NCTM 2008 Annual Meeting and Exposition
Becoming Certain about Uncertainty
April 9-12, 2008 • Salt Lake City, Utah
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Meeting Facilities
All Annual Meeting presentations will be held at the Salt Palace Convention Center, Hilton Salt Lake City Center, and the Marriott Salt Lake City Downtown. See pages 177–79 for floor plans.

On-Site Registration
Registration will be held in Exhibit Hall A–E at the Salt Palace Convention Center during the following times:

- **Wednesday, April 9** 8:00 a.m.–6:00 p.m.
- **Thursday, April 10** 7:00 a.m.–4:00 p.m.
- **Friday, April 11** 7:00 a.m.–4:00 p.m.
- **Saturday, April 12** 7:00 a.m.–10:00 a.m.

Exhibits
Meet with the vendors and the suppliers in Exhibit Hall A–E at the Salt Palace Convention Center. The Cyber Café and Member Showcase will also be located in the Exhibit Hall. The exhibits will be open during the following times:

- **Thursday, April 10** 8:00 a.m.–6:00 p.m.
- **Friday, April 11** 8:00 a.m.–5:00 p.m.
- **Saturday, April 12** 8:00 a.m.–12:00 noon

Bookstore
The NCTM Bookstore will be held in Exhibit Hall A–E at the Salt Palace Convention Center during the following times:

- **Wednesday, April 9** 10:00 a.m.–5:00 p.m.
- **Thursday, April 10** 8:00 a.m.–6:00 p.m.
- **Friday, April 11** 8:00 a.m.–5:00 p.m.
- **Saturday, April 12** 8:00 a.m.–12:00 noon

Directory and Special Locations
(All located at the Salt Palace Convention Center)

- **ADA Services/Special Needs** Exhibit Hall A–E
- **Bag and Coat Check** Exhibit Hall A–E
- **Bookstore** Exhibit Hall A–E
- **Business Center** Upper Level
- **Cyber Café** Exhibit Hall A–E
- **Exhibits** Exhibit Hall A–E
- **First Aid Room** EMT Room (Lower Level)
- **Housing Desk** Exhibit Hall A–E
- **Information Booth** South Foyer
- **Lost-and-found** Information Booth
- **Mathematics Education Trust** Exhibit Hall A–E
- **Message Center** Information Booth
- **Member Showcase** Exhibit Hall A–E
- **Press Room** Room 252 A/B
- **Registration** Exhibit Hall A–E
- **Restaurant Reservations** South Foyer
- **Shuttle Desk** South Foyer
- **Speaker and Exhibitor Check-In** Exhibit Hall A–E
- **Volunteer Check-In** South Foyer

The publications and programs of the National Council of Teachers of Mathematics present a variety of viewpoints. The views expressed or implied in this publication, unless otherwise noted, should not be interpreted as official positions of the Council. References to particular commercial products by a speaker should not be construed as an NCTM endorsement of said product(s). NCTM reserves the right to change speakers, change facilities, or modify program content.

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

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

Printed in U.S.A
Greetings! Welcome to the 86th Annual Meeting and Exposition of the National Council of Teachers of Mathematics. On behalf of the Board of Directors, NCTM staff, and the many volunteers who have lent their invaluable time and energies, we hope that you take advantage of all that this year’s conference has to offer.

Mathematics teachers impact the lives of their students—every day. They plan for, teach, and assess mathematics learning—all the time. The elements (planning, teaching, and assessment) of this overly simplified instructional cycle regularly present uncertainties for students and teachers. Professional development experiences like this Annual Meeting and Exposition have the potential to make a difference, a difference that may influence your planning, teaching, and assessment. How? Perhaps you will participate in sessions that will enhance your own understanding of mathematics, or emphasize relevant research on learning mathematics, on the use of instructional strategies, the use of technology, and on and on. It’s all here for you in Salt Lake City.

NCTM works hard to meet the needs of mathematics teachers, at every level, in this country and beyond. This year’s conference theme, “Becoming Certain about Uncertainty,” our First Timers’ sessions, New and Preservice Teacher session, and initial Iris M. Carl Equity Address exemplify just a sampling of NCTM’s efforts to assist you in your quest to meet the needs of all students.

While in Salt Lake City, be sure to take advantage of the amenities of a major metropolitan area that will feel like a small, western city. As you may remember, Salt Lake City was the host of the 2002 Olympic Winter Games and is world-renowned for its Wasatch and Oquirrh mountains and, of course, skiing. Meeting attendees may be fortunate enough to see wildflowers in bloom in the area canyons. There is much to see and it won’t take very long at all to get anywhere you want to go. It is our hope that you leave the beautiful Salt Lake City area with a feeling of accomplishment and rejuvenation and the excitement that occurs when you bring back new ideas for others, particularly your students.

Thank you for joining us this week in Salt Lake City. By attending the 2008 NCTM Annual Meeting and Exposition, you have demonstrated your commitment to the improvement of mathematics teaching and learning for all.

