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# REGIONAL CONFERENCE \&EXPOSITION ATLANTIC CITY, NEW JERSEY October 19-21, 2011 <br> Technology and Mathematics: Get Connected! 

## HOST

Association of Mathematics Teachers of New Jersey

## MEETING FACILITY

All Regional Conference presentations will be held at the Atlantic City Convention Center.
See pages 72-75 for floor plans.

## REGISTRATION

| Wednesday | 5:00 p.m. $-8: 00$ p.m. |
| :--- | :--- |
| Thursday | 7:00 a.m. $-4: 00$ p.m. |
| Friday | 7:00 a.m. $-4: 00$ p.m. |

EXHIBITS
Thursday
8:00 a.m.-4:00 p.m.
Friday
8:00 a.m. $-4: 00$ p.m.

## BOOKSTORE AND MEMBER SHOWCASE

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


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National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 20191-1 502; Telephone (703) 620-9840; Fax (703) 4762970; E-mail nctm@nctm.org; Web wnw.nctm.org


## Welcome to Atlantic City!

We're glad you're taking a chance on us for NCTM's 2011 Regional Conference and Exposition in Atlantic City. We think the odds are in your favor that you'll take away lots of new ideas. As we say in Jersey, it's a shore thing! We encourage you to take advantage of the variety of sessions and hands-on gallery workshops that the conference offers. You will be able to participate in more than 200 presentations on technology, Common Core State Standards, assessment and equity over the next two days. Unique to this regional conference is a strand designed to address teaching mathematics to students who struggle. Although this strand includes an emphasis on special education issues, the strand isn't limited to special needs. The list of presentations scheduled in this strand runs the gamut, focusing on learners at all levels of preparation, capabilities, and disabilities. Don't forget to take time to explore the Exhibit Hall and check out some of the latest teaching products and technology. We hope that you walk away with a wealth of knowledge and answers to your biggest challenges.

While you're here, be sure to enjoy the rich culture and diversity that Atlantic City (aka A.C.) has to offer. Take a stroll along our world-famous Boardwalk to enjoy the ocean breeze, shop at Atlantic City's premiere shopping outlets, ride in one of our Atlantic City rolling chairs for a genuine slice of iconic Americana, or visit the long-time home of the Miss America Pageant-Atlantic City Boardwall Hall. Don't forget the salt water taffy! Take a tub back home to those who didn't get to join us here in A.C. So, are you psyched to visit America's Playground? Again, it's a shore thing you are.


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


Nadine J. Williams Local Arrangements Chair Newark Public Schools Dayton, New Jersey


## PROGRAM INFORMATION

THE 2011 NCTM Regional Conference and Exposition officially begins with the Opening Session, starting at 5:30 p.m. on Wednesday in room 402/403 on the fourth level of the Atlantic City Convention Center. All other presentation days begin at 8:00 a.m. and are scheduled concurrently throughout the day on Thursday and Friday.

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

## Please remember:

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


## Professional Development Focus of the Year 201 1-2012

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

## Learn $\leftrightarrow$ Reflect Strand

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

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

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

## Learn $\leftrightarrow$ Reflect Kickoff Session <br> Thursday, 9:30 a.m. <br> Room 403

Learn $\leftrightarrow$ Reflect Reflection Session
Thursday, 3:30 p.m.
Room 405-406

## Teaching Mathematics to Students Who Struggle Strand

This strand is intended to support teachers who work with the spectrum of students who struggle with mathematics, from those who occasionally are challenged by particular topics to those who have disabilities. These sessions offer a variety of approaches and assessment strategies to assist special education teachers, Title 1 teachers, and regular classroom teachers who instruct students with a wide range of abilities. This strand is appropriate for teachers of students with special needs.

Look for the symbol for Teaching Mathematics to Students Who Struggle Strand presentations.

## PROGRAM INFORMATION

## New and Preservice Teachers Workshop

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

Thursday
2:30 p.m.-4:00 p.m.
Room 411

Friday
10:30 a.m.-12:00 noon
Room 404

## New Member and First Timers' Orientation

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

Thursday and Friday 7:15 a.m.-7:45 a.m. Room 318

> NCTM newbie? Attend the New Member and First Timers' Orientation to learn how to enhance your conference experience
> and maximize your membership's benefits. See this page for details.

## 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 audiovisual 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 $\mathbf{C W}$ 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-applies to multiple grades and audiences


## Program Updates

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

## Tips for a Rewarding Regional Conference and Exposition

- Download the Atlantic City Conference App for conference alerts and up to the minute information.
- Become familiar with the layout of the Atlantic City Convention Center by reviewing the floor plans on pages 72-75.
- Visit the NCTM Bookstore for the latest NCTM educational resources, and the Member Showcase, where you can learn more about how NCTM can help you professionally and pick up free resources. Save 25 percent off all list price items.
- Stop by the Information Booth for information on the local area.
- If attending the conference with colleagues, attend different presentations and share your learned knowledge after the conference.
- Wear comfortable shoes and clothes, and dress in layers.
- Turn off cell phones during presentations.
- Visit the Exhibit Hall, where exhibitors will share the latest educational products.
- The more you participate in the presentations, the more you will get out of the conference.
- Tell us about your conference experience by filling out the postconference online survey.
- Be safe! Remove your name badge when you leave the conference facilities at the end of the day.


## Registration and Access to Presentations

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

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

## Recycling

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

## For Your Child's Safety

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

## GENERAL INFORMATION

## Member Showcase

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

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

## Renew your membership or join NCTM for the first time onsite

 and you will receive a free 2012 NCTM Annual Meeting t-shirt! Supplies are limited.
## Bookstore

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

Note on Sales Tax Exemptions: To be considered exempt from sales tax in the NCTM Bookstore, you must provide a copy of a New Jersey 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 New Jersey 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 New Jersey are not valid for this regional conference.

The NCTM Bookstore is not equipped to handle shipping from the meeting site. The Business Center at the Atlantic City Convention Center can assist you with your shipping needs.

## Information Booth

The NCTM Information Booth will be in the lobby area of the Atlantic City Convention Center outside Exhibit Hall B. Local personnel from New Jersey will be on hand to answer any questions you may have. They will also assist you with directions and local information, from transportation and historical sites to shopping and entertainment.

## EXHIBIT HALL INFORMATION

## Lost-and-Found

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

## First Aid Station

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

## NCTM Clear Air Act

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

## Your Opinion Counts!

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

## Exhibits

Be sure to make time in your schedule to visit the NCTM Exhibit Hall. The hours allow ample opportunity to explore, try out, and purchase products and services for use in your classroom or to help you meet your career goals. You'll also be able to meet the people who produce these products, get fresh ideas, and see demonstrations of how products work. Be sure to check out the list of exhibits and a map of the Exhibit Hall on page 75. Please note: Children under age 16 will not be permitted in the Exhibit Hall.

## Exhibitor Workshops

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

## Internet Station

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

## Conference Sponsors

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

Your Passion. Our Technology. Student Success."'

## WEDNESDAY PLANNER

5:00
$5: 30$
6:00
6:30
$7: 00$


Photos Courtesy of the Atlantic Convention \& Visitors Bureau

## Highlights

- Opening Session (Presentation 1): Got Technology?

Registration Hours
5:00 p.m.-8:00 p.m.
Bookstore and Member
Showcase Hours
5:00 p.m.-7:00 p.m.

## Fire Codes

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

5:30 P.M.--7:00 P.M.


## Got Technology? Opening Session

Good technology combined with bad teaching can actually make kids worse in math, faster! But combine it with great teaching and a little ingenuity, and technology can be a game-changer. Join us for a mind-bending, spirit-lifting, paradigm-shifting look at what technology can do for math education when done right.

Greg Tang
Creative Smarts Inc., Cambridge, Massachusetts

## LEARN MORE ABOUT:

- Graduate and Professional Development Programs
- Resources for the Mathematics Classroom
- Ask Dr. Math, Teacher2Teacher
- Problems of the Week, Math Tools
- Programs that develop the Mathematical Practices of the Common Core State Standards
- Research and Development Collaborations with Teachers

VISIT OUR BOOTH FOR MORE INFORMATION! Booth \#111

The Math Forum is the leading online resource for improving math learning, teaching and communications using the collaborative power of the Internet to improve math education through online mentoring, integration of technology
 into the math classroom, development of mathematical practices, action research, team problem solving, and professional development.

## Visit mathforum.org for more information.

The Master of Science in Mathematics Learning and Teaching (MLT) is a one-of-a-kind graduate program combining the best of the Math Forum's dynamic resources with an experiential, research-based curriculum centered on problem solving through communication and individualized instruction. MLT graduates are trained to improve math in middle and high school through shared, solution-oriented teaching methods. Drexel University's School of Education has been recognized by U.S. News \& World Report as one of America's Best Graduate Schools. Visit goodwin.drexel.edu/mIt for more information.

## THURSDAY PLANNER

8:00
8:30
9:00
9:30
10:00
10:30
11:00
11:30
Noon
12:30
1:00
1:30
2:00
2:30
3:00
3:30
4:00
4:30
5:00
$L \subset \mathbb{R}$ Learn $\leftrightarrow$ Reflect Strand

## Highlights

- New Member and First Timers' Orientation (Presentation 2)
- Learn $\leftrightarrow$ Reflect Kickoff (Presentation 40)
- New and Preservice Teachers Workshop (Presentation 125)
- Learn $\leftrightarrow$ Reflect Reflection Session (Presentation 127)


## Fire Codes

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

7:15 A.M.-7:45 A.M.

## 2

## New Members and First Timers' Orientation

## (General Interest) Session

New to NCTM? Join us to learn how to maximize your membership experience! From journals and online lessons, tools, and activities; to networking and career-advancement opportunities; you'll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.
John E. Hammett III
Saint Peter's College, Jersey City, New Jersey
Room 318

## 8:00 A.M.-9:00 A.M.

## 3

## Differentiating Instruction in Grades 3-8

(General Interest) Session
Participate in hands-on examples of ways to address students' needs. The speaker will draw samples from the number, algebra, geometry, measurement, and data areas, with particular attention to how the Common Core State Standards addresses the areas.
Janet H. Caldwell
Rowan University, Glassboro, New Jersey
Room 403

## 4

## The Power of Mathematical Learning Communities

(General Interest) Session
Mathematical learning communities build trust, open honest communication, and promote an in-depth understanding of mathematical concepts and knowledge. Come listen to how Lowell Public Schools have infused this model into professional development courses and workshops for teachers.

## M. Claire Abrams

Lowell Public Schools, Lowell, Massachusetts

## Jeff Gwiazda

Lowell Public Schools, Lowell, Massachusetts
Magaly Ronan
Lowell Public Schools, Lowell, Massachusetts

## Using National Board Standards to Guide and Improve Mathematics Teaching

## (General Interest) Session

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

## Francis (Skip) Fennell

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

## Karen King

National Concil of Teachers of Mathematics, Reston, Virginia

## Tamara Sewell

Adelphi University, Garden City, New York
Donna Young
Kent Island High School, Stevensville, Maryland
Room 305/306

## 6

## Activities for Students' Success

(Pre-K-5) Session
This session will include problem-based mathematics activities that engage elementary school students in doing mathematics. You will leave this session with the materials needed for students' success.

Janet Stramel
Fort Hays State University, Hays, Kansas

Participate in today's Learr $\leftrightarrow$ Reflect Strand. Look for sessions marked with the $\mathrm{I} \subset \mathrm{R}$ icon.

> 8:00 A.M.-9:00 A.M.

## 7

## Coteaching in the Mathematics Classroom

## (Pre-K-5) Session

Whether it occurs with an inclusion teacher, math coach, or gifted-support or intervention teacher, coteaching implemented correctly benefits all students. Learn first-hand strategies from teachers who use coteaching daily, learn what coteaching means, and take home strategies and methods that you can implement in your school.

## Amy Besterman

Avonworth School District, Pittsburgh, Pennsylvania
David Thomas
Avonworth School District, Pittsburgh, Pennsylvania
Room 318

## 8

## Family Math Nights: Building Mathematical Knowledge in the Community (Pre-K-5) Session

This session will share successful practices for organizing family math nights in low-performing schools. Participants will try out activities that promote number sense, geometry, and problem solving. You can increase mathematical understanding and build enthusiasm for learning math by incorporating family involvement.

Kristen Appleby
University of Florida, Gainesville, Florida
Rich Busi
University of Florida, Gainesville, Florida
Room 415

## 9

## If You Give a Moose a Map

 (3-8) SessionTake a journey with Maddie Moose down the Appalachian Trail. This culminating unit incorporates computation skils (buying supplies, balancing a checkbook) fractions, geometry, measurement, probability, and graphing. The unit is geared for grade 4 but can be adapted to any level.

## Lisa Carlson

Saint Charles School, Kettering, Ohio

## Writing across the Mathematics Curriculum to Assess Conceptual Understanding <br> (3-8) Session

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

## Carla J. Hunt

Albemarle County Schools, Charlottesville, Virginia

## Monica Cabarcas

Albemarle County Schools, Charlottesville, Virginia
Colleen Branche
Albemarle County Schools, Charlottesville, Virginia

## 11

## Developing Linear Graphs and Equations through Guided Discovery (6-8) Session

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

## Virginia Fraser

Indiana University Southeast, New Albany, Indiana
Room 320

8:00 A.M.-9:00 A.M.

## 12

## Geometry in the Community: Using Local Contexts to Ground Learning

(6-8) Session

From the shapes in local architecture to the coordinate grid and angles formed by city streets, geometry is all around us. Instead of exploring geometry as an abstract concept or thinking about it in imaginary contexts, learn how to give your students a "home field advantage" by situating core geometric concepts in their daily lives.

## Emily Magee

University of Pennsylvania, Philadelphia, Pennsylvania
Caroline Ebby
University of Pennsylvania, Philadelphia, Pennsylvania
Nina D. Hoe
University of Pennsylvania, Philadelphia, Pennsylvania
Room 414

## 13

Graphing across the Curriculum (6-12) Session
Graphing technology can do more than produce graphs easily. We can use it to teach mathematical concepts visually for understanding. Survey students using free internet tools or clickers to make the data meaningful. Use graphs to help students make connections among mathematical concepts and model the real world.

Linda Treilman
Mercer County Community College, West Windsor, New Jersey

Room 408/409

## 14

## Making Students' Thinking Visible

 (6-12, Research) SessionResearch on effective classrooms shows that visible thinking weaves throughout teachers' planning and presentation, giving teachers a variety of teaching strategies. What are visible thinking's benefits? What classroom activities make students' thinking visible? Creating such activities is crucial to closing the achievement gap.

