curricula and supplemental math titles. We welcome you to come by Booth 408 to peruse our Singapore Math® books and learn more about the Singapore approach to teaching and learning mathematics.
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Ph: 800-842-2737 800-842-2737
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Supporting each educator’s vision of student success in math and science, TI’s versatile education technology, curricular support materials and professional development can help enhance teaching and learning. The latest TI-Nspire™ CX handhelds and software go beyond traditional graphing capabilities. With the new wireless TI-Nspire™ Navigator™ system, educators can engage the entire class and instantly evaluate understanding.

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Booth: 400
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Serving students in grades 3 through algebra I, TTM deepens understanding of critical math concepts and improves higher-order thinking and problem-solving skills. The program provides rigorous instruction and meaningful practice designed to accelerate the path to college and career readiness. From basic platform skills to algebra I, each student works through a personalized lesson pathway that reflects their unique needs as well as grade-level targets, according to the CCSS.

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Booth: 401
New York, New York
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www.triumphlearning.com
Triumph Learning is your #1 Common Core Supplemental Resource Solution for K–12. We are best known for great content, teacher-friendly formats, engaging activities, and low prices. TL is a leading provider of high quality, supplemental, instructional materials for the K–12 educational classroom for more than two decades. Our products are designed for supplemental, enrichment, or intervention strategies in the areas of core curriculum, enrichment curriculum, RTI and/or special education.

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Booth: 216
West Valley City, Utah
Ph: 800-462-2019
www.valleybusinessmachines.com
Valley Business Machines is an Instructional Products Dealer for Texas Instruments Calculators, Navigator Systems, Software and related products. We offer very competitive pricing, and pride ourselves in excellent customer service. We distribute nationally, and have been servicing the education market since 1972. Please stop by our booth.

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Portland, Maine
Ph: 800-341-6094
walch.com
Walch Education extends and enhances learning with innovative, flexible solutions for middle school, high school, and beyond, addressing both Common Core and state standards. Walch is one of the leading publishers of Integrated Math courses for high school students, working in partnership with districts and states nationwide.

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Booth: 303
Salt Lake City, Utah
Ph: 801-290-3636 866-225-5948
www.wgu.edu
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