Francis (Skip) Fennell
President, National Council of Teachers of Mathematics
McDaniel College, Westminster, Maryland

Florence Glanfield
Salt Lake City Program Chair
University of Alberta, Edmonton, Alberta

Barbara Kuehl
Local Arrangements Committee Cochair
Salt Lake City School District
Salt Lake City, Utah

Jerry Evans
Local Arrangements Committee Cochair
Weber State University
Ogden, Utah

On behalf of the NCTM Headquarters staff, it is my great pleasure to welcome you to the Council’s 2008 Annual Meeting and Exposition. We assemble here to gain new knowledge, get new perspectives, and meet new colleagues. In this exciting setting, each of us can learn from session and workshop leaders, examine the latest educational materials, and network with teachers from across North America and the rest of the world. You can also examine and explore a wide array of professional development resources, services, and materials that are either in print format or electronic format. At a time when mathematics education is faced with increased public attention and many challenges, it is appropriate to gather together at the “Crossroads of the West,” Salt Lake City. This city blends the intensity of the urban experience with the rugged terrain of the mountains and the vastness of the western sky. This venue is, in a sense, symbolic of the challenges we face in making the future envisioned for all children in Principles and Standards for School Mathematics a reality.

James M. Rubillo
Executive Director
National Council of Teachers of Mathematics

April 9–12, 2008 • Salt Lake City, Utah
Registration

For questions about registration, please call (888) 241-8406 or (972) 349-7476, Monday–Friday, between 7:00 a.m. and 7:00 p.m. CST. You may also e-mail questions to nctmsaltlakecityattendee@wyndhamjade.com.

For registration assistance after you arrive in Salt Lake City, please stop by the Registration Booths, located in the Registration area of Exhibit Hall A–E in the Salt Palace Convention Center. Registration hours are located on page 3. Separate registration is required for the Research Presession. By registering for the NCTM 2008 Annual Meeting 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.

Travel Arrangements

If you need to make travel arrangements to the NCTM Annual Meeting and Exposition, NCTM’s official travel agency, Association Travel Concepts (ATC), can help take the guesswork out of it and search for the lowest available fare on any airline. ATC has negotiated discounted airfares and car rental rates that are lower than those offered to the public. ATC is a full-service company that offers online booking 24/7, advance seat assignments, electronic ticketing, dedicated agents, coordination with frequent flyer programs, and more. ATC’s Web site offers a wide range of helpful travel tools including airport and flight status updates as well as maps and driving directions.

For more information or to make a reservation, call Association Travel Concepts at (800) 458-9383, e-mail requests to reservations@atcmeetings.com, fax your request to (858) 362-3153, or visit their Web site at www.atcmeetings.com. ATC representatives are available to assist you Monday through Friday, 8:30 a.m.–8:00 p.m. EST. To receive your discount, please mention that you are registering for the NCTM 2008 Annual Meeting and Exposition when making your flight arrangements and car rental reservations.

Transportation

By Air

Salt Lake City International Airport is approximately ten minutes from downtown and the Salt Palace Convention Center and serves all major airlines. General information on Salt Lake City International Airport, terminals, baggage collection, and more can be found at www.sclairport.com.

By Taxi/Shuttle/Mass Transit

A Ground Transportation Desk is located at the far end of the baggage claim in both terminals, where ground transportation options and information can be arranged or obtained. The airport is located about ten minutes from downtown Salt Lake City. A one-way taxi fare from the airport to downtown is approximately $20.

Salt Lake City has a convenient light-rail, above-ground subway service known as TRAX, along with buses traveling to and from the downtown area. You can buy a one-day pass covering both for only $4. For more information, log on to www.rideuta.com.

By Car

The convention center is easily accessible from Interstates 15 and 80 and U.S. Highway 89.

Parking

The Salt Palace Convention Center offers convenient covered parking on three levels. With 600 parking stalls available and elevator access from the garage to a main concourse, parking is virtually hassle-free. The parking garage entrance is located on West 200 South at the corner of South 200 West.

Travel Discount Codes

You may call your own agency or the vendors directly and refer to the following I.D. numbers:

United: 510CK 800-521-4041
American Airlines: A1548AA 800-433-1790
Continental Airlines: ZBV6-BLDYDS 800-468-7022
Avis: T306599 800-331-1600
Enterprise: 32H7476 800-593-0505
General Information

Note: Discounts not available on vendor Web sites. Some restrictions and a service fee may apply. The above discounts apply for travel April 6–15, 2008.

Hotel
NCTM has reserved a block of sleeping rooms at hotels that are in proximity to the meeting facilities. By booking through the Wyndham Jade Housing Reservation Center by Thursday, March 13, 2008, you will receive reduced room rates and access to shuttle service provided by NCTM to the convention center. If you are in need of an ADA accessible sleeping room, please let the Wyndham Jade Housing Reservation Center know when you call for your housing reservation or indicate your needs on the Hotel Request Form.

The Hotel Request Form and a list of hotels and their locations can be found at www.nctm.org/slc. To make your reservations:

- Phone: (888) 241-8406 North America
  (972) 349-7476 outside North America
  7:00 a.m.–7:00 p.m. CST, Monday–Friday
- Fax: (972) 349-7715
- Online: www.nctm.org/slc
- E-mail: nctmsaltlakecityattendee@wyndhamjade.com

Deposits
All hotel reservations must be guaranteed. No reservations will be taken without a guarantee. You may guarantee your reservation with a major credit card, or you may send in a check made payable to NCTM Annual 2008 covering the hotel’s first night room and tax. Credit cards used for guarantee will be charged by the hotel after March 20, 2008. Purchase orders will not be accepted.

No-Shows and Cancellations
If you do not check in on your scheduled arrival date, your credit card will be charged and any deposit will be forfeited to the hotel for a no-show fee. Your reservation will then be canceled, and rooms will be on a first-come, first-served basis. Please check your confirmation for your hotel’s individual cancellation policy. Should you need to adjust your reservation, please contact the NCTM housing reservation center up until 72 hours prior to your scheduled arrival date. If you have a last-minute change after this date, you will need to call the hotel directly.