## Don Balka

Saint Mary's College, Notre Dame, Indiana

## 15

## TI-Nspire vs. Tl-89 in Calculus

## (9-12, Higher Education) Session

This presentation will focus on comparing the TI-Nspire and TI-89 calculators when used for classroom activities in calculus, with particular emphasis on assessing student understanding when using each calculator.

## Marlena Herman

Rowan University, Glassboro, New Jersey
Paul Laumakis
Rowan University, Glassboro, New Jersey
Room 314

## 16

## A Question of When for Beginning Mathematics Teachers

(Higher Education, Preservice and In-Service, Research) Session
The presenters will discuss research methods, data and analysis from an empirical study conducted regarding when beginning mathematics teachers report learning attributes of successful teaching. Participants from two teacher education programs will offer a reflection for teacher educators on how to prepare successful teachers.

## Nicholas H. Wasserman

Marymount School of New York, New York, New York
Edward Ham
Ph.D. Candidate, Teachers College, Columbia University, New York, New York

Room 420

8:30 A.M.-9:30 A.M.
ew 17
Do You Have the Right Stuff for Science, Technology, Engineering, and Mathematics (STEM) Leadership?
(General Interest) Exhibitor Workshop
See if you have the "right stuff." Join Dr. Meghan Marrero, director of curriculum for U.S. Satellite Lab, in an activity from Connections to Earth and Space Science, a Course in Endeavor, an online professional development experience that offers a STEM education certificate endorsed by Teachers College of Columbia University and NASA.
Houghton Mifflin Harcourt
Boston, Massachusetts

## 8:30 A.M.-9:30 A.M.

## ew 18

## CCSS: Aligned Supplemental Curricula for Mathematically Talented Students

 (K-5) Exhibitor WorkshopSupport advanced mathematics students in grades K-5 with Project $\mathrm{M}^{2}$, Mentoring Young Mathematicians and Project $M^{3}$, Mentoring Mathematical Minds. These units increase math achievement and foster greater interest in mathematics through investigations aligned to Common Core State Standards (CCSS) mathematical practice and content standards.

Kendall Hunt Publishing Co.
Dubuque, lowa
Room 315
ew 18.1

> The Interactive Whiteboard and the Common Core Mathematical Practices in an Inquiry-Based Classroom
> (General Interest) Exhibitor Workshop
> Through example whiteboard activities, participants will investigate strategies for teaching, supporting, and recognizing the Common Core Mathematical Practices in their classroom, developing a further understanding of the Math Practices along the way.

Pearson
Upper Saddle River, New Jersey
Room 313

## 8:30 A.M.-10:00 A.M.

## 19

## Examining Geometric Thinking in Young

 Children: The Shape of Things!(Pre-K-2) Gallery Workshop
Join in as we move, build, and investigate to develop geometric thinking. Participants will try dynamic activities designed to engage young learners in geometric thinking. They will examine students' understandings and misconceptions and take away detailed, classroom-tested, ready-to-use activities addressing big ideas in geometry.

## Trena Wilkerson

Baylor University, Waco, Texas
Room 418

## 20

## I.M.P.A.C.T. Math

## (Pre-K-2) Gallery Workshop

Have you ever gone math bowling? Ever do the ice cube shake? How about played popsicle math? These easy, hands-on, inexpensive math projects, and many more, will have your students asking for more. Learn how to integrate technology and receive practical, creative ways to reach your students.

## Kimberly D. Mueller

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

Room 411

## 21

## Engaging All Children with Number Sense and Problem Solving <br> (Pre-K-5) Gallery Workshop

Speaker will offer strategies, including use of manipulatives, to develop number sense and problem solving skills. She will demonstrate the power of mathematical discourse to develop concepts, reasoning and vocabulary. She will engage attendees with activities to develop place value, patterns, estimation, fractions and problem solving.

Donna L. Knoell
Consultant, Shawnee Mission, Kansas
Room 308/309

## 22

## Promoting Critical Thinking in Computation through Problem-Based Assessments

(Pre-K-5) Gallery Workshop
Problem-based assessments naturally differentiate while allowing students to construct, apply, and validate their own thinking during everyday instruction. The speaker will offer practical ideas, advice, sample problems, and strategies for incorporating critical thinking into the primary school classroom.
Courtney K. Baker
George Mason University, Fairfax, Virginia
Room 404

> 8:30 A.M.-10:00 A.M.

## 23

## Using Base-Ten Blocks in Elementary School Education

## (Pre-K-5) Gallery Workshop

Research shows that children learn mathematics best exploring it using concrete materials and understanding the concepts before representing them symbolically. This presentation demonstrates this method for teaching multidigit addition, subtraction, multiplication, and division with whole numbers and decimal fractions by using base-ten blocks.

## Gary Christie

Baldwin-Wallace College, Berea, Ohio
Room 401

## 24

## Developing Rounding Sense (3-5) Gallery Workshop

Why is rounding a difficult skill for students to master? Most students can quote a rounding rule from memory, but yet they don't understand the concept. Participants will explore hands-on alternatives to the rounding rule that will increase students' conceptual understanding and help them make sense of the rounding process.

## Cindy Baird

Hampton City Schools, Hampton, Virginia
Laura Bitto
College of William and Mary, Williamsburg, Virginia
Room 417

## 25

## Cultivating Algebraic Thinking

(6-8) Gallery Workshop
Beginning with pairs of sequences, empower your students as they construct linear functions, determine $y$-intercepts, and make connections among sequences, formulas, and four-quadrant graphs. You will leave with a host of materials and strategies to employ right away.

Eric M. O'Brien
Bellmore Schools, Bellmore, New York

## Math for All Seasons <br> (6-8) Gallery Workshop

This workshop will show you motivational ways to integrate mathematics into traditional and nontraditional holidays. Discover hands-on activities that will make your classroom come alive all year long. Students will learn that mathematics is fascinating, exciting, and meant to be enjoyed. Handouts will be available.

## Diane McKeen

Cinnaminson School District, Cinnaminson, New Jersey
Room 302

## 27

## Deal or No Deal: Fair, or Not Fair? (9-12) Gallery Workshop

Participants will calculate mathematical measures of mean, median, expectation, and fairness, to analyze the offers from the banker in the game show Deal or No Deal, predicting offers as the game progresses until the final deal is accepted.

## Jason Gershman

Nova Southeastern University, Fort Lauderdale, Florida
Room 412

## 28

## Mathematical Models of Falling Dominoes <br> (9-12) Gallery Workshop

Participants investigate the dynamics and mathematical models of toppling dominoes including the optimum distance that dominoes topple at the fastest rate, a "Domino Chain Reaction" and a "Domino Effect Cannon." Various technologies are used to collect and analyze data. Finally, a review of literature on the classic problem is presented.

## Hector Lopez

Rutgers University, New Brunswick, New Jersey
Room 301

## 8:30 A.M.-10:00 A.M.

## 28.1

## Empowering Our Students' Voices: An Intervention Model for Professional Development <br> (Preservice and In-Service) Gallery Workshop

What does mathematical reasoning look like? How do we listen for a convincing argument? Engage in an intervention model for professional development that uses video data available through Rutgers University's Video Mosaic Repository. Explore examples that trace the development of a student's ideas over seventeen years.

## Maria Steffero

Monroe Township Middle School, Monroe Township, New Jersey

## Alice S. Alston

Rutgers University, New Brunswick, New Jersey
Room 322

## 30

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

(Preservice and In-Service) Gallery Workshop
The speaker will present findings from a study of preservice teachers' content knowledge, confidence levels, and math anxiety. The study's teachers included a large percent of firstgeneration college attendees and speakers of other languages, for whom English-reading ability, content knowledge, and anxiety interacted in interesting ways.

Noureen A. Khan
University of North Texas Dallas, Dallas, Texas
Room 419

Hear what's new from
Exhibitors-attend an
Exhibitor Workshop
(see pg. 6)

9:30 A.M.-10:30 A.M.

## 31

## Progressive Math Initiative (PMI) (General Interest) Session

Discover new strategies using technology and teacherdeveloped units through the PMI to increase students' achievement. The initiative uses Smart Notebook files and Smart Responders to increase students' engagement and achievement through formative assessment.

## Melissa Axelsson

Egg Harbor City Community School, Egg Harbor City, New Jersey

## Heather Henderson

William Allen Middle School, Moorestown, New Jersey
Room 420

## 32

## Women and Mathematics: Examining Experience and Perspective <br> (General Interest, Research) Session

This presentation will showcase implications from the perspectives about, and experiences in mathematics of, successful female academics as they mentor and influence female students. The speakers will compare these implications with current research about women in mathematics.
Candace D. Joswick
Ohio State University, Columbus, Ohio
Sarah Gilchrist
Ohio State University, Columbus, Ohio
Room 410

## 33

Building Links between Addition and Subtraction: Concepts and Number Facts

## (Pre-K-2) Session

Addition and subtraction are closely linked. This session will demonstrate strategies that can help reinforce the connection between the operations and develop flexible thinking. In particular the speaker will show practical ways to develop number facts for both operations by using visual materials and games.
James L. Burnett
ORIGO Education, Saint Charles, Missouri

9:30 A.M.-10:30 A.M.

## 34

## Storybook Characters in the Primary

 School Mathematics Classroom(Pre-K-2) Session
Using any storybook, primary grade teachers can learn a process of entering into the story to create problems using the characters, setting, and story line. The speakers will share sample problems from storybooks along with resources to help participants create their own problems.

## Jane Willburne

Pennsylvania State University Harrisburg, Middletown, Pennsylvania

Jane B. Keat
Pennsylvania State University Harrisburg, Middletown, Pennsylvania

## 35

## Math Learning Centers: Something for Everyone

(Pre-K-5) Session
In reading, we group kids by ability at the earliest ages. Why not in math? Group learning combined with welldesigned activities can teach, challenge, and inspire students with diverse abilities and learning styles. See how carefully planned math centers can help you meet the needs of all your students.

## Greg Tang

Creative Smarts Inc., Cambridge, Massachusetts
Room 305/306

## 36

## Mathematics Integrated across the Disciplines and Enhanced with Technology <br> (3-5) Session

Experience how to integrate mathematics activities with other disciplines such as science, language arts, art, and social studies, enhanced with technology, especially with interactive whiteboards.

## Maria Diamantis

Southern Connecticut State University, New Haven, Connecticut

## 37

## Powerful Strategies to Get Every Student Thinking, Doing, and Talking Math

 (3-5) SessionExperience ready-to-use strategies that enhance mathematics teaching and learning for every student, especially English language learners and those in special education. These strategies will actively engage students in thinking, speaking, and doing mathematics to improve instruction and assessment.

Jennie M. Bennett
NUMBERS Mathematics Professional Development, Houston, Texas

Room 319

## 38

## The Strip Model, Word Problems, and Students with Learning Disabilities

(3-5) Session
This session will present results from a teaching experiment in which 21 grades $2-5$ students with learning disabilities demonstrated extraordinary success solving addition-andsubtraction word problems using Singapore Math's strip drawing heuristic. Come hear our approach and their story!
Robin O'Dell
Buffalo State College, Buffalo, New York
Elizabeth Wright
Daemen College, Buffalo, New York
Room 320


## 9:30 A.M.-10:30 A.M.

## $\operatorname{LER} 40$ <br> Learn↔Reflect Kickoff: Teaching Number Sense to the iGeneration <br> (General Interest) Session

This session will examine how to engage, motivate, and teach the iGeneration (the Internet Generation). Participants will received videos, Web sites, social networking, and motivational strategies for students which can lead to building better number sense and facility with rational numbers.

Eric Milou
Rowan University, Glassboro, New Jersey
Room 403

## 41

## Making Mathematics Explicit

 (6-8) SessionHiebert and Grouws's research states that attending explicitly to concepts while teaching influences students' mathematics learning. Participants will work through several middle school level problems, share solutions, make connections, and make the mathematical concepts explicit.
Mary Buck
CORE, Berkeley, California
Room 421

## 42

## Building Students' Understanding of Mathematics through Reasoning and Proof

## (9-12) Session

Although high school mathematics, during instruction and assessment, sometimes short-changes reasoning and proof, they can furnish a revealing portrait of students' understanding. Participants will evaluate samples of students' logical arguments and proofs from algebra, geometry, and number theory and explore strategies that promote reasoning and proof.

## Bob Cunningham

College of New Jersey, Ewing, New Jersey
Katelyn Goodman
College of New Jersey, Ewing, New Jersey

## 43

## Reclaiming Lost Ground: ResearchBased Interventions for Underprepared Algebra Students

(9-12) 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 that help underprepared students.

## James Lynn

Learning Sciences Research Institute, University of Illinois at Chicago, Chicago, Illinois
Diane J. Briars
National Council of Supervisors of Mathematics, Pittsburgh, Pennsylvania

Room 415

## 44

## Teaching Sampling Distributions in the Statistics Classroom <br> (9-12) Session

Statistics students routinely have difficulty with the concept of sampling distributions. The speakers will describe activities that use various levels of technology to teach the concept. Participants will learn how to increase students' understanding of it.

## Doug Tyson

Central York School District, York, Pennsylvania
Michael A. V. Costello
Bethesda-Chevy Chase High School, Bethesda, Maryland

Room 414

## Extra, Extra...

 Pick up your copy of the Program Updates at the Registration Area.10:00 A.M.-11:00 A.M.

## ew 45

## Attaining Success for Students and Teachers Using Britannica SmartMath! (K-8) Exhibitor Workshop

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

## Britannica Digital Learning

Chicago, Illinois
Room 315

## ew 45.1

enVisionMATH Common Core: What Does Teaching through Mathematical Practices Look Like?
(General Interest) Exhibitor Workshop
Through activities in this workshop, participants will develop an understanding of each of the Standards for Mathematical Practice and how various types of learning tasks and questioning strategies can engage students in order to develop understanding and proficiency in mathematics.

## Pearson

Upper Saddle River, New Jersey
Room 313

## CW 45.2

## Mathematical Practices in the NSF, K-5 Think Math! Program

## (K-5) Exhibitor Workshop

Mathematical Practices in Think Math! pervade the entire program in age-appropriate ways. The program articulates the mathematical habits of the mind that are articulated in the program that develop precisely the kind of mathematical practices described in the Common Core State Standards. This workshop illustrates examples of the eight mathematical practices. Resource packet provided.
School Specialty Math and Intervention
Nashua, New Hampshire

10:30 A.M.-12:00 P.M.