ADA Services
NCTM is committed to ensuring that our annual meeting is fully accessible to all persons. If you require an interpreter or special services that are described under ADA, please contact the NCTM Conference Services Division before Friday, February 29, 2008. After this date, requests for interpreters cannot be guaranteed, although every effort will be made to accommodate requests. Contact NCTM at 1906 Association Drive, Reston, VA 20191-1502; fax (703) 295-0956; e-mail ada@nctm.org. Please identify your requirements and include your name, address, phone number, and e-mail address (if applicable). A list of wheelchair rental agencies in the Salt Lake City area is available to registrants by contacting NCTM.

Shuttle Bus Service
Complimentary shuttle bus service will be provided from hotels in the NCTM housing block to the Salt Palace Convention Center. Some of the hotels are within walking distance of the convention center and will not require shuttle bus service. Routes and schedules will be posted in your hotel lobby. The schedule will be followed as closely as possible. To view the NCTM shuttle bus schedule, please log on to www.nctm.org/slc.

Salt Lake City
Salt Lake City is a unique fusion of metropolitan city and quaint mountain town. The towering Wasatch Mountains that embrace Salt Lake offer a dramatic backdrop to the vibrancy and activities of downtown. Salt Lake City is fast becoming one of America’s foremost destinations—and for good reason. A beautiful, safe, and vibrant city, Salt Lake combines unparalleled access to natural recreation, a bustling economy, dynamic nightlife, remarkable history, warm hospitality, and Utah’s Greatest Snow on Earth. One thing you’ll never do in Salt Lake City is run out of things to do. Go to www.visitsaltlake.com for more information.

Tour Information
The Salt Lake City Visitor Information Center will assist you with sightseeing tour information on-site only. They’ll be on hand to suggest a variety of self-guided tours. The Visitor Information Center is located at the Salt Palace Convention Center.

Weather
Salt Lake City is known for varying spring weather, and the average range of temperature for the month of April can go from the high 30s to low 60s (Fahrenheit) in a day. A possibility of rain or snow exists in April.

Attire
Business casual attire is appropriate for all conference events. We recommend that attendees dress in layers because of the variation in room temperatures. Comfortable shoes are essential.

Information Booth
An Information Booth will be located in the South Foyer Lobby of the Salt Palace Convention Center, where local staff from the Salt Lake Convention & Visitors Bureau will be on hand to answer any questions you may have and to assist you with directions and local information, from transportation and historical sites to shopping and entertainment.
Message Center
To help you keep in touch with your colleagues and newfound friends while you are enjoying the Annual Meeting and Exposition, stop by the Message Center located at the Information Booth at the Salt Palace Convention Center. This is a quick way to touch base with your colleagues as you make plans throughout the day.

Restaurant Reservations
Explore the fabulous restaurants of Salt Lake City! Stop by the Restaurant Reservations desk located at the Salt Palace Convention Center, staffed by the Salt Lake Convention & Visitors Bureau. The friendly staff will be available to offer recommendations and make reservations.

Lost-and-Found
Items for lost-and-found may be retrieved or turned in at the Information Booth. At the end of each day, all lost-and-found items brought to the Information Booth will be turned over to Convention Center Security.

Bag and Coat Check
A bag and coat check will be available for you in Exhibit Hall A–E of the Salt Palace Convention Center to store your belongings during the conference hours for a nominal charge of $2.00 per item. Hours: Thursday, April 10, 8:00 a.m.–6:00 p.m.; Friday, April 11, 8:00 a.m.–5:00 p.m.; Saturday, April 12, 8:00 a.m.–12:00 noon. All items are to be picked up each day by closing time of the Exhibit Hall. Items may not be left overnight.

Certificate of Attendance
Certificates of attendance will be available at the Information Booth located at the Salt Palace Convention Center. Certificates will also be available at the Member Showcase located in the Exhibit Hall of the Salt Palace Convention Center.

On-Site Daily News
Start each morning with the NCTM Daily News, which will include late-breaking news about the NCTM 2008 Annual Meeting and Exposition. Program or speaker changes and cancellations will be listed as well. The Daily News will be distributed in the lobby of the Salt Palace Convention Center and available in the Hilton Salt Lake City Center and the Marriott Salt Lake City Downtown.

Press Room
The NCTM Press Room is located in room 252 A/B at the Salt Palace Convention Center. Members of the media may arrange for private interviews with NCTM leaders and other individuals, or obtain other information, by contacting the Press Room. Hours: Wednesday, April 9, 1:00 p.m.–5:30 p.m.; Thursday, April 10, and Friday; April 11, 8:00 a.m.–6:00 p.m.; Saturday, April 12, 8:00 a.m.–3:30 p.m.

2008 NCTM Annual Conference and Exposition

Salt Lake City, Utah • April 9–12, 2008

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| American | A1548AA | 800-433-1790 |
| Continental | 2B6-BLDYDS | 800-468-7022 |
| Avis     | T306599 | 800-331-1600 |
| Enterprise | 32H7476 | 800-693-0505 |


*ATC Agents are available by phone from 8:30 am until 8:00 pm Eastern Time, Monday through Friday. Some restrictions may apply. Service fees apply.

www.atcmeetings.com
First Aid Station
A first-aid station will be staffed at the Salt Palace Convention Center during the NCTM program in the EMT Room (lower level). If you need medical services while in Salt Lake City, please check with the hotel concierge for the closest medical facilities. As with any medical emergency, call 911 without hesitation.