## 46

## Just Let Me Survive Today: Math Classroom Management and Motivation

## (Preservice and In-Service) Gallery Workshop

Through a unique combination of games, incentives, a structured system of rules, humor (math dancing, among much else), brain-based study strategies, and traditional techniques, attendees will learn how to motivate and manage their students so that they enjoy class and improve their exam results.

## Mark Richman

Maplewood Board of Education, Maplewood, New Jersey

Room 312

## 47 <br> Math Explorations: Developing Numeracy through Play (Pre-K-2) Gallery Workshop

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

## Aldo Bacallao

Henry County Schools, McDonough, Georgia
Room 401

## 48

Rtt: Ready to Inspire
(Pre-K-2) Gallery Workshop
Response to Intervention ( RtI ) requires thoughtful planning to ensure that all students have opportunities to learn and succeed in the classroom. This interactive workshop will include hands-on activities and games, with references to children's literature, that will make you ready to inspire your students in the classroom.

## Donna Long

Houghton Mifflin Harcourt, Indianapolis, Indiana

## 10:30 A.M.-12:00 P.M.

## 49

## Domino Games: Connecting the Dots for Primary School Students (Pre-K-5) Gallery Workshop

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

## Allison Riddle

Davis School District, Salt Lake City, Utah

## 52

## Eureka! I Found It! Ways to Assess All Students Creatively (3-8) Gallery Workshop

The speaker will share a unique, interesting way to present the standards—history! Learn about famous mathematicians' ideas and ways to engage your students in hands-on activities related to their work. A resource CD of biographies, teacher-tested activities, teachers' resources, and assessment tools will be provided.

## AnneMarie Hornyak

Mendham Township Board of Education, Brookside, New Jersey

Room 322

## 50

## Differentiation and Accommodation for Students with Special Needs

 (3-5) Gallery WorkshopThis presentation will discuss differentiation and accommodation in lesson planning and teaching for students with special needs, especially techniques for teaching rich mathematical tasks in probability and patterns.
James E. R. Beyers
College of New Jersey, Ewing, New Jersey
John DeRosa
College of New Jersey, Ewing, New Jersey

## 51

## The Singapore Bar Model Method of Problem Solving

(3-5) Gallery Workshop
One of the most powerful features of Singapore math is the bar-model method for problem solving. Bar models allow students to represent word problems graphically to understand the operations needed to solve the problem. This session will solve problems using bar models, to examine how they can enhance learning in our classrooms.

Nancy Pavia
Scarsdale Public Schools, Scarsdale, New York
William Jackson
Scarsdale Public Schools, Scarsdale, New York

## 53

## My Teacher Writes in Secret Code! I Don't Get It!

(3-8) Gallery Workshop
Manipulatives are a key to understanding. Strategies for using manipulatives foster learning and help students see what $2 b^{2}, 3 b r$, and $x+2 y$ really mean. A concrete foundation for understanding math notation and symbols will demystify what students see as "that code only my math teacher knows." Let's help our students crack the secret code!
Janie L. Zimmer
Research-Based Education, Reading, Pennsylvania
Robert O. Jesberg
Consultant, Chalfont, Pennsylvania
Room 404

## 54

Successful SMARTBoard ${ }^{\circledR}$ Lessons Combine the Dynamic with WholeClass Participation (3-8) Gallery Workshop
Sometimes lessons with interactive whiteboards endup as "watch and do" lessons for all but a few students. Participants will complete sample activities and learn how to ensure every student's involvement when they incorporate this great technology into their classrooms.

## Paul Lawrence

LL Teach, Inc., Bridgewater, New Jersey
Room 308/309

10:30 A.M.-12:00 P.M.

## 55

## Go for the Gold!

(6-8) Gallery Workshop
Explore the golden ratio and golden rectangle by discovering its existence in the human body, nature (Fibonacci sequence), everyday objects (cereal boxes, credit cards, logos), art (Mona Lisa, The Last Supper), architecture (the Parthenon, pyramids), music (violin construction, piano), and more.

Sandra Marie Miller
Pennridge School District, Perkasie, Pennsylvania
Room 411

## 56

## An EXCEL-ent Way of Creating Interactive Applets <br> (6-12) Gallery Workshop

Many students are visual learners. Explore Excel 2003 and 2007 and their viabilities as visual learning devices. Participants should have an intermediate knowledge of Excel and are encouraged to bring their laptops, to make applets that will cover topics in prealgebra, algebra, and calculus. Resources will be available online.

Elisa R. Napierala
Nazareth College of Rochester, Rochester, New York
Caitlin VerSchneider
Nazareth College of Rochester, Rochester, New York

## 57

## Problem Solving in Geometry for 2011 (9-12, Preservice and In-Service) Gallery Workshop

Warm up with some problem-solving classics, among them the "bookworm" and "spider and the fly" problems. Explore a few new ones, then finish with a famous problem posed by Polya. Participants will work in cooperative groups and present their solutions.

## Michael Serra

Consultant, San Francisco, California

11:00 A.M.-12:00 P.M.

## 58

## From Standards to Actions: Implementing the Common Core State Standards

## (General Interest) Session

Learn about the latest resources from NCSM that support implementing the Common Core State Standards for Mathematics (CCSS-M). Resources include example tasks and instruction that promote students' proficiency in mathematical practices and a tool for analyzing instructional materials' alignment to CCSS-M content and mathematical practices.

## Diane J. Briars

National Council of Supervisors of Mathematics (NCSM), Pittsburgh, Pennsylvania

Room 403

## 59

## Power Your Math Instruction with Meaningful Contexts and Visual Models (General Interest) Session

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

Stuart J. Murphy
Author, Boston, Massachusetts
Room 318

## 60

## Raising Scores and Raising Eyebrows: Immediate, Positive Classroom Change <br> (General Interest) Session

Teachers lose 5-9 hours a week dealing with minor misbehavior, which translates to low test scores, high staff turnover, and a negative atmosphere in your school. It doesn't have to be that way! Learn effective classroom management strategies that will end student-teacher power struggles and dramatically improve academic performance.

## Katrina Ayres

Time to Teach!, Hayden Lake, Idaho

## 11:00 A.M.-12:00 P.M.

## 60.1

## Math Talk! <br> (Pre-K-2) Session

We want our students to be critical thinkers and successful problem solvers and mathematicians. The speaker will share ideas, calculator games, and activities that encourage your students to perform at the higher levels of Bloom's taxonomy.

## Mickey Jo Sobierajski

Past President, Association of Mathematics Teachers of New York, Cato, New York

## 61

## Math and Literature: A Marriage Made in Books

## (Pre-K-5) Session

Discover how children's books can teach mathematics. See examples of how to use children's books to teach adding, multiplying, patterns, measurement, and data graphing. Participants will receive a list of children's books and a set of classroom activities based on children's literature.

## Jadwiga Domino

Medaille College, Buffalo, New York
Room 402

## LSR <br> 62

Using Calculators and Other Educational Technology Effectively with Elementary School Children
(Pre-K-5) Session
The speaker will offer instruction strategies that develop and extend number sense and number operations, emphasizing number patterns, place value, estimation skills, and solving word problems using real-life applications. She will demonstrate effective calculator and technology implementations. Handouts will be available.
Donna L. Knoell
Consultant, Shawnee Mission, Kansas

## LER 63

## Finally! Math for My SMART Board

(3-8) Session
Getting the most out of your board used to mean drawing a big circle and tapping it in the middle. New math tools with prepared lessons and activities for the SMART Interactive Whiteboard are changing this. Your classes will coming full circle-with no tapping in the middle.

Kathy Robinson
Miss Sally School, Durant, Oklahoma
Room 314

## 64

Seeing and Doing Geometry: Gain a Deeper Understanding with Manipulatives

## (3-8) Session

Participants will try engaging, interest-building activities that foster greater conceptual understanding and skill recall of two- and three-dimensional geometric concepts. Learn how to make inexpensive manipulatives while incorporating effective questioning to enrich students' understanding of geometric vocabulary.

Dawn M. Boyer
Byram Township Board of Education, Byram, New Jersey
Elaine Lipani
Kearny Board of Education, Kearny, New Jersey
Room 414

## 65

## The Math behind the Market (6-8) Session

Preparedness for the new century means a functional grasp of mathematics and a fundamental understanding of personal finance. Participation in a real-world investment simulation addresses both needs. Attendees will discuss maintaining students' interest in math learning through meaningful, real-world applications.

## Vincent Young

SIFMA Foundation for Investor Education, New York, New York

Room 405/406

> 11:00 A.M.-12:00 P.M.

## 67 <br> Students as Mathematicians: A Modeling Approach <br> (6-12) 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 collaboration, investigation, modeling, and idea sharing. The speaker will explore open-ended models from initial scenario to final resolution. All activities will be available.

## Greta Mills

Hanover High School, Hanover, New Hampshire
Room 305/306

## Chi Alpha Mu

The National Junier Mathematics Club
has been reactivated by Mu Npha Theta to serve middile school mathematics students. Visit www.thialphamu.org

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Jointly sponsored by the MAA, SIAM and AMATYC

## NCTM is a founding member of Mu Alpha Theta

## LOR 68

Using Screen-Capture Movies to Assess Quadrilateral Constructions in Sketchpad ${ }^{\circledR}$
(6-12) Session
Students' sketches of quadrilateral constructions convey much information about the students' understanding of quadrilateral properties and how those properties drive sound constructions. But how do you document the decisions, missteps, and self-corrections that are lost in the final sketch? Make screen-capture movies of the construction process!

## Annie Fetter

Math Forum @ Drexel University, Philadelphia, Pennsylvania

Debbie Wile
Wallingford Elementary School, Wallingford, Pennsylvania
Room 408/409

## IER 69

Housekeeper and the Professor: Teaching Mathematics with Fiction and Film
(9-12) Session
The Housekeeper and the Professor, a novel by Yoko Ogawa, and The Professor's Most Beloved Equation, a movie based on the book, tell a touching story about memory, family, and a boy with a flat head named Root who grows up to be a math teacher. This workshop will appeal to teachers wanting to use fiction and film to teach algebra and geometry.
Ron Lancaster
Ontario Institute for Studies in Education, University of Toronto, Toronto, Canada

> 11:00 A.M.-12:00 P.M.

## 70

## Test Paper to Chalk Board: Analyzing Developmental Algebra Responses

(Higher Education) Session
Come learn valuable information about college students' algebraic thinking! An analysis of assessment and survey responses has discovered similar and distinct patterns among students' responses to algebra problems. This semiinteractive presentation will offer insight into some best practices for algebra teaching.
Nathan Alexander
Teachers College, Columbia University, New York, New York
Ronny Leong
Teachers College, Columbia University, New York, New York

Room 420

## 11:30 A.M.-12:30 P.M.

## ew 70.1

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

## (K-8) Exhibitor Workshop

A research-based, multisensory program teaches times tables in three weeks, guaranteed! If the class average isn't 90 percent on final test, you get a 100 percent refund. Addresses all four learning styles. Regular, special ed, gifted, Response to Intervention. Tons of fun! No training! Sister products: Fishin' for Addition, Subtraction in Action, Divide 'n' Slide, ClockWise Fractions , and Equivalency. Visit www. rhymesntimes.com and www.clockwisemath.com.
Rhymes ' $n$ ' Times
Lewisville, Texas
Room 315


## ew 70.2

## Pearson's New digits Program: Where Math Clicks! <br> (6-8) Exhibitor Workshop

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

## Pearson

Upper Saddle River, New Jersey
Room 313

12:30 P.M.-1:30 P.M.

## 71

## Assessing Students on the Common

 Core: Your Next Steps(General Interest) Session
This session will give an update on the PARCC and SMARTER Better Balanced Assessment consortia as they produce math assessments for use by 2014-15. The speaker will recommend uses and interpretation to improve your students' learning. Give your feedback during test development, through your school, district, and state.

## Henry Kepner

Past President, National Council of Teachers of Mathematics; University of Wisconsin-Milwaukee, Milwaukee, Wisconsin

Room 421

## 72

Designing a Web Site to Support Students' Learning and Communication
(General Interest) Session
Learn and share ideas about designing a Web page with appropriate content to support a successful learning environment. Ideas will include meeting students' needs, communicating with parents, and simplifying classroom procedures for the teacher and students.

## Kimberly Summey

East Tennessee State University, Johnson Clty, Tennessee

> 12:30 P.M.-1:30 P.M.

## 73

## How to Support Teachers' Management of Interactive Mathematics Classrooms

## (General Interest) Session

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

## Candace Barriteau Phaire

New York University, New York, New York
Room 305/306

## 74

## More than Fifty Centuries of Computation in a Twenty-first-Century Format <br> (General Interest) Session <br> Progress from number names to digits, body parts tally sticks, coins, numerals, calculi, sand tables, abacuses, Napier's bones, and slide rules. Examine math history digitally from the Sumerians to Egyptians, the Middle Ages, and the Renaissance in a format that not only is appropriate to a twenty-first-century classroom, but also enhances it.

Agnes Azzolino
Mathnstuff.Com, Keyport, New Jersey
Room 403

## 75

## Using Designed Artifacts and Symbolic Tools to Teach Arithmetic to Kindergartners

(General Interest, Research) Session
The study focuses on developing sociomathematical authority in young children, in teaching them basic arithmetic, to explore solutions, and to view mathematics as a sense-making activity through physical materials, verbal expression, group work, encouragement and self-validation, and inquiry.
Rupam Saran
City University of New York, New York, New York

Room 405/406

## 76

## The New Kid Magnet: SMART BoardTM Activities for Grades K-2 Classrooms

 (Pre-K-2) SessionIn a DSI and iPod world, this presentation connects with our smallest, youngest tech-savvy students. Learn how to integrate practical, creative SMARTboard lessons to make your math lessons come alive and grab every child's attention.

## Kim Mueller

Board of Directors, National Council of Teachers of Mathematics; Florence L. Walther School, Lumberton, New Jersey
Cynthia A. Grovatt
Florence L. Walther School, Lumberton, New Jersey
Room 408/409

## 77

## Preservice Teachers' Beliefs about Constructivist Mathematics Education

(Pre-K-2, Preservice and In-Service) Session
This presentation will focus on preservice teachers' knowledge of constructivism, exploring their views on the efficacy of constructivist practices in mathematics education. The speaker will discuss respondents' attitudes toward constructivism and examine the roles of respondents' age, program, academic level, and teacher's preparation experiences.

Anne George
Saint Xavier University, School of Education, Chicago, Illinois

## L:R 78

Developing Algebra, Number Sense, and Geometry through NCTM's Free E -Examples
(Pre-K-5) Session
Make your classroom come alive with NCTM's E-examples! From geoboards and tangrams to hundreds boards and interpreting graphs, these newly revised, interactive applets demonstrate muliple representations, explore connections, and communicate understanding. Leave prepared to use guided reflections on Monday!

Sarah Marie DeLeeuw
National Council of Teachers of Mathematics, Reston, Virginia

## 12:30 P.M.-1:30 P.M.

## 79

## Essential, Immediate Actions to Implement the Common Core State Standards

(Pre-K-5) Session
What are the most important actions to take now to implement the content and mathematical practices of the CCSS, even though the related assessments will not be in place until 2014? Learn about crucial differences between CCSS and current practice and how to modify your instruction to meet these new expectations.

## Diane J. Briars

National Council of Supervisors of Mathematics, Pittsburgh, Pennsylvania

Room 318
t©R 80
Beyond Paper: Using Technology to Extend the Lesson

(3-5) Session

The interactive session will encourage the extension of mathematical concepts through nontraditional avenues such as writing assignments, interactive boards, forums, and classroom systems. This session will specifically focus on students having the opportunity to communicate orally and through print.
Nicole Hamilton
Archipelago Learning, Dallas, Texas
Room 415

81

## Using Lab Reports to Increase Interest in Algebra 1 Class

(6-8) Session
Experience firsthand how lab reports have successfully increased interest in Algebra 1 classes while providing real-life, mathematical modeling experiences for students. Discuss writing and grading reports, as well as implementation strategies. Bring your calculator. Examples will be distributed.

Willard H. Blaskopf, Jr.<br>Newark Academy, Livingston, New Jersey

## LER 82

## Space Marh@NASA and NASA eClips ${ }^{\top \text { : }: ~ R e a l-W o r l d ~ A l g e b r a ~}$

## Connections

## (6-12) Session

Do your students ask why they should learn algebra and when they might use it? Free Space Math@NASA and NASA eClips ${ }^{\text {sm }}$ video segments answer these questions by building real-world connections and relevance to algebra content. You will also learn how to power up your lessons using other Web 2.0 tools, such as online models and simulations.

Sten Odenwald
NASA Goddard Space Flight Center, Greenbelt, Maryland

## Elaine Lewis

NASA Goddard Space Flight Center, Greenbelt, Maryland

## Sharon Bowers

National Institute of Aerospace, Hampton, Virginia
Room 314

## 83

## I See It, Now I Understand and Can Solve It

(9-12) Session
Students struggle solving application problems involving algebra concepts. Come join a session that will offer multiple, visual approaches to building algebra concepts for all students. Each participant will receive a preview CD and sample lessons.
Brenda J. Morgan
Houston Independent School District, Houston, Texas
Room 320

Stay Connected! Check us out on Twitter and Facebook.

## 12:30 P.M.-1:30 P.M.

## LOR 84

## How Graphing Technology Changes Teachers' Questioning

(9-12, Preservice and In-Service) Session<br>Current graphing technology allows students to explore mathematical concepts by examining actions on the screen and observing consequences. As a result, teachers' questions must aim to elicit students' thinking and promote conversation among students. The speaker will share questioning techniques and sample lessons from algebra through calculus.<br>Daniel Ilaria<br>Mahwah Public Schools, Mahwah, New Jersey

12:30 P.M.-2:00 P.M.

## 85

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

(Pre-K-2) Gallery Workshop
Transformers, moveable numbers, PlayDough, and snacks will illustrate hands-on approach that help every student develop concepts of numbers, money, time, and measurement. English as a Second Language and exceptional students, or anyone, will enjoy these activities that transform reluctant learners into avid mathematicians.

Kathryn Robinson
WriteMath Enterprises, Inc., Valrico, Florida
Room 302

## 86

> The Most Powerful Model You've Probably Never Heard Of

(Pre-K-2, Preservice and In-Service) Gallery Workshop
Are you frustrated with your students' lack of number sense? A tool from the Netherlands is starting to make its way into the United States that can help you and your students.
This interactive session will focus on using a rekenrek (aka arithmetic rack) to help teachers facilitate students' development of number sense.
Christina D. Tondevold
Mathematically Minded, Orofino, Idaho
Room 308/309

## 87

## Shuffling into Math: Primary School Math Games

(Pre-K-5) Gallery Workshop

Come prepared to play card and dice games that help your primary school students achieve success in numeration, operations, place value, and graphing. The speaker will share excellent take-home ideas, game boards, students' work samples, and more that work for regular, English as a Second Language, and after-school programs.

## Jane Felling

Box Cars \& One-Eyed Jacks, Edmonton, Canada
Room 418

## 88

Games: An Essential Component for Differentiation and Center Activities

## (3-5) Gallery Workshop

Participants will play, analyze, and differentiate games that provide single- and cross-strand conceptual practice while promoting problem solving. Topics include regrouping, place value, fractions, decimals, and algebraic thinking. Game implementation techniques will be modeled, and rules and relations materials will be distributed.

## Suzi Streppone

LL Teach, Inc., Bridgewater, New Jersey
Room 411

## 90

Illustrating Fraction Concepts and Vocabulary for All Students (3-8) Gallery Workshop
Using a concrete-representational-abstract sequence, participants will illustrate and model essential fraction concepts and vocabulary as they create fraction concept cards and quantity recognition sheets. Participants will solve fraction problems with manipulatives as they learn new strategies for fraction instruction.

## Marilyn Zecher

Multisensory Training Institute, Dyslexia Education Center, Rockville, Maryland

Room 322

## 12:30 P.M.-2:00 P.M.

## 91

## Wading Pools and Water Wings for Problem Solvers

(3-8) Gallery Workshop

Teaching kids to be swimmers by throwing them into the deep end and then walking away doesn't always succeed. Teaching them to be problem solvers by giving them challenging problems and leaving them to "sink or swim" has similar results. Support strategies help all students succeed in problem solving. Get your mathematical water wings here!

## Mary Altieri

Math Olympiads for Elementary and Middle Schools, Bellmore, New York

Room 312

## 91.1

## Origami and Mathematics: Perfect Together (6-8) Gallery Workshop

According to the Common Core State Standards, students will learn ratios, fractions, area, and relationship between shapes in gr. 6/7. They will move on to congruence and similarity of 2-d shapes and delve in depth into studying triangles in gr.8. Participants will explore how to use origami to help students learn and retain these concepts.

Patsy Wang-Iverson
Gabriella and Paul Rosenbaum Foundation, Bryn Mawr, Pennsylvania

Room 412

## 92

## Activities to Help the Lower 50 Percent of Students Learn Algebra <br> (6-12) Gallery Workshop <br> Looking for methods and activities that will engage and reach the reluctant learner? Then this workshop is for you. The speakers will present several activities that will engage your students as they learn difficult algebraic concepts, your students as they learn difficult algebraic concepts, including solving equations, writing linear equations from data, systems of equations, and others.

Paul J. Weisse
Appleton Area School District, Appleton, Wisconsin
Thomas Strauss
AMME, Inc., Fond du Lac, Wisconsin

## Exceptional, Free Online Resources for the Middle Grades Classroom

## (6-12) Gallery Workshop

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

## G. Patrick Vennebush

National Council of Teachers of Mathematics, Reston, Virginia

Room 401

## 94

## Let's Get "Write" to the Common Core

 State Standards(6-12) Gallery Workshop
How can we not only cover the Common Core State Standards but also reinforce them in and outside the classroom? By writing, of course. The speakers will discuss how to use writing in many different forms both to introduce students to the standards and to reinforce the knowledge they've learned.

Douglas G. Smith
Pittsgrove Township Board of Education, Elmer, New Jersey
Corinne Kallman
Bergen Community College, Paramus, New Jersey
Room 301

## 95

## Problem Solving, Reasoning, and Engagement with Mathematical Card Tricks

(6-12) Gallery Workshop
Participants will try to determine why certain card tricks work. They will learn the mathematics for the tricks and then discuss how to implement them in their courses and assess their effectiveness.

James R. Matthews
Siena College, Loudonville, New York

## 12:30 P.M.-2:00 P.M.

## 96

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

(9-12, Preservice and In-Service) Gallery Workshop
Textbooks and chapter projects often refer to mathematics in the world around us, yet they restrict examples to two-dimensional photographs and static representations. Participants will develop lessons, based on photographs and videos taken during this conference, using technologies that superimpose the mathematics directly onto images.
Mike Reiners
Christ's Household of Faith School, Saint Paul, Minnesota

2:00 P.M.-3:00 P.M.

## 98

## A Mathematical Carnival (General Interest) Session

Step right up! Enter the wonderful world of recreational mathematics. The presenter will model enthusiastic teaching and presents mathematics in a spirit of play. You will receive a handout of activities that enhance NCTM standards and motivate students to become active learners. Come prepared to experience the beauty and fun of mathematics.

Charles B. Sonenshein
Wright State University, Dayton, Ohio
Room 403

## 1:00 P.M.-2:00 P.M.

## ew 97

## Mental Math with Fractions, Decimals, Percents, and Degrees

 (K-8) Exhibitor WorkshopThis multisensory program connects fractions, decimals, percents, and degrees to a clock face. Do mental math, compare fractions, convert them to decimals, add or subtract in your head, and master pie charts. Discover real-world applications for all four learning styles for regular, special and gifted education, and Response to Intervention. No training! www.clockwisemath.com

ClockWise Fractions
Lewisville, Texas
Room 315
ew 97.1

## Navigating Your Way through the Fraction Story of the Common Core

## (K-8) Exhibitor Workshop

One approach to the story of fractions is to build on students' understanding of counting and whole-number arithmetic and extend this previous knowledge to the study of fractions. This session will focus on conceptual understanding of the "knotty" topic of fractions, including connections to equal partitioning and unitizing. Video clips will be used to examining the conceptions many students have that allow them to complete some tasks successfully but that prove inadequate in other contexts.
Pearson
Room 262

## 99

## Shaping Critical Thinking to Increase the Value of Differentiated Instruction

## (General Interest) Session

Participants will learn about critical thinking and strategies that they can use in their inclusive classrooms.
Julie Norflus-Good
Ramapo College of New Jersey, Mahwah, New Jersey
Room 414

## 100

What Is Different between U.S. Hands-On and Asian Cognitive Approaches?

## (General Interest) Session

American grades 3-8 fraction curricula, along with standards, require using three models for hands-on exploration. The Asian curricular model, not emphasizing any particular fraction model, seems to produce greater cognitive development. Come discuss how North American educators can redesign curriculum along Asian approaches to rational numbers.

Hsuehi (Martin) Lo
Saint Cloud State University, Saint Cloud, Minnesota

## 2:00 P.M.-3:00 P.M

## 101

## Building Algebraic Thinking for

Pre-K-Grade 2

## (Pre-K-2) Session

This session will share valuable strategies for building algebraic thinking through literature, songs, movement, and meaningful mathematical content. Participants will leave with practical strategies that model differentiation and higher-level thinking. The speaker will share her energetic, meaningful message about teaching content-intensive mathematics.

Kim Sutton
Creative Mathematics, Arcata, California
Room 314

## 105

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

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

This presentation will showcase the upcoming book on mathematics and ELLs, focusing on describing the stages of second language development and implications for teaching elementary school mathematics. Video clips and lesson plans will illustrate examples of how to engage ELLs at different English proficiency levels in learning mathematics.

## Nora Ramirez

TODOS: Mathematics for ALL, Tempe, Arizona
Sylvia Celedón-Pattichis
University of New Mexico, Albuquerque, New Mexico
Room 410

## LER 102 <br> Multiplayer Gaming and Math Fact Fluency

(Pre-K-5) Session
Ninety-seven percent of elementary school students play video games. If aspects of multiplayer gaming combined with educational content can transform learning. This presentation will demonstrate multiplayer multiplication games, results from an NSF study on multiplayer gaming and fact fluency, and ideas for classroom game integration.

David Woodward
Boulder Valley School District, Boulder, Colorado
Room 421

## 104

## Making Fractions Tow the Line

(3-5) Session
See how a group of fourth graders demonstrate their understanding of placing fractions on a number line. The session will discuss some results of a brief study and students' work as it guides teachers' instruction. Participants will receive samples of the activities and students' work.

Shelly Heron<br>Kent State University at Stark, North Canton, Ohio

Room 319

## 106

## Generating Students' and Teachers' Excitement for Mathematical Problem Solving

(3-8) Session
A "problem" is not a problem if it has an easy solution. Real problems must challenge appropriately, have multiple solution paths, and lead students to understand mathematical concepts better. Participants will discover ways that they and their students can become better problem solvers while preparing them for any assessment.

## Nicholas J. Restivo

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

Room 405/406

## 107

## Geometry: Activities That Check for Understanding and Motivate (6-8) Session

This session will explore important concepts using a variety of activities and questioning formats. The topics will be consistent with the Common Core State Standards, among them coordinate geometry, area, and perimeter, modified also for constructed-response questions.

David Glatzer
Retired, West Paterson, New Jersey

## 2:00 P.M.-3:00 P.M.

## 108

## Empowering Students through Reasoning and Sense Making: Video Clips and Tasks <br> (6-12) Session

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

## J. Michael Shaughnessy

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

Daniel Chazan
University of Maryland, College Park, Maryland
Room 402

LER 109

> Gaining Perspectives of Generalizations Involving Transformations (9-12) Session
> Participants will rotate and reflect geometric figures using the Cartesian plane. They will use technology to gain insights and perspectives of the concepts that help make generalizations about specific transformations.
> Estella P. De Los Santos
> University of Houston-Victoria, Victoria, Texas

Room 420

LER 110
Technology and Mathematics: The Right Angle
(9-12) Session
Seven software pieces + 113 digital images + five grade levels +29 ideas +17 videos $=61$ minutes of prime technology fun. Computer technology can do much more than answer math questions. It can pose them, thereby enticing students to investigate and play with mathematical ideas. "Aha!" moments abound.

Frank Sobierajski
The Math Place, Cato, New York

## Students Using ProbeWare in Marh and Science

## (9-12, Higher Education) Session

This presentation on ProbeWare and its uses in the classroom will familiarize participants with the technology. The speakers will share ideas for projects that they have used with students, and the results and effect using ProbeWare has had on students' learning.