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

Other Group Functions
The following groups will meet during the week of the NCTM 2008 Annual Meeting and Exposition. For further information, a contact person is listed for your convenience.

AP Statistics annual meeting will be held Friday, April 11, 6:00 p.m.–7:30 p.m. in Grand Ballroom B at the Hilton Salt Lake City Center. For more information, contact Kim Gilbert at (678) 407-5766; e-mail kgilbert@ggc.edu.

College Board/AP Calculus reception/panel discussion will be held Thursday, April 10, 6:00 p.m.–8:00 p.m. in Grand Ballroom D at the Marriott Salt Lake City Downtown. For more information, contact Lin McMullin at (914) 734-4898, email lnmcmullin@aol.com.

North American Study Group on Ethnomathematics (NASGEm) annual meeting will be held Thursday, April 10, 7:00 p.m.–9:00 p.m. in the Topaz Room at the Hilton Salt Lake City Center. For more information, contact Bill Collins at (315) 445-4880, e-mail collinwj@lemoyne.edu.

TODOS: Mathematics for ALL reception will be held Thursday, April 10, 6:00 p.m.–8:00 p.m. in the Canyon Room at the Hilton Salt Lake City Center, sponsored by Houghton Mifflin Company. For more information, contact Carol Edwards at todosconfi@cox.net.

For Your Child’s Safety
Due to the size and nature of the NCTM 2008 Annual Meeting and Exposition, this event is not the appropriate setting for children under 16 years of age. Your hotel concierge will be able to recommend activities for children while you are attending the conference. We appreciate your understanding and cooperation. Children 16 years and over will need to register as nonteaching guests. To register a nonteaching guest, visit www.nctm.org/slc or call (888) 241-8406.

Your Opinion Counts!
Thank you for attending the 2008 NCTM Annual Meeting and Exposition. Please take a moment to complete the conference attendee survey. Your feedback is important to us and will be instrumental in the future Annual Meeting and Exposition planning process. Visit www.nctm.org/slc to complete the 2008 NCTM Annual Meeting and Exposition survey.

Tips for a Rewarding Annual Meeting and Exposition
• Use the NCTM Web site to plan your conference experience (www.nctm.org).
• Become familiar with the layout of the Salt Palace Convention Center, Hilton Salt Lake City Center, and Marriott Salt Lake City Downtown by reviewing the floor plans on pages 177–179.
• Visit the NCTM Bookstore for the latest NCTM educational resources.
• Stop by the Information Booth for information on the local Salt Lake City 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 and pagers during presentations.
• Visit the Exhibit Hall, where more than 250 exhibitors will share the latest educational products.
• Tell us about your conference experience by filling out the post-conference survey.
• The more you participate in the presentations, the more you will get out of the conference.
• Be safe! Remove your name badge when you leave the conference facilities at the end of the day.

Exhibit Hall Information

Bookstore
The NCTM Bookstore, located in Exhibit Hall A–E of the Salt Palace Convention Center, provides the opportunity for you to view firsthand the nearly 200 NCTM publications, written by mathematics educators for mathematics educators. Publication topics include assessment, research, problem solving, and mathematics and literature, as well as the essential Principles and Standards for School Mathematics and the Navigations series. You will also find a variety of specialty products that you can use as gifts, prizes, and incentives to spread the word about the importance of mathematics.

Stop by the Bookstore and save 25 percent off the list price on all purchases made at the NCTM Annual Meeting and Exposition! Don’t miss this opportunity to enhance your professional development and add to your library.

Start your wish list today by previewing NCTM’s wealth of resources at www.nctm.org/catalog.

Note on Sales Tax Exemptions: In order to be considered exempt from sales tax in the NCTM Bookstore, you must provide a copy of a Utah tax exemption certificate, issued by the state, at the time of purchase. NCTM is required by law to keep a copy of the certificate, so we are unable to return it to you. In order to qualify, payment must be made with a purchase order, check, or credit card from the school to which the Utah Exemption Certificate is issued. Personal checks,
personal credit cards, and cash cannot be accepted in conjunc-
tion with school exemption certificates.

The NCTM Bookstore is not equipped to handle shipping
from the meeting site. A Business Center located at each meet-
ing facility is ready to assist you with your shipping needs.

Cyber Café

Stop by the NCTM Cyber Café to check your Web-based
e-mail messages. The Cyber Café is located in the front of
Exhibit Hall A–E at the Salt Palace Convention Center. A
wireless connection is available at the Salt Palace Convention
Center for a fee. The Cyber Café is sponsored by
BeAnActuary.org, Pearson, and The Stock Market Game.

Expo Walk

Save time in your schedule for this exciting event. On Thursday,
April 10, attendees will have the opportunity to participate in
NCTM’s annual Expo Walk. Each player will have the chance
to win a variety of great prizes donated by participating exhibi-
tors. Your Expo Walk card is included in your preregistration
packet. Complete your Salt Lake City Expo Walk card by visit-
ing the specially marked, participating exhibit booths during the
opening day of the Exhibit Hall. Place your completed card by
4:45 p.m. in the collection box located in Exhibit Hall A–E for
your chance to win big. A variety of great prizes will be raffled
off in the Exhibit Hall between 5:00 p.m. and 6:00 p.m. on
Thursday. Attendees must be present in the Exhibit Hall at this
time to win raffle prizes. Please plan to join us!