Angie M. Morgan
Ohio Valley University, Vienna, West Virginia
Gordon L. Wells
Ohio Valley University, Vienna, West Virginia
Room 305/306

## 2:30 P.M.-3:30 P.M.

## ew 112

## CCSS: Aligned Mathematics for the Middle Grades

## (6-8) Exhibitor Workshop

At last, a new middle grades curriculum in an engaging' digital format that's also aligned to the Common Core State Standards (CCSS)! Math Innovations focuses on reasoning, sense making, questioning, and mathematical discourse while increasing students' conceptual understanding. Learn about the interactive eBook and integrated learning tools, including whiteboard activities, practice games, and more.
Kendall Hunt Publishing Co.
Dubuque, lowa
Room 315
ew 113
Mathematics Achievement: Essential Curriculum, Automatic Data, and Differentiated Instruction (3-8) Exhibitor Workshop
Enhance and differentiate your instruction with statespecific online assessments, practice, and curriculum for grades 3-8. Take an exciting look at this new technology and an exclusive peek at how instantaneous scoring, realtime reporting, and actionable data can make a difference in your district.

## Triumph Learning

New York, New York

## 2:30 P.M.-4:00 P.M.

## 114

## 3, 2, 1, Blast Off! <br> On a Mission to Create a Space Week

 (Pre-K-2) Gallery WorkshopLearn about five hands-on math activities that incorporate mathematics with a Space twist, such as Alien Eyes, Tangram Rocket, and Alien Invasion, which promote number sense, geometry, and problem solving. Increase mathematical understanding and build enthusiasm toward learning math by incorporating activities about space.
Kristen Appleby
University of Florida, Gainesville, Florida
Room 322

## 115

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

(Pre-K-5) Gallery Workshop

This very interactive session will introduce teachers to innumerable creative ways of exploring many concepts in all strands of math on a large, 100 -square floor grid. The speaker will share fun, foolproof strategies for immediate implementation.
Wendy E. Hill
Retired, Huntsville, Canada
Room 412

## 116

## Area, Arrays, and Algorithms (3-5) Gallery Workshop

Visual representations can help students improve their understanding of multiplication, division, and geometry. Experience games and hands-on concrete, pictorial, and symbolic activities, with a variety of geometric tools, that explore connections to number. Geometry can help students avoid multiplication mayhem and division disaster!

Janet H. Caldwell<br>Rowan University, Glassboro, New Jersey

2:30 P.M.-4:00 P.M.

## 120

## What Does It Mean to Be Average? (6-8) Gallery Workshop

When you ask your students what the mean is, they say it's the average. When you ask students what an average is, they tell you that you to add all the numbers and divide by the total number of items. But what does average really mean? This session will explore hands-on activities that develop the concepts of mean, median, mode, and range.
Kristi Grande
Love of Learning Educational Services, LLC, Anchorage, Alaska

Room 404

## 121

## Stories and Technology: Gateways into Mathematics for All

## (6-12) Gallery Workshop

This workshop, through teacher-created stories, will explore using technology such as a SMARTboard, PowerPoint, and the CAST UDL Web site, to offer access to various mathematics concepts. The speakers will address specific strategies for diverse learners, including learning-disabled students and English-language learners.
Karen Terrell
Boston College, Chestnut Hill, Massachusetts
Dennis DeBay
Boston College, Chestnut Hill, Massachusetts
Room 419

## 122

## Fun with Functions: Active Learning Strategies

(9-12, Preservice and In-Service) Gallery Workshop
Learn how to have fun with functions by using in-class activities that make this abstract topic much more concrete. Participants will be engaged in a variety of hands-on activities which model different types of functions. Connections to technology will also be explored. Handouts will be provided.

## Revathi Narasimhan

Kean University, Union, New Jersey
品

# Public-Domain, Mathematical Software to Support Implementing the Common Core State Standards (CCSS) 

(9-12, Preservice and In-Service) Gallery Workshop
This session will overview of the design features of and demonstrate CPMP-Tools, a suite of public-domain software that includes a computer algebra system, spreadsheet, and interactive geometry, data analysis, and discrete mathematics tools. The speakers will focus on problems that align with the CCSS.

Christian R. Hirsch
Western Michigan University, Kalamazoo, Michigan

## Beth E. Ritsema

Western Michigan Unversity, Kalamazzoo, Michigan
Room 312

Roa

## 123.1

## A Professional Development Partnership to Promote Constructive Learning

(Preservice and In-Service) Gallery Workshop
This session will focus on establishing a professional development partnership that helps teachers integrate effective research strategies on mathematics teaching. Examples will encourage participants to concentrate on pedagogical strategies that require students to manipulate materials and ideas in order to explore concepts and make connections.
Krista Althauser
Eastern Kentucky University, Richmond, Kentucky
Room 418

## 125

## New and Preservice Teachers' Workshop

## (Preservice and In-Service) Gallery Workshop

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

## G. Patrick Vennebush

National Council of Teachers of Mathematics, Reston, Virginia

Room 411

## 3:30 P.M.-4:30 P.M

## 126

## Enhancing the Math Inclusion Coteaching Experience Using Interactive Whiteboards

## (General Interest) Session

Wondering how to improve your math inclusion coteaching experience? Come see how daily integrating your interactive whiteboard will help reach not only your special-education students, but all your learners. Classroom-ready strategies, tips, and tricks for dynamic lesson planning highlight the session. Make your class work for everyone involved.

## Martin Ford

Pennsauken High School; Education First PD Solutions, LLC,
Pennsauken, New Jersey
Rose Birkhead
Pennsauken High School; Education First PD Solutions, LLC, Pennsauken, New Jersey

## Eileen Egan

Pennsauken High School, Pennsauken, New Jersey
Room 408/409

LER 127
Learn $\leftrightarrow$ Reflect Reflection Session
(General Interest) Session
This culmination session of the Learn $\leftrightarrow$ Reflect strand will facilitate a discussion of four reflection questions. Those who attend the Kickoff, at least one Learn $\leftrightarrow$ Reflect session, and the Reflection session will earn a personalized certificate.

## Norma Boakes

Richard Stockton College of New Jersey, Pomona, New Jersey
Cheryl Giordano
Morris Hills Regional District, Rockaway, New Jersey
Brian Rawlins
Scotch Plains-Fanwood School District, Scotch Plains, New Jersey
Christina Tondevold
Mathematically Minded, LLC, Orofino, Idaho
Room 405/406

## 128

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

(General Interest, Research) Session

In India, sociocultural dynamics play important role in mathematics teaching and learning practices. U.S. schools often lack an intentional effort to help culturally and linguistically different (CLD) students. Lessons learned from Indian mathematics education would enrich mathematics teaching strategies for CLD students.

## Rupam Saran

City University of New York, New York, New York
Room 402

## 129

## Teaching Math Online: Using the Research

## (General Interest) Session

This presentation will show how existing research should, but too often doesn't, guide online math instruction. It will examine how many online math lessons fly in the face of current research, and then demonstrate promising efforts and examples of lessons that more fully incorporate current research findings.
Harold I. Lawrance
K12, Herndon, Virginia

## 130

## It's All about Ten! <br> (Pre-K-2) Session

This session will deal with the importance of elementary students' understanding how 10 composes and decomposes. Participants will engage in activities that promote students' understanding of the number 10 , fact families, and the commutative property.
Mary Buck
CORE, Berkeley, California

Stay Connected! Check us out on
Twitter and Facebook.

3:30 P.M.-4:30 P.M.

## 131

## Assessment Data: How Can Teachers Use This in the Classroom?

(Pre-K-5) Session
Assessment data on students inundates many teachers. The challenge we face is how to use the data to help our students make gains. This session will highlight the latest research in assessment of young students on math concepts. Moreover, the participant will learn how to use the data to design activities to improve math performance.

## Jeff Ohmer

McGraw-Hill Companies, Saint Johns, Florida
Room 320

## 134

## Data-Driven, Differentiated Instruction Provides Algebra Readiness in Middle School <br> (6-8) Session

Assessment, activities matched to Common Core State Standards, and research-based strategies prepare the lowest 20 percent of middle school students for success in algebra. Learn about differentiated instruction for Response to Intervention, English language learner, and special education students. Receive handouts.

## Caryl K. Pierson

Math Teachers Press, Inc., Minneapolis, Minnesota

## Amy Johnson

Math Teachers Press, Inc., Minneapolis, Minnesota
Room 319

## 132

## Making Math Assessments Meaningful (Pre-K-5) Session

This session will cover how to make an assessment meaningful to students. It will give specific examples of how to teach your students to become responsible for their own learning. Participants will leave with a variety of different ways to assess their students and the confidence to teach their students to analyze their own mistakes.

## Amy Besterman

Avonworth School District, Pittsburgh, Pennsylvania
Room 403

## 135

## Using Mathematics to Increase Civic Participation: The Case of Philadelphia (6-8) Session

Not all students have the same access to information for participating in institutional processes that will enhance their educational opportunities. This session presents how mathematics lessons can use real data of consequence to urban middle school students, such as data on high school choices, to increase their mathematics and civic engagement.
Vivian Y. Lim
University of Pennsylvania, Philadelphia, Pennsylvania
Janine Remillard
University of Pennsylvania, Philadelphia, Pennsylvania


3:30 P.M.-4:30 P.M.

## 136

## Using Online Simulations to Improve Conceptual Understanding in Mathematics

(6-8) Session
Learn how Gizmos online simulations help teachers take advantage of research-proven instructional strategies and help students of all ability levels develop conceptual understanding in mathematics. Teachers enhance instruction with powerful interactive visualizations of concepts, while students engage in extensive "what-if" experimentation.
Teresa M. Moon
Crestwood High School, Mantua, Ohio
Room 420

## 136.1

## Moving Special Education Students from Procedure to Thinking <br> (9-12) Session

A way to encourage students to think deeply about word problems is to remove the numbers. Participants will solve and discuss problems without numbers, examine some student and teacher solutions, and explore ways in which they can use such problems to enhance special ed students' mathematical reasoning.

Richard Askey
University of Wisconsin, Madison, Wisconsin
Marian Palumbo
Bernards Township Public Schools, Basking Ridge, New Jersey

\author{

## Patsy Wang-lverson

 <br> Gabriella and Paul Rosenbaum Foundation, Bryn Mawr, Pennsylvania}

## Who Wants to Be a Millionaire? Mathematics of Retirement Investing

## (9-12, Higher Education) Session

This talk will focus on using spreadsheets and the development and analysis of discrete dynamical systems to examine fully the advantages of investing early for retirement. It will also discuss retirement savings issues, such as $401(\mathrm{k})$, IRA, mutual funds, employer match, diversification, and asset allocation.

Paul Laumakis
Rowan University, Glassboro, New Jersey

## Marlena Herman

Rowan University, Glassboro, New Jersey
Room 410

## 139

## Developing an Online Lesson-Study Community <br> (Preservice and $\ln$-Service) Session

Lesson study can supporting teachers' development, but is difficult to sustain in schools. The speakers will discuss their efforts to create a virtual lesson-study community, which uses the Internet and other technologies to create an infrastructure that allows teachers from different schools in lesson-study activities conveniently and efficiently.

## Jason Silverman

Drexel University, Philadelphia, Pennsylvania
Hope Yursa
Drexel University, Philadelphia, Pennsylvania
Room 305/306

## ORIGO



## Looking for better results in your classroom?

ORIGO Education provides in-depth professional learning, intervention resources, and supplemental materials for elementary schools. Our unique solutions are research-based, highly effective, and utilize the latest technologies. Educators with decades of mathematics experience create all of ORIGO's resources and services to help classroom teachers make a difference.

## FRIDAY PLANNER

8:00
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## EW Exhibitor Workshop

## Highlights

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

Registration Hours
7:00 a.m.-4:00 p.m.
Exhibit Hours
8:00 a.m.-4:00 p.m.
Bookstore and Member
Showcase Hours
8:00 a.m.-4:00 p.m.

## Fire Codes

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

7:15 A.M.-7:45 A.M.

## 140

## New Members and First Timers' Orientation

## (General Interest) Session

New to NCTM? Join us to learn how to maximize your membership experience! From journals and online lessons, tools, and activities; to networking and career-advancement opportunities; you'll discover all that NCTM has to offer you. Also, learn how to make the most of your time at the conference.
John E. Hammett III
Saint Peter's College, Jersey City, New Jersey
Room 318

## 8:00 A.M.-9:00 A.M.

## 141

## Clicking Developmental Mathematics and Beyond

## (General Interest) Session

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

## Jerry J. Chen

Suffolk County Community College, Selden, New York

## Myung-chul Kim

Suffolk County Community College, Selden, New York

## Christine Brady

Suffolk County Community College, Selden, New York

## Extra, Extra...

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

8:00 A.M.-9:00 A.M.

## 144.1

## Math Talk: Teaching Concepts and Skills through Illustrations and Stories

## (Pre-K-2) Session

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

## Char Forsten

Staff Development for Educators, Peterborough, New Hampshire

## 145

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

(Pre-K-5) Session
Elementary mathematics specialists, coaches, or instructional leaders deal with their own set of challenges every day. This session will actively explore issues of transitioning to the Common Core State Standards, the adult learner, and relationships with other teachers and others.
Francis (Skip) Fennell
Past President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland

Jonathan Wray
Howard County Public Schools, Ellicott City, Maryland
Beth Kobett
Stevenson University, Eldersburg, Maryland
Room 403

## 146

## Yes, We Can! Overcoming Students' Math Anxiety

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

Jennifer Rising
Nueva School, Hillsborough, California

## Exploring Cognitive Demand in Teachers' Use of Instructional Materials

(6-8) Session
What does cognitive demand mean for your classroom? Participants will define and analyze levels of cognitive demand for middle school mathematical tasks. This session will share findings from research on how teachers implement materials, and discuss opportunities to learn and the possible impact on students' achievement.

## Karen King

National Concil of Teachers of Mathematics, Reston, Virginia
Jessica Tybursky
New York University, New York, New York
Candace Barriteau Phaire
New York University, New York, New York

8:00 A.M.-9:00 A.M.

## 149

## Illuminate and Clarify Variables and Functions' Behavior with Sketchpad ${ }^{\circledR}$

 (6-12) SessionStudents needn't struggle with domain, range, composition, and inverses. Learn how students using Sketchpad 5 create geometric functions, drag input points to determine output points, produce visual images of compositions and inverses, and transform photographic images. We'll report on actual classroom use and offer ready-to-use activities.

## Scott Steketee

Key Curriculum Press Technologies, Emeryville, California
Erin Garvey
Science Leadership Academy, Philadelphia, Pennsylvania Brian Cohen
School of the Future, Philadelphia, Pennsylvania
Room 320

## 150

## Puzzles and Codes that Enhance Number Theory

 (6-12) SessionBeginning with the Break the Code game, enjoy an exploration into the marvels of number theory. Take home a cornucopia of games, puzzles, and investigations to share with your students throughout the year.

## Eric O'Brien

Bellmore Schools, Bellmore, New York
Room 421

## Integrating Quantitative Reasoning (QR)

 across the Curriculum: A Grass-Roots Movement(9-12, Higher Education) Session

Our students must develop QR skills to compete in today's world. The speakers will discuss what QT is and how they involve faculty in implementing related activities in their classes. Participants will have access to materials to help them develop QR projects for their classes.
Gordon L. Wells
Ohio Valley University, Vienna, West Virginia
Angie M. Morgan
Ohio Valley University, Vienna, West Virginia
Room 305/306

## 153

## Examining Prospective Teachers' Mathematical Dispositions and Achievement in Mathematics

(Higher Education, Preservice and In-Service) Session

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

James E. R. Beyers
College of New Jersey, Ewing, New Jersey
Room 405/406

8:30 A.M.-9:30 A.M.

## ew 154

## Addressing Common Core

 Mathematical Practices Using Models from Math in Context ${ }^{\text {® }}$(General Interest) Exhibitor Workshop
Experience realistic mathematics education and problem solving while exploring multiple number models that support the Common Core. These models move students to a deeper understanding of number and operations. Each participant will receive a free Number Tools workbook.
Britannica Digital Learning
Chicago, Illinois
Room 315

8:30 A.M.-9:30 A.M.

## ew 155

## Interact with the Common Core Mathematical Practices, Every Day (K-5) Exhibitor Workshop

Experience the Common Core State Standards for Mathematical Practice in action using interactive technology. Through meaningful classroom discussion centered on the Every Day Counts digital white board curriculum, learn ideas for reinforcing, building, and mastering the Common Core in just ten minutes, every day.
Houghton Mifflin Harcourt
Boston, Massachusetts
Room 321

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

## 156

## Developing Number Sense in the Primary Grades <br> (Pre-K-2) Gallery Workshop

Experience a variety of rich mathematical tasks that help students to develop number sense in grades K-2. Practical ideas for classroom use will be included, as well as connections to the Common Core.
Linda Gojak
President-Elect, National Council of Teachers of Mathematics; John Carroll University, University Heights, Ohio

Room 418

## 157

## Math Workstations at Work <br> (Pre-K-5) Gallery Workshop

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

Mary Puglisi
Sayville Public Schools, Sayville, New York

## 159

## Exploring Addition, Subtraction, and Multiples with Dynamic Number Grids

 (3-8) Gallery WorkshopImagine a number grid that can display multiples of any two numbers simultaneously, change its dimensions and range of values, and be used to develop strategies for addition and subtraction. Better yet, bring your laptop and engage in activities that take the traditional hundreds chart and turbocharge it for the twenty-first century.
Daniel Scher
Key Curriculum Press Technologies, Emeryville, California
Scott Steketee
Key Curriculum Press Technologies, Emeryville, California
Room 417

## 160

Algebraic Equations and Water: What a Combination!
(6-8) Gallery Workshop
Grades 6-9 students need experiences that allow connections among tables, graphs, equations, manipulatives, and verbal descriptions. Participants will engage in two standards-based activities that allow students to discover and apply slope-intercept form while making mathematical and real-world connections.

Rachelle D. Meyer
Baylor University, Waco, Texas
Room 419

## 8:30 A.M.-10:00 A.M.

## 161

## Differentiating Math Instruction for Multiple Intelligences (6-8) Gallery Workshop

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

## John Hinton

Hofstra University, Hempstead, New York

## 162

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

(6-8) Gallery Workshop
The Common Core State Standards state that students need to discuss, develop, and justify formulas for areas of plane figures by decomposing, rearranging, and relating them to rectangles. Come learn how you can help students improve their mathematical thinking, problem solving, and understanding through a series of area exploration activities.

## Makoto Yoshida

William Paterson University, Wayne, New Jersey
William Jackson
Scarsdale Public Schools, Scarsdale, New York
Room 401

## 164

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

(9-12) Gallery Workshop
In this interactive presentation, participants will calculate means, expectations, biases, and proportions to determine if the American Idol competitor who got the most "counted" votes was the contestant who actually received the most votes, because of a flawed, biased voting scheme made worse by geography, age, and gender.

Jason Gershman<br>Nova Southeastern University, Fort Lauderdale, Florida

Room 412

## 165

Creative Projects for Teaching Mathematics in the Differentiated Classroom
(9-12) Gallery Workshop
Enhance your students' mathematical literacy by engaging them in creative activities. The speakers will use a constructivist approach to explore advanced concepts of composite and inverse functions, rational exponents, and word problems. Participants will learn effective methods for improving students' study skills.
Diane L. Johnson
Central Consolidated School District \#22, Kirtland, New Mexico

Mary A. Boognl
Central Consolidated School District \#22, Kirtland, New Mexico

Room 308/309

## 166

## Using Manipulatives in the Algebra Classroom (9-12) Gallery Workshop

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

## Don Balka

Saint Mary's College, Notre Dame, Indiana

## 8:30 A.M.-10:00 A.M.

## 167

## Promoting Classroom Discourse and

 Developing Questioning Strategies Using Dynamic Technology(Preservice and In-Service) Gallery Workshop
Experience this interactive session focusing on students' reasoning and sense making using dynamic technology. Explore strategies that connect mathematical notions including finding solutions to algebraically "unsolvable" problems. Multiple perspectives that promote classroom discourse and involve dynamic technology and software will be discussed.

## Farshid Safi

College of New Jersey, Ewing, New Jersey

## 9:30 A.M.-10:30 A.M.

## 168

Craffing Creative Thinkers: Teaching Life Lessons through Mathematics

## (General Interest) Session

What will our students remember after they've forgotten the quadratic formula and how to solve for $x$ ? We celebrate the real prize in teaching- inspiring students' creativity in math and beyond-with entertaining antics that allow us to foster the pleasures of effective thinking while preparing students for the stressful reality of standardized exams.
Edward Burger
Williams College, Williamstown, Massachusetts
Room 403

## 169

## Let Me Count The Ways: Benefits of Subitizing

(Pre-K-2) Session
A partnership between a university instructor and a secondgrade teacher resulted in significant gains in basic addition fact automaticity for second- grade students. The speakers will share research, data, results, observations, instructional strategies, and activities.
Mitzi James Adams
Abilene Christian University, Abilene, Texas
Evelyn Moser
Abilene Independent School District, Abilene, Texas

## 170

## Teaching Basic Operations to Diverse Students Using the Model Method

(Pre-K-5) Session

The model method for problem solving from Singapore Math derives from the concrete-representation-abstract technique for teaching mathematics. Learn how to implement the model method for teaching basic computation to students with diverse learning needs.
Joseph Sencibaugh
Truman State University, Kirksville, Missouri
Angela Sencibaugh
Valley Park School District, Valley Park, Missouri
Room 408/409

## 171

## Activities That Reach the Core of Important Math Concepts (3-5) Session

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

Joyce A. Glatzer
West New York Public Schools, West New York, New Jersey

Room 410

## 172

## Eliminate Speed Bumps on the Road to Common Core Math Standards

(3-8) Session
We will soon teach—or not—some math concepts that have challenged students most in different grades. This transition will present both a challenge and an opportunity. Participants will consider specific examples and discuss strategies for most effectively implementing the Common Core State Standards.
Robert J. Riehs
New Jersey Department of Education, Trenton, New Jersey
Room 415

9:30 A.M.-10:30 A.M.

## 173

## Making Memories in the Math Classroom

(3-8) Session

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

## Charles B. Sonenshein

Wright State University, Dayton, Ohio
Room 320

## 174

## Multiplication Rock! for the Twenty-first Century

(3-8) Session
Multiplication Rock! animated shorts, staples of 1970 s, Saturday-morning television, can teach so much more than just multiplication facts. See how clips from the videos can create exercises in pattern recognition, properties of multiplication, and even alternative number bases. Handouts with lesson ideas will be provided.
Julie A. Belock
Salem State University, Salem, Massachusetts
Room 402

## 175

## Refocusing Our Classrooms: New Opportunities for Students' Learning (6-12) Session

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

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

## Bringing STEM into Your Classroom (9-12) Session

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

## David Young

Fayetteville Public Schools, Fayetteville, Arkansas
Room 319

## 177

Easy Does It!
(9-12) Session
Go beyond philosophical concepts and learn simple, classroom-tested, practical techniques that both engage and differentiate instruction for inner-city students. Participants will learn how quick, easy adjustments to an activity will enable them to reach a broad range of students' abilities.
Patrick L. Bryar
New York City Department of Education, New York, New York

Room 414

## 178

## Get Smart! Take the SAT!

(9-12, Higher Education) Session
The speaker took the SAT again after 29 years to relive studying and test taking, fill gaps in her education, and relate better to students' experiences. We can use the SAT/ ACT/GED for college and career standards while improving skills and persistence. Studying for the SAT can challenge and entertain while promoting brain fitness at any age.
Robin A. Schwartz
Math Confidence; College of Mount Saint Vincent, Bronx, New York

Room 420

## 9:30 A.M.-10:30 A.M.

## 179

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

## (9-12, Higher Education, Research) Session

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

Lauretta E. Garrett
Tuskegee University, Tuskegee, Alabama
Room 405/406

## 180

## Teaching Algebra Concepts to Students with Special Needs

(9-12, Preservice and In-Service) Session
With appropriate strategies, resources, and pedagogy, students with special needs are very capable of learning algebra concepts. This session will explore how those strategies, resources, and pedagogy apply to several important concepts in middle and high school algebra. The speaker will discuss learning difficulties specific to algebra.

## Mary Lou Metz

Indiana University of Pennsylvania, Indiana, Pennsylvania
Room 305/306

10:00 A.M.-11:00 A.M.

## ew 181.1

Video Games for Intervention and Fluency, Using Singapore Math Methodology
(K-3) Exhibitor Workshop
Tricia Salerno, developer of iPad and PC games, will discuss and demonstrate the role of video technology in giving additional support in developing math competence using the strategies in Singapore Math.
SingaporeMathNow/SmartTraining
Scottsdale, Arizona
Room 313
ew 182
Transitioning to the Common Core with GO Math!
(K-6) Exhibitor Workshop
Hit the ground running and never look back! Go Math!@2012 is the program of choice for teachers across the country. Come learn more about how the Common Core State Standards will affect what you teach in Grades K-6. See how GO Math!@2012 addresses the Common Core both in content and mathematical practices. Through specific examples in the workshop, participants will learn strategies for developing mathematical practices in their students. Participants will receive a set of concept readers.
Houghton Mifflin Harcourt
Boston, Massachusetts
Room 321

## 181

## Cooperating Teachers \& Coaches: Putting Mathematics Teacher Education into Practice

(Preservice and In-Service) Session
What does it take to be an effective, cooperating teacher? Join officers from the New Jersey Association of Mathematics Teacher Educators and others in answering this and additional questions about mentoring student teachers. Come prepared to share your experiences and suggestions.
Cathy Liebars
College of New Jersey, Ewing, New Jersey
Karen lvy
New Jersey City University, Ewing, New Jersey
ew 183
Conquer Times Tables in Only Three Weeks, Guaranteed! (K-8) Exhibitor Workshop
A research-based, multisensory program teaches times tables in three weeks, guaranteed! If class average isn't 90 percent on final test, you get a 100 percent refund. Addresses all four learning styles. Regular, special ed, gifted, Response to Intervention. Tons of fun! No training! Sister products: Fishin' for Addition, Subtraction in Action, Divide'n'Slide, Clockwise Fractions and Equivalency. Visit www.rhymesntimes.com and www.clockwisemath.com.

Rhymes ' $n$ ' Times
Lewisville, Texas
Room 315

10:30 A.M.-12:00 P.M.

## 184

## Embedding Number Sense in Measurement <br> (Pre-K-2) Gallery Workshop

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

## Beth Kobett

Stevenson University, Eldersburg, Maryland
Room 418

## 185

## Building Number Sense to Develop Mental Math Skills <br> (Pre-K-5) Gallery Workshop

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

## Jeanne D. Rast

St. John the Evangelist Catholic School, Atlanta, Georgia
Room 322

## 186

## Making It Real: Easy, Effective Math Centers <br> (Pre-K-5) Gallery Workshop

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

## Marilyn Lance

Houghton Mifflin Harcourt, Austin, Texas

# Come Fly with Me! Paper Airplanes <br> Make Mathematics Lessons Soar! <br> (3-5) Gallery Workshop 

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

## James J. Clayton

Saint Peter's College, Jersey City, New Jersey

## Sera Clayton

Red Oaks School, Morristown, New Jersey

## 188

Melodies, Methods, and Models That Make Math Marvelous and Meaningful (3-5, Preservice and In-Service) Gallery Workshop
Come get ideas that you can use to help your students become true problem solvers and math lovers. Learn unique ways to assess what students have learned. See how putting the content being taught in a context helps students really understand it and remember it. Come get a free copy of the "Melodies that Make Math Marvelous and Meaningful" CD.

Brenda Barrow
Old Dominion University, Norfolk, Virginia
Room 302

## 189

## Dealing with Diversity: Math Games That Suit All Learners <br> (3-8) Gallery Workshop

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

## Joanne Currah

Box Cars \& One-Eyed Jacks, Edmonton, Alberta, Canada
Room 401

10:30 A.M.-12:00 P.M.