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 find
a remarkable collection of mathematics education books,
teaching resources, games, manipulatives, and technology and
services. You’ll also have the opportunity to meet the people
who produce these products; get fresh ideas, valuable informa-
tion and resources; and see demonstrations of how products
work. Be one of the many people present on Thursday morn-
ing to see first-hand the excitement that the NCTM Exhibit
Hall generates. No presentations are scheduled on Thursday,
April 10, between 4:30 p.m. and 6:00 p.m., to give you some
dedicated Exhibit Hall time. Be sure to check out the list of
exhibits and a map of the Exhibit Hall on pages 180–83.

Exhibitor Workshops

Do you want more in-depth and personal interaction with
exhibitors? If you do, plan to attend the Exhibitor Workshops.
These workshops will be held on Thursday, Friday, and
Saturday and will offer a wide variety of topics. See the
program for workshop offerings, indicated by “EW” before
the session number.
General Information

Member Showcase
Want to learn more about your NCTM membership? We can help. Stop by the Member Showcase to meet with NCTM staff who can help you take full advantage of your membership. You can also learn more about NCTM’s online resources or pick up sample journals, lessons and activity packets, personalized membership certificates, membership ribbons, certificates of attendance, and more.

Not a member? The Member Showcase is an excellent place to find out all that NCTM offers both you and your institution. Stop by the Member Showcase in Exhibit Hall A–E at the Salt Palace Convention Center.

Member News Release
NCTM Annual Meeting and Exposition attendees may obtain personalized news releases that recognize their commitment to education excellence and professional development. Attendees may then hand-deliver or mail the news release to their local news outlets for publication. Individuals interested in this service should visit the Member News Release Desk at the NCTM Member Showcase in Exhibit Hall A–E at the Salt Palace Convention Center. Member news releases will be available Wednesday through Saturday.

NCTM Sponsors
A special thank-you goes to our sponsors for generously supporting NCTM by providing products and services to enhance your conference experience. Please stop by to thank the following sponsors when you are in the Exhibit Hall.

- BeAnActuary.org – Cyber Café
- Casio – First Timers’ Orientation Coffee Breaks
- Freeman – Distribution of Donated Educational Materials
- Glencoe/McGraw-Hill – Volunteer Shirts
- Holt, Rinehart and Winston – Program Book Flags
- SRA/McGraw-Hill – Marriott Key Cards
- Pearson – Cyber Café
- The Stock Market Game – Cyber Café

Program Information
The 2008 NCTM Annual Meeting and Exposition officially begins with the Opening Session, starting at 5:30 p.m. on Wednesday, April 9, in Hall 1 at the Salt Palace Convention Center. All other presentations begin at 8:00 a.m. each day and are scheduled concurrently throughout the day on Thursday, Friday, and Saturday.

We have made every attempt to provide adequate seating for participants at the Annual Meeting and Exposition. The room capacity for each presentation is listed in the program book and on all meeting room signs. For your safety and due to fire regulations, only those with seats will be allowed in meeting rooms. To comply with fire codes, it may be necessary to ask any person sitting on the floor or standing to leave the room.

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.
- As a courtesy to the speaker and your colleagues, please turn off your cell phone during all presentations.

Online Conference Planner
Visit the Online Conference Planner at www.nctm.org/slc to create a personalized list of presentations that interest you. Search presentations by grade band, topics, and speaker name. Print out your choices to take to the meeting.

Copyrighted Materials
Written permission to tape or record programs must be obtained directly from the speaker involved at least thirty days before the NCTM Annual Meeting and Exposition. The request must contain a statement indicating the intended use of such a recording or videotape. The person making the request should also inform the NCTM Headquarters Office at least two weeks prior to the NCTM Annual Meeting and Exposition.

Presentation Descriptions on the Web
Any updates to presentation descriptions are available on the NCTM Web site at www.nctm.org/slc.

Professional Development Focus of the Year 2007–2008
Data Analysis and Probability
The 2007–2008 Focus of the Year is “Becoming Certain about Uncertainty: Data Analysis and Probability.” This theme will be highlighted in many of NCTM’s activities throughout the year, including journals, the Web site, the NCTM News Bulletin, publications, and conferences. Watch for this symbol, which will alert you to items and opportunities related to the Focus of the Year.

Learn↔Reflect Strand
Attendees are invited to participate in this event, which will start with a Kickoff session on Thursday, April 10, 2008. Sessions dedicated to the theme “Becoming Certain about Uncertainty,” noted by the Learn↔Reflect symbol, will be scheduled throughout the day on Thursday and will end with a session allowing participants to reflect on the discussions and activities of the strand.

Learn↔Reflect sessions are open for anyone to attend throughout the day. Personalized certificates will be prepared for those attendees who attend the Kickoff session, at least one Learn↔Reflect session during the day, and the final Reflection session. See list of sessions on pages 19–20.
Resources for the Mathematics Educator...
in the NCTM Bookstore

With nearly 200 publications written by mathematics educators for mathematics educators, NCTM's wealth of books, videos, electronic content, and specialty products is unmatched.

New Resources
NCTM's publications are topical, practical, and dedicated to the same cause you are—improving the teaching and learning of mathematics for all students.

Popular Series
Realizing the vision of high-quality mathematics education for all students, as described in NCTM's Principles and Standards for School Mathematics, requires the active participation of everyone in the education community. NCTM offers a wealth of materials designed to help you spread the message of the importance of improved mathematics education.