## 190

## Dynamic, Multirepresentational Approaches to Fractions with The Geometer's Sketchpad ${ }^{\circledR}$

## (3-8) Gallery Workshop

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

## Daniel Scher

Key Curriculum Press Technologies, Emeryville, California

## Scott Steketee

Key Curriculum Press Technologies, Emeryville, California
Room 308/309

## 191

## Beyond M\&M's and Cheerios: Making Data Collection and Analysis Fun! (6-12) Gallery Workshop

Let's make statistics fun! Participants will actively engage in hands-on, data-collection activities to generate data suitable for scatter plots, trends, box-and-whisker plots, bar graphs, histograms, and other descriptive statistics. Handouts with many other activities will be included. Most activities can be modified for all grades.
Colleen A. Watson
James Madison University, Harrisonburg, Virginia
Room 411

## 192

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

## (6-12) Gallery Workshop

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

## Fred Decovsky

Teachers Teaching with Technology, Millburn, New Jersey

## Piquing Students' Interest in Modeling (9-12) Gallery Workshop

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

## Ben Fusaro

Florida State University, Tallahassee, Florida
Room 301

## 194

## Exploring Divisibility: A Central Concept throughout the Curriculum

(Preservice and In-Service) Gallery Workshop
NCTM's Standards indicate the importance of primes, factors, and multiples. This hands-on workshop will explore divisibility through base-ten pieces, color tiles, a computer algebra system, and modular arithmetic. It will delve deeper into divisibility ideas in the Fibonacci and Lucas sequences, using congruences to furnish proofs for divisiblity.
Jay L. Schiffman
Rowan University, Glassboro, New Jersey
Room 419

## 195

## New and Preservice Teachers' Workshop

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

## G. Patrick Vennebush <br> National Council of Teachers of Mathematics, Reston, Virginia

Room 404

11:00 A.M.-12:00 P.M.

## 196

## Math + Adrenaline $=$ The Roller Coaster (General Interest) Session

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

## Mike Long

Shippensburg University, Shippensburg, Pennsylvania

## Nathan Barr

Shippensburg University, Shippensburg, Pennsylvania
Room 320

## 197

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

## Kimberly D. Mueller

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

## J. Michael Shaughnessy

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

Room 303

## Partners Building Knowledge:

Collaboration among Practitioners, Researchers, and Curriculum Developers

## (General Interest) Session

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

## Karen King

National Concil of Teachers of Mathematics, Reston, Virginia

## Gary Benenson

City University of New York, New York, New York
Derek Riley
Policy Studies Associates, Inc., Washington, D.C.
Room 318

## 199

## Providing Best Mentoring Practices and Online Support for New Teachers

## (General Interest) Session

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

Nina R. Girard
University of Pittsburgh at Johnstown, Johnstown, Pennsylvania

Room 405/406

200

## Effective Games and Practices That Lead to Students' Success

(Pre-K-2) Session
Be more efficient and selective about time devoted to number. A ready-to-use handout of highly engaging, repeatable activities and instructional strategies will help you enhance number sense and build confidence in your students.

## Laura L. Choate

Fallbrook Union Elementary School District, Fallbrook, California

## 11:00 A.M.-12:00 P.M.

## 201

## A Real Hands-On Approach to Teaching Place Value

## (Pre-K-5) Session

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

Brian J. Tickle
Consultant, Taree, Australia
Room 319

## 202

## Teaching Fractions to Build Proportional Reasoning

## (3-5) Session

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

## Kim Sutton

Creative Mathematics, Arcata, California
Room 421

## 203

## Multiplicative Identity Property of 1: Connect Its Meaning to Applications

## (3-8) Session

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

## Karen Lucas

University of Tennessee, Knoxville, Tennessee
Room 305/306

## 204

## Practices That Improve Attitude and Achievement in Mathematics and Science

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

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

Kenneth C. Wolff<br>Montclair State University, Montclair, New Jersey<br>\section*{Sumi Hagiwara}<br>Montclair State University, Montclair, New Jersey<br>Elaine Lipani<br>Kearny Board of Education, Kearny, New Jersey

## 205

## Launching Rockets and Secret Sharing

 Techniques from Algebra(6-12) Session

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

## 206

## Making Mathematics a Habit! (6-12) Session

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

## 11:00 A.M.-12:00 P.M.

## 207

## What Does the Brain Do with All That Mathematics?

(9-12) Session
Why do we find ourselves reteaching basic concepts at different stages of mathematical development? How can we help students learn toward mastery? This session will explore current brain research and give insights into how we can make instruction more effective and increase students' mathematics retention.
Carolyn Williamson
Virginia Advanced Study Strategies, Richmond, Virginia
Room 410

## 208

## Diver Problem, Surfer Problem Further Extended

(9-12, Higher Education) Session
The presenters will demonstrate methods and techniques used to help students enjoy the famous surfer problem, developing original proofs for it and extending it to a 3-D, deep-sea-diver problem with appropriate, analogous results. If you need some interesting, straightforward projects to enrich your students' learning, come join us.

## Ronald G. Smith

Harding University, Searcy, Arkansas
Dean B. Priest
Harding University, Searcy, Arkansas
Room 314

## 209

## If Math Were an Animal: Addressing Math Anxiety <br> (Preservice and In-Service) Session

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

Kimberly C. Arp
Cabrini College, Radnor, Pennsylvania

## 210

## What Do We Know about "Good Teaching" for All Students?

## (Preservice and In-Service) Session

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

## Marilyn Strutchens

Auburn University, Auburn, Alabama

11:30 A.M.-12:30 P.M.
ew 211
Visualize Singapore Math: Transitioning from the Concrete to the Abstract (K-6) Exhibitor Workshop
Singapore's Mathematics Framework focuses on problem solving and conceptual understanding through visualization. Transition from concrete to pictorial to abstract with Math in Focus: Singapore Math by Marshall Cavendish, the U.S. edition of Singapore's widely used program. This workshop will model Singapore's visual strategies: ten-frames, number bonds, and bar models.

Houghton Mifflin Harcourt
Boston, Massachusetts
Room 321
ew 212

## Mental Math with Fractions, Decimals, Percents, and Degrees <br> (Pre-K-8) Exhibitor Workshop

This multisensory program connects fractions, decimals, percents, and degrees to a clock face. Do mental math, compare fractions, convert them to decimals, add or subtract in your head, and master pie charts. Discover real-world applications for all four learning styles, regular, special ed, gifted, Response to Intervention. Tons of fun! No training! www.clockwisemath.com
ClockWise Fractions
Lewisville, Texas
Room 315

## 12:30 P.M.-1:30 P.M.

## 214

## Understanding and Implementing the Common Core State Standards for Mathematics

## (General Interest) Session

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

Nancy L. King<br>Cedar Crest College, Allentown, Pennsylvania

Room 403

## 215

## Using Asian Textbooks to Develop Number Sense in Early Grades <br> (Pre-K-2) Session

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

## William Jackson

Scarsdale Public Schools, Scarsdale, New York
Makoto Yoshida
William Paterson University, Wayne, New Jersey

## 216

## Gaining Insight into Students'

Mathematical Understanding: The
"Write" Way
(Pre-K-5) Session
Are you looking for a strategy to engage students' higherlevel thinking? Math journaling lets students demonstrate mathematical knowledge while also allowing insight into students' comprehension of conceptual and procedural knowledge. Explore practical ideas for integrating math journaling into your classroom.
Renae Castelluci
West Allegheny School District, Oakdale, Pennsylvania

## Kirsten Davis

West Allegheny School District, Oakdale, Pennsylvania

## 217

## Manipulatives from the Dollar Store

(Pre-K-5) Session
If you work in a school where manipulatives are hard to come by, or your district has a tight budget, you need not fret. Mathematics lessons for grades 1-4 can use common items from any dollar store, such as dice, playing cards, play money, colored beads, workbooks, sticky-backed shapes, and tangram pieces.

## Anita Schuloff

Paramus Catholic High School, Paramus, New Jersey
Room 415

## 217.1

## Examining the IMPACT of UDL in Special Education Mathematics Instruction

## (3-5) Session

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

## Jennifer V. Jones

Rutgers University, New Brunswick, New Jersey
Leslie Malara
Bergenfield Public Schools, Bergenfield, New Jersey
Lauren Rogers
Bergenfield Public Schools, Bergenfield, New Jersey

## 218

## Flip It Over and Multiply? What's That? (3-8) Session

The speaker will share strategies for conceptual development where one might say, "I know how to do it, but not why!" Concepts include multiplying fractions, multiplying two digit numbers, subtracting a negative, the area of a trapezoid, algebraic thinking, and more. Participants will receive a $C D$ and lesson plans.
Rudy V. Neufeld
Neufeld Learning Systems, Inc.; Thames Valley Schools, London, Canada

12:30 P.M.-1:30 P.M.

## 219

## Writing across the Mathematics Curriculum to Assess Conceptual Understanding

(3-8) Session

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

## Monica Cabarcas

Albemarle County Schools, Charlottesville, Virginia
Room 410

## 220

## Interested in Differentiation, But Not Sure Where to Begin?

(6-8) Session
This interactive session will get you started. Use NCTM resources, state standards, and advanced courses to develop anchor activities, challenges, and tiered assignments. Design lessons and activities that create a challenging, engaging learning environment for students with different readiness levels and learning styles.
Laurie Griffo
Harrison Central School District, Harrison, New York
Linda Criniti
Harrison Central School District, Harrison, New York
Andrea Courtney
Harrison Central School District, Harrison, New York

## 221

## The Mathematics behind Sports (6-8) Session

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

Diana Cheng
Towson University, Towson, Maryland
Johanna Bunn
Boston University, Boston, Massachusetts
Room 402

## 222

## Using Arithmetic Sequences to Introduce Linear Functions

## (6-12) Session

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

> Michael Manganello
> Downingtown Area School District, Downingtown, Pennsylvania
> Matthew Grinwis
> Downingtown Area School District, Downingtown, Pennsylvania

Room 320

## 223

## Technology as a Lever for Reasoning and Sense Making in Mathematics (9-12) Session

Technology can create new opportunities for reasoning and sense making. The speakers will draw exemplars from throughout secondary school mathematics, including numbers and operations, algebra, geometry, functions and modeling, statistics, and probability. They will discuss choosing and using technology effectively in mathematics classrooms.
Thomas P. Dick
Oregon State University, Corvallis, Oregon
Karen F. Hollebrands
North Carolina State University, Raleigh, North Carolina
Room 408/409

## 12:30 P.M.-1:30 P.M.

## 224

## Alternative Assessments in Precalculus: Putting Concepts in Context

## (9-12, Higher Education) Session

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

## Amy Gersbach

Seneca High School, Tabernacle, New Jersey
Ingrid Williams
Shawnee High School, Medford, New Jersey

12:30 P.M.-2:00 P.M.

## 227

## Addition and Subtraction: What Are the Essential Understandings?

## (Pre-K-2) Gallery Workshop

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

## Karen Karp

University of Louisville, Louisville, Kentucky
Room 419

Room 414

## 225

## Teacher Outreach: Math Mondays and Recruiting Students

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

## Margaret Wirth

East Carolina University, Greenville, North Carolina
Room 420

## 226

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

## (Preservice and In-Service) Session

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

W. Gary Martin<br>Auburn University, Auburn, Alabama

12:30 P.M.-2:00 P.M.

## 230

## Use Children's Literature to Create Dynamite Lessons

(3-5) Gallery Workshop
Participants will actively learn ways to incorporate literature into their math lessons to initiate investigation, discourse, manipulative use, and inquiry-based teaching. Concepts and lessons teachable using Spaghetti and Meatballs for All, A Cloak for a Dreamer, Alexander Who Was Rich Last Sunday, and Pigs Will Be Pigs will be shared.
Robert Jolley
LLTeach, Inc., Bridgewater, New Jersey

## SMARTIraining Singapore Math, the Singapore Way!

Training SINGAPORE MATH Methodology Not Textbooks For Over 6 Years!

See us at BOOTH 519 for a free DVD Modeled Lesson!

www.SingaporeMathTraining.com or call 602.570.1942

Know When to Fold 'Em to Measure Up in Math
(3-8) Gallery Workshop
Come out of the textbook and into the fold in this fastpaced, hands-on workshop as you learn to make and use measurement-focused, 3-D graphic organizers aimed at helping your students "measure up in math." Depart with practical, evidence-based, kinesthetic, and integrative ideas ready for immediate use.

Nancy Wisker
Dinah Zike Academy, Comfort, Texas
Room 308/309

## 232

Transformational Geometry through Games and Hands-On Activities (3-8) Gallery Workshop
Make your transformational geometry unit come to life. Try methods for teaching transformations. Using games like Blokus to candy boxes, learning about reflection, rotation, and translation can be lots of fun. Participants will leave with all they need to use these activities in their own classroom.

Norma Boakes
Richard Stockton College of New Jersey, Pomona, New Jersey

Room 404

## 233

Experiencing Geometry through Dollar Bills, Paper Bags, and More (6-12) Gallery Workshop
Participants will use paper-folding activities to review and investigate geometric vocabulary and concepts, discuss adapting and incorporating these activities for the different grade levels, and receive handouts and materials.

Kathleen M. Fick
Delaware State University, Dover, Delaware

## 12:30 P.M.-2:00 P.M.

## 234

## Multiple Representations of Motion: Mellow Yellow Works Out with Sketchpad ${ }^{\circledR}$ <br> (6-12) Gallery Workshop

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

## Scott Steketee

Key Curriculum Press Technologies, Emeryville, California
Daniel Scher
Key Curriculum Press Technologies, Emeryville, California
Room 301

## 235

## Reasoning and Sense Making: Algebra Instruction to Meet New Standards (6-12) Gallery Workshop

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

## Deborah L. Ives

Morris School District, Morristown, New Jersey

## 236

## From Wikki Stix to Graphing Calculators <br> (9-12) Gallery Workshop

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

## 237

## Riding the Ferris Wheel: A Sinusoidal Model

## (9-12) Gallery Workshop

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

## Sharon E. Taylor

Georgia Southern University, Statesboro, Georgia
Kathleen Mittag
University of Texas at San Antonio, San Antonio, Texas
Room 418

## 238

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

## (Preservice and In-Service) Gallery Workshop

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

Claire B. Passantino
Let's Read Math!, Yardley, Pennsylvania
Room 322

## 1:00 P.M.-2:00 P.M.

ew 238.1

## Nourishing Young Math Minds with MANGO!

(4-8) Exhibitor Workshop
See how easy it is to create a classroom of active learners with creative, enjoyable games and activities that you can immediately and effortlessly implement in a classroom. See how to use tools to help students discover math concepts, foster discussion on math ideas, and mentally process math facts to inspire confidence in mathematics and beyond.

## MANGO Math Group

Snohomish, Washington

## 1:00 P.M.-2:00 P.M.

## ew 239

## HELP Implement Rtl for ELL Math (5-8) Exhibitor Workshop

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

Houghton Mifflin Harcourt
Boston, Massachusetts

## 2:00 P.M.-3:00 P.M.

## 240

## Are These the Right Standards for Preparing Future Mathematics Teachers?

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

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

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

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

Participants will explore how children develop number sense and how teachers can best scaffold early learning experiences to meet the needs of all children. Video clips of young children thinking aloud in individual interviews and in classroom settings will be used to illustrate development of the big ideas in number and operations.
Linnea Weiland
William Paterson University, Wayne, New Jersey
Room 303

## 243

## Don't Tell Them, Ask Them! <br> (Pre-K-5) Session

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

Tricia N. Salerno
Benchmark School, Phoenix, Arizona
Sherri Adler
Benchmark School, Phoenix, Arizona
Room 319

## 241

## Keys to Successful Teaching: Turning Research into Practice <br> (General Interest) Session

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

Frank Wang
Alexander Dawson Foundation, Las Vegas, Nevada

2:00 P.M.-3:00 P.M.

## 245

## Universal Design for Learning (UDL) in the Math Classroom

## (3-5) Session

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

Adam Goldberg<br>Southern Connecticut State University, New Haven, Connecticut<br>Deborah Newton<br>Southern Connecticut State University, New Haven, Connecticut

Room 421

## 246

## Helping Community College Developmental Mathematics Students See and Understand Mathematics

## (6-8, Higher Education) Session

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

Room 314

Join us at the 2012 Regional Conferences:

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


# Reaching All Students with Mathematics: Experience Success in Action <br> <br> (6-8, Preservice and In-Service) Session 

 <br> <br> (6-8, Preservice and In-Service) Session}

Actions speak louder than words. Experience proven strategies for increasing focus, feedback, and conceptual understanding. Learn questioning techniques that elicit enthusiastic, whole-class participation; raise achievement; and prepare students for success in algebra and beyond.
William J. Glee
Project SEED, Berkeley, California
Howard Baker
Project SEED, Berkeley, California
Room 414

## 248

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

(6-12) Session
Participants will ponder, through a lesson-study approach, several problems proven to be rich sources for promoting students' reasoning and discourse in the classroom. They will analyze collaboratively planned and inquiry lessons using technology, how assessment aligns with instruction, and students' work.

José Francisco Sala García
Instituto de Educación Secundaria Sa Colomina, Ibiza, Balearic Islands, Spain

Room 405/406

## 249

Finance and Math: A Combination You Can Bet On!
(6-12) Session
Twenty states, including New Jersey and New York, require financial education for high school graduation, and other states are moving to join them. The speakers will show how to support those requirements in math class, in lessons form algebra through precalculus, while making math more interesting and teenagers more money-savvy.
Paul Westbrook
Rutgers University, New Brunswick, New Jersey
Deborah Zisa
North Warren Regional High School, Blairstown, New Jersey

2:00 P.M.-3:00 P.M.

## 250

## Problems Students Want to Solve: Getting beyond "Two Trains Leave ..."

 (6-12) SessionStudents often find problem solving boring. Word problems have little relevance to their lives. Why can't algebra and geometry involve video games, music, or sports? This session will look at problems that middle and high school students would find interesting and want to solve. Problem solving, math modeling, and communication will be emphasized.

## Betsy J. McShea

Richard Stockton College of New Jersey, Pomona, New Jersey

## Maureen Yarnevich

Towson University, Towson, Maryland
Christina Tiley
Howard Community College, Columbia, Maryland

251

## Using Manipulatives to Help Students Be Successful with Algebra (6-12) Session

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

## Kevin Dykema

Mattawan Middle School, Mattawan, Michigan
Room 408/409

## An Innovative Assessment Paradigm: From Classroom to NSF-Funded Research Study <br> (9-12, Higher Education) Session

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

## Michael A. Posner

Villanova University, Villanova, Pennsylvania

## Nancy Lawrence <br> Twenty-first Century Partnership for STEM Education, Conshohocken, Pennsylvania

Room 410

## 253

## Math Modeling across the Curriculum <br> (Higher Education, Preservice and In-Service) Session

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

## Ben Galluzzo

Shippensburg University, Shippensburg, Pennsylvania

## Johnathan Hocker

Shippensburg University, Shippensburg, Pennsylvania
Room 305/306

## 254

## Professional Development for MiddleSchool Teachers: Recent Research in the United States

(Preservice and In-Service, Research) Session
During academic years 2009-11, research identified completed projects that used United States government funding to address professional development for middle school teachers. This presentation will describe the research's methodology, summarize its findings, and direct attendees to material that the projects produced.

Katherine Safford-Ramus
Saint Peter's College, Jersey City, New Jersey

## 2:30 P.M.-3:30 P.M.

## ew 255

## iPads, Tablets, Mobile Devices: New

 Tech for the Math Classroom (6-12) Exhibitor WorkshopThe secondary school math classroom of the future is here, now. How do these devices fit into math instruction? Why do they appeal to the current generation of students? Come imagine and explore real-life applications, modeling, and problem solving using iPads, tablets, and mobile devices.
Houghton Mifflin Harcourt
Boston, Massachusetts
Room 321

## 2:30 P.M.-4:00 P.M.

## 256

## Methods and Games to Enhance the Understanding of Basic Facts

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

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

## Rich Busi

University of Florida, Gainesville, Florida
Room 308/309

## 257

## Parents and Children: Playing Math Games Together <br> (Pre-K-5) Gallery Workshop

Are you looking for ways to partner with parents in the educational process? Do you want to engage parents in meaningful, fun activities that will also strengthen math skills? Explore exciting games that encourage counting, estimation, facts, and logical thinking to be played "any time and any place," even in the busiest lives!
Martha E. Hildebrandt
Chatham University, Pittsburgh, Pennsylvania
Barbara Biglan
Chatham University, Pittsburgh, Pennsylvania

## 258

## Visual Models and Instructional Strategies for Struggling Learners

## (3-5) Gallery Workshop

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

Rob Nickerson
ORIGO Education, Saint Charles, Missouri

## 259

## They Need More Time! (3-8) Gallery Workshop

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

Sherri Adler
Benchmark School, Phoenix, Arizona

## 260

## Constructing Patterns to Figure Functions (6-8) Gallery Workshop

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

## Bridget Coleman

University of South Carolina-Aiken, Aiken, South Carolina
Room 417


2:30 P.M.-4:00 P.M.

## 261

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

(6-8) Gallery Workshop
Using NASA Smart Skies, a Web-based simulator; an online graphing tool; and distance-rate-time relationships at the prealgebra and algebra levels, your students will learn to predict and resolve air traffic control conflicts. All materials, including the simulator, graphing tool, videos, print workbooks, and teacher's guides, are free online.

## Gregory W. Condon

NASA Ames Research Center, Moffett Field, California
Rebecca Green
NASA Ames Research Center, Moffett Field, California

## 262

## An Nspired Math Trail (6-12) Gallery Workshop

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

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

## 263

## Reasoning and Sense Making in Data Analysis and Probability

 (6-12) Gallery WorkshopMost students do not understand what variability means. Interactive, dynamic software creates opportunities for students to make sense of data, explore correlation, simulate probability questions, and investigate random variables' behavior, helping them develop an understanding of fundamental statistical concepts.

## Gail Burrill

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

## Stacking and Nesting Reveal the Multiple Personalities of Slope (6-12) Gallery Workshop

Participants will collect data from real-world activities related to object stacking or nesting. They will analyze the data using TI-SmartView and judge whether the data are linear or nonlinear. With the linear data they will discover, "If it stacks or nests, then it has a slope and intercept!"
John M. Ashurst
Harlan County Public Schools, Harlan, Kentucky
Room 418

## 265

## Facets of Functions: Making Sense of $F(x)$ Using Illuminations Resources (9-12) Gallery Workshop

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

## Julia Zurkovsky

National Council of Teachers of Mathematics, Reston, Virginia

Room 404

## 266

## Making Functions in Algebra 2 Active and Interesting

## (9-12) Gallery Workshop

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

## Christine Mikles

College Preparatory Mathematics Educational Program, Sacramento, California

Room 419

## 2:30 P.M.-4:00 P.M.

## 267

## Validating Proofs: Students' Use of Inductive and Deductive Reasoning

 (9-12, Preservice and In-Service) Gallery WorkshopParticipants will examine tasks used with preservice teachers to explore common misconceptions students have about proof, especially concerning inductive and deductive reasoning. The preservice teachers received samples of students' proofs and discussed the proofs' validity.
Sarah K. Bleiler
University of South Florida, Tampa, Florida
Room 401

## 3:30 P.M.-4:30 P.M.

## 269

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

(General Interest) Session
Students can handle proof! Pivotal examples get students in the habit of "speaking the proof" before and after high school geometry. See how students experience more than moments of proof using fractions, decimals, integers, probability, algebra, geometry, and number theory. Leave with new ways to get to the proof of the matter in your classroom.
Ralph Pantozzi
Scotch Plains-Fanwood Public Schools, Scotch Plains, New Jersey

## 270

Geometry: What's Most Important for Primary School Students?
(Pre-K-2) Session
The grades K-2 geometry learning progression detailed in NCTM's Focal Points gives guidelines for what is important when limited classroom geometry time exists or students lack experience. Activities and discussion will help participants understand the important geometry and spatial experiences that help prepare students for future learning.

## Jean Howard

Office of Public Instruction, Helena, Montana

# The Whole-Brain Approach to Mathematics Learning for Children <br> (Pre-K-2, Preservice and In-Service) Session 

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

Daniel J. Franklin
Six Red Marbles, Charlestown, Massachusetts
Room 408/409

## 272

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

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

## Rudy V. Neufeld

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

Room 305/306

## 273

## Elementary School Math: Teach Discretely <br> (Pre-K-5) Session

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

## Kevin R. Merges

Rutgers Preparatory School, Somerset, New Jersey
Room 402

## 3:30 P.M.-4:30 P.M.

## 274

## Playing with Numbers in the Elementary Grades

(Pre-K-5) Session
Learn how playing with numbers helps develop number sense and fluency with whole-number computation. The Common Core Math Standards emphasize developing an understanding of operations and their properties. The speaker will examine learning trajectories for numerical operations across the elementary grades, with examples of hands-on activities.

Janet H. Caldwell
Rowan University, Glassboro, New Jersey
Room 403

## 275

## Lessons From Singapore: Transitioning from Arithmetic to Algebra

(6-8) Session

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

Andy Clark
Houghton Mifflin Harcourt, Portland, Oregon
Room 320

## 275.1

## Meaningful Middle School Math: Effectively Infusing Technology with UDL Principles

(6-8)Session
Do you long to hear your students say these three little words, "I love math"? Come discover how to implement hands-on, Universal Design for Learning Choice Boards infused with technology. Highlighted technologies will include: TI-Technologies, Flip Camera Movies, Voki Avatars, Smart Board Technologies, Sensory Integration, and more.
Melissa Jackson
Monongahela Middle School, Deptford, New Jersey

## Meredith Howell <br> Monongahela Middle School, Deptford, New Jersey

Strategies That Increase "Aha!" Moments for Fractions, Decimals, and Percents<br>(6-8) Session

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

Brenda J. Morgan<br>Houston Independent School District, Houston, Texas

Room 415

## 277

Overcoming Challenges to Develop Mathematically Promising Students in Urban Schools
(6-12) Session
Understand cultural and social issues in urban schools to better the needs of mathematically promising students better. Develop strategies to keep up with the math classroom's changing dynamic and strengthen students' belief and ability to do well in mathematics. Help students develop their mathematical potential fully.

## PingHsiu Lee

Reagan High School, Houston, Texas
Room 319

## 278

Developing Students' Ability to Reason and Conjecture with Dynamic Technology
(9-12, Higher Education, Research) Session
Dynamic technology software can help promote effective classroom discourse and engage students in purposeful reasoning and conjecturing. This session will highlight pedagogical perspectives in connecting mathematical notions using the Technological Pedagogical Content Knowledge (TPACK) framework.

## Farshid Safi

College of New Jersey, Ewing, New Jersey
Room 405/406

## 3:30 P.M.-4:30 P.M.

## 279

## Exponential Functions and the Global Energy Crisis

## (9-12, Higher Education) Session

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

## Maria Hernandez

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

Room 421

## Quantitative Reasoning (QR) across

 the Curriculum: Enhancing Skills in All Disciplines
## (9-12, Higher Education) Session

QR skills typically develop in high school and college mathematics courses. Although this is essential, students resonate more with $Q R$ incorporated into projects in other disciplines. The speaker will discuss how to offer projects that connect QR skills with other fields and encourage teachers in other fields to add QR in their classes.
David G. Taylor
Roanoke College, Salem, Virginia
Room 410

## 281

## Why Do We Have to Learn This? The Math Connection <br> (Preservice and In-Service) Session

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

NCTM's 2012 Annual Meeting is Coming Up!

Philadelphia, Pennsylvania April 25-28, 2012

# Regional Conferences \& Expositions 

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- Learn practices central to teaching the Common Core State Standards
- Refine your assessment techniques
- And more!

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Country*
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Primary E-mail*
Your grade level interest (check all that apply)*: $\square$ PreK-2 $\quad \square$ 3-5 $\quad \square 6-8 \quad \square$ 9-12 $\square$ Higher Education
$\square$ I was referred by an NCTM Member:
$\square$ Check here to remove your name from rental lists (companies renting lists must obtain approval from NCTM before using lists).
$\square$ Standing Yearbook Order Plan: Check this box to receive each NCTM Yearbook as it becomes available. Yearbooks may be returned in resalable condition within 30 days and you may cancel your plan at any time.
NOTE: Membership pricing valid through May 31, 2012. Visit www.nctm.org/membership for up-to-date pricing.

## OPTION 1

## Full Individual Membership

Includes a print subscription to one NCTM journal (print version includes online access). Select ONE journal below:
\$78Teaching Children Mathematics (PreK-6) Mathematics Teaching in the Middle School (5-9) $\square$ Mathematics Teacher (8-14)
$\$ 105 \square$ Journal for Research in Mathematics Education

## Additional Print Journals:

May be selected to enhance your membership for as little as \$33 (print version includes online access).

| $\square$ | $\mathbf{\$ 3 3}$ | Teaching Children Mathematics (PreK-6) |
| :--- | :--- | :--- |
| $\square$ | $\mathbf{\$ 3 3}$ | Mathematics Teaching in the Middle School (5-9) |
| $\square$ | $\mathbf{\$ 3 3}$ | Mathematics Teacher (8-14) |
| $\square$ | $\mathbf{\$ 6 0}$ | Journal for Research in Mathematics Education |

## PAYMENT SUMMARY

Membership Dues (Option 1 or 2). . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . \$
Additional Print Journals (if choosing Option 1) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . \$
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Membership and Additional Journals Total. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\$$
For 2-year membership, multiply by 2 and deduct $10 \%$. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\$$
For 3-year membership, multiply by 3 and deduct 15\%. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . \$ $\qquad$
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