Strategies to Implement
Classroom friendly, grade-band-specific volumes are filled with practical, teacher-tested activities and strategies to help students meet and exceed state or local standards.

Specialty Products
NCTM provides a variety of shirts, erasers, balloons, and other gifts and incentives to spread the importance of mathematics.

All conference attendees will receive a special conference discount of 25% off the NCTM list price on all purchases made in the Bookstore.

NCTM National Council of Teachers of Mathematics
New Teacher Strand

Get answers to pivotal questions and concerns of new teachers. Sessions are targeted to grade bands to address the specific needs for that level. Learn from the best and network with other new teachers. Targeted to teachers in their first two years and those working on certification. Look for this symbol, NT, on Friday, April 11, 2008, for presentations that are part of this new strand, or see page 21 for a full listing of sessions.

Equity Strand

The Equity Strand features presentations given by the Benjamin Banneker Association and TODOS: Mathematics for ALL. The presentations are scheduled on Friday and Saturday of the Annual Meeting and Exposition program.

Iris M. Carl Equity Address

The annual Iris M. Carl Equity Address was established to underscore the crucial need for collective action in advancing understanding of equality and equity in education. The address is being inaugurated in 2008 to commemorate Iris Carl’s lifelong commitment to educational equity and celebrate the vision and inspiration that she provided for achieving the goal of “more and better mathematics for all children.” Each year a distinguished scholar who is recognized for leadership and action related to equality in mathematics education is invited to deliver a featured address at the NCTM Annual Meeting. This year’s address is presentation #429, on Friday, April 11.

Mathematical Association Presidents’ Series

The Presidents’ Series is a feature of the NCTM Annual Meeting program that highlights connections among the mathematical community at different levels.

Program Overview and First Timers’ Orientation

Make the most of your Annual Meeting and Exposition experience with NCTM’s Program Overview and First Timers’ Orientation! All conference registrants attending their first NCTM Annual Meeting and Exposition are encouraged to attend one of these sessions. The sessions will discuss the format of the conference and help attendees make the most of their experience. Our attendees are representative of the United States, Canada, and numerous international locations. Sponsored by Casio.

<table>
<thead>
<tr>
<th>Wednesday</th>
<th>Thursday</th>
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<tr>
<td>Session #1</td>
<td>Session #3</td>
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<tr>
<td>4:00 p.m.–4:30 p.m.</td>
<td>7:15 a.m.–7:45 a.m.</td>
</tr>
<tr>
<td>Hall 3 (Convention Center)</td>
<td>Ballroom H/J (Convention Center)</td>
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</tbody>
</table>

Types of Presentations

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

<table>
<thead>
<tr>
<th>Session (60 minutes)</th>
<th>Rooms are set theatre style and vary in size.</th>
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</thead>
<tbody>
<tr>
<td>Research Session (60 minutes)</td>
<td>Rooms are set theatre style and vary in size. Research sessions emphasize the connection between research and practice.</td>
</tr>
<tr>
<td>Gallery Workshop (90 minutes)</td>
<td>Rooms are set with round tables for hands-on work and additional seating around the perimeter of the room. The gallery participants will receive the print material and observe the workshop in a fashion similar to a classroom observer.</td>
</tr>
</tbody>
</table>

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**—preschool and prekindergarten through grade 2
- **Grades 3–5**—grades 3 through 5
- **Grades 6–8**—grades 6 through 8
- **Grades 9–12**—grades 9 through 12
- **Higher Education**—university and college level issues including both two-year and four-year institutions
- **Teachers of Teachers**—includes preservice teacher education and professional development of teachers through the professional development of supervisors, coordinators and mathematics educators
- **General Interest**—applicable to multiple grades and audiences
### NCTM Regional Caucuses

**Wednesday, April 9, 2008**

**Regional Caucuses for Delegates and Alternates**

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<tr>
<th>Caucus &amp; Time</th>
<th>Presiders</th>
<th>Room</th>
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<tbody>
<tr>
<td>Affiliates-at-Large Caucus</td>
<td>Vena Long, <em>University of Tennessee, Knoxville, Tennessee</em></td>
<td>255A (Convention Center)</td>
</tr>
<tr>
<td>2:00 p.m.–4:00 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian Caucus</td>
<td>Carol Matsumoto, <em>Governor Semple School, Winnipeg, Manitoba</em></td>
<td>255D (Convention Center)</td>
</tr>
<tr>
<td>2:00 p.m.–4:00 p.m.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Caucus</td>
<td>Jim E. Austin, <em>Bullitt County Schools, Shepherdsville, Kentucky</em></td>
<td>255B (Convention Center)</td>
</tr>
<tr>
<td>2:00 p.m.–4:00 p.m.</td>
<td>Tom Muchlinski, <em>University of Minnesota, Minneapolis, Minnesota</em></td>
<td></td>
</tr>
<tr>
<td>Eastern Caucus</td>
<td>Maria Diamantis, <em>Southern Connecticut State University, New Haven, Connecticut</em></td>
<td>355 E/F (Convention Center)</td>
</tr>
<tr>
<td>2:00 p.m.–4:00 p.m.</td>
<td>William J. Barnes, <em>Baltimore County Public Schools’ Office of Mathematics, Baltimore, Maryland</em></td>
<td></td>
</tr>
<tr>
<td>Southern Caucus</td>
<td>Thomas Ottinger, <em>Reinhardt College, Waleska, Georgia</em></td>
<td>355 B/C (Convention Center)</td>
</tr>
<tr>
<td>2:00 p.m.–4:00 p.m.</td>
<td>Cynthia L. Schneider, <em>Charles A. Dana Center, University of Texas at Austin, Austin, Texas</em></td>
<td></td>
</tr>
<tr>
<td>Western Caucus</td>
<td>David Brancamp, <em>Nevada Department of Education, Carson City, Nevada</em></td>
<td>255E (Convention Center)</td>
</tr>
<tr>
<td>7:30 p.m.–9:30 p.m. (following the Opening Session)</td>
<td>Trudy Mitchell, <em>Retired</em></td>
<td></td>
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</tbody>
</table>

### Delegate Assembly

**Thursday, April 10, 2008**

**59th. Annual Delegate Assembly (Session #4)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Presenter Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 a.m.–9:00 a.m.</td>
<td>Ballroom A/C (Convention Center)</td>
<td>Trudy Mitchell, <em>Retired</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Francis (Skip) Fennell, *President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Special Announcements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Resolutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Facilitator: Suzanne Mitchell, <em>Arkansas State University, Jonesboro, Arkansas</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parliamentarian: Linda Coutts, <em>Columbia Public Schools, Columbia, Missouri</em></td>
</tr>
</tbody>
</table>
Affiliate Services Committee (#4, session)

59th Annual Delegate Assembly
Trudy Mitchell, San Diego, California; Chair
Jim E. Austin, Shepherdsville, Kentucky
William J. Barnes, Sykesville, Maryland
David Brancamp, Reno, Nevada
Maria Diamantis, Branford, Connecticut
Carol Matsumoto, Winnipeg, Manitoba
Tom Muchinski, Plymouth, Minnesota
Thomas Ottinger, Ellijay, Georgia
Cynthia L. Schneider, Austin, Texas
Vena Long, Knoxville, Tennessee; Board Liaison
Virginia Williams, Reston, Virginia; Staff Liaison

Mathematics Education Trust Board of Trustees (#155, session)

Mathematics Education Trust: Grants for Classroom Teachers: Tips for Proposals
Roberta Koss, San Rafael, California; Chair
Richard Ludholz, Creve Coeur, Missouri
Sandra Powers, Charleston, South Carolina
William Speer, Henderson, Nevada
James M. Rubillo, Reston, Virginia; Staff Liaison

Mathematics Teacher Editorial Panel (#705, session)

Writing for the NCTM Journals: Tips and Discussion with Editorial Panel Members
Elizabeth Bremigan, Muncie, Indiana; Chair
Margaret Coffey, Middletown, Delaware
J. Kevin Colligan, Columbia, Maryland
Lionel Garrison, Bronx, New York
Anna Spanik, Halifax, Nova Scotia
Ruth Casey, Frankfort, Kentucky; Board Liaison
Albert Goetz, Reston, Virginia; Staff Liaison

Mathematics Teaching in the Middle School Editorial Panel (#295, session)

Supporting Mathematical Communications with Mathematics Teaching in the Middle School (MTMS)
Trena Wilkerson, Waco, Texas; Chair
Richard Billstein, Missoula, Montana
Michaela Chappell, Murfreesboro, Tennessee
Casilda Pardo, Albuquerque, New Mexico
Ira Patrick, Columbia, Missouri

ON-Math: Online Journal of School Mathematics Editorial Panel (#616, session)

Enliven Your Mathematics Class with Resources from ON-Math!
Karen Hollebrans, Raleigh, North Carolina; Chair
Daniel Canada, Cheney, Washington
Robin Harmon, Huntington, West Virginia
Doyt M. Jones, Philadelphia, Pennsylvania
Nora Ramírez, Tempe, Arizona
Scott Steketee, Emeryville, California
Jon Wray, Ellicott City, Maryland
Sandy Berger, Reston, Virginia; Staff Liaison

Professional Development Services Committee (#457, session)

A Blueprint for Building Learning Communities Using NCTM Journals
Murrel Hoover, Elkview, West Virginia; Chair
Debbie Duvall, Sherwood Park, Alberta
Latrenda Knighten, Lewisville, Alberta
Eric Milou, Glassboro, New Jersey
Arlene Mitchell, Pine, Colorado
Karen Norwood, Kansas City, Missouri
Audrey Jackson, Fenton, Missouri; Board Liaison
Monique C. Lynch, Reston, Virginia; Staff Liaison

Research Committee (#126, research session)

Improving the Quality of Mathematics Discussions: Linking Research and Practice
Marilyn Strutchens, Auburn, Alabama; Chair
Michael T. Battista, Okemos, Michigan
Timothy A. Boerst, Ypsilanti, Michigan
Jere Confrey, Saint Louis, Missouri
Karen D. King, Saint Louis, Missouri
Margaret Schwan Smith, Gibsonia, Pennsylvania
John Sutton, Denver, Colorado
Judith Reed, Reston, Virginia; Staff Liaison
Look for the Learn↔Reflect symbol throughout the program book to identify the following sessions on Thursday, April 10, 2008. See page 14 for more information on the Learn↔Reflect strand.

2007–2008 Learn↔Reflect Strand Reflection Questions

Participants are asked to reflect on the following questions throughout the Learn↔Reflect strand. At the end of the strand during the Reflection session, participants engage in a discussion based on these questions:

1. How does data analysis and probability foster connections among other NCTM principles, content standards, and process standards?
2. What role does the use of multiple representations play in data analysis and probability at your grade level?
3. How are you thinking differently about your learning and teaching of data analysis and probability as a result of participating in the Learn↔Reflect sessions?
4. What do you do, and what will you do, in your teaching to connect data analysis and probability with the real world?

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### List of Learn↔Reflect Sessions

<table>
<thead>
<tr>
<th>Session #</th>
<th>Time</th>
<th>Title</th>
<th>Speakers</th>
<th>Location</th>
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</thead>
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<tr>
<td>69</td>
<td>9:30 a.m.–10:30 a.m.</td>
<td>Learn↔Reflect Kickoff Session: Internet Challenges: From Wikipedia to Data Overload</td>
<td>Johnny W. Lott</td>
<td>Ballroom B/D (Convention Center)</td>
</tr>
<tr>
<td>129</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Young Children Dealing with Data and Chance (Pre-K–2)</td>
<td>Rosemary Reuille Irons</td>
<td>Room 250 A (Convention Center)</td>
</tr>
<tr>
<td>130</td>
<td>11:00 a.m.–12:00 noon</td>
<td>A Graph a Day Builds Math Understanding and Vocabulary for English Language Learners (Yay!) (Pre-K–2)</td>
<td>Heather McVarish</td>
<td>Room 255 B (Convention Center)</td>
</tr>
<tr>
<td>136</td>
<td>11:00 a.m.–12:00 noon</td>
<td>What Are My Chances? (3–5)</td>
<td>Judy Kasabian</td>
<td>Room 254 A (Convention Center)</td>
</tr>
<tr>
<td>137</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Lemonade and Pistachios (3–5)</td>
<td>Jane Martain</td>
<td>Room 355 C (Convention Center)</td>
</tr>
<tr>
<td>139</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Can We All Be Average? Let’s Analyze This and Other Claims about Data and Statistics (3–8)</td>
<td>Susan Gay Jeanine Haistings</td>
<td>Room 251 F (Convention Center)</td>
</tr>
<tr>
<td>145</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Keeping It Real (6-12)</td>
<td>Kelly Sullivan</td>
<td>Room 355 A (Convention Center)</td>
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<tr>
<td>147</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Probability Laws: Learn Them All with Dice Games! (6-12)</td>
<td>Sharon Whitton</td>
<td>Room 255 A (Convention Center)</td>
</tr>
<tr>
<td>153</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Conditional Probability, Independence, and Mutual Exclusivity: How to Teach Them Correctly in the First Place! (9–12, Teachers of Teachers)</td>
<td>Ruth Miller</td>
<td>Room 251 A/B (Convention Center)</td>
</tr>
<tr>
<td>161</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Using Picture Books and Manipulatives for Data Analysis and Algebraic Concepts (Pre-K–2)</td>
<td>Catheline Jones Jacqueline Austin Karen Darris</td>
<td>Room 251 A/B (Convention Center)</td>
</tr>
<tr>
<td>162</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Grappling with Graphing (Pre-K–2)</td>
<td>Julie Norflus-Good</td>
<td>Room 255 A (Convention Center)</td>
</tr>
<tr>
<td>164</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Can You Name All the People in the World? (3–5)</td>
<td>Stephen Currie</td>
<td>Room 355 A (Convention Center)</td>
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<tr>
<td>167</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Are You Game? Explorations in Probability for Grades 3–6 (3–8)</td>
<td>Kimberly Rimbey</td>
<td>Room 251 F (Convention Center)</td>
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<tr>
<td>170</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Bar Graph or Histogram? How to Be Certain It’s the Right Graph! (3–8, Teachers of Teachers)</td>
<td>Susan L. Hillman Cathy M. Malotka</td>
<td>Room 254 A (Convention Center)</td>
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<tr>
<td>173</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>A Sure Thing: Probability Activities for Your Classroom (6–8)</td>
<td>Roger Day</td>
<td>Room 255 B (Convention Center)</td>
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<tr>
<td>Session #</td>
<td>Time</td>
<td>Title</td>
<td>Speakers</td>
<td>Location</td>
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<tr>
<td>179</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>“What’s My Line?” Fun and Interesting Ways to Explore Real-Life Data and Regression Models (6–12, Higher Education, Teachers of Teachers)</td>
<td>Patricia Fairwood, Terri Schulman</td>
<td>Room 355 C (Convention Center)</td>
</tr>
<tr>
<td>181</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>What’s the Deal with <em>Deal or No Deal?</em> (9–12)</td>
<td>Dave Kennedy</td>
<td>Room 250 A (Convention Center)</td>
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<tr>
<td>222</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Not By Chance: Using Trade Books to Help Young Children Develop the Language of Probability (Pre-K–2)</td>
<td>Eula Ewing Monroe</td>
<td>Room 250 A (Convention Center)</td>
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<tr>
<td>223</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>The Wild World of Mathematics (Pre-K–2)</td>
<td>Susan L. Hansen</td>
<td>Room 355 C (Convention Center)</td>
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<tr>
<td>224</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Possible, Impossible, or Just Luck? (Pre-K–5)</td>
<td>Janice C. Reutter</td>
<td>Room 251 A/B (Convention Center)</td>
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<tr>
<td>231</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>What Are the Chances? Teaching Data Analysis and Probability to Elementary School Students (3–5)</td>
<td>Elaine A. Tuft</td>
<td>Room 255 A (Convention Center)</td>
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<tr>
<td>234</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Wild Math: Dynamic Data Analysis Using TinkerPlots™ with Authentic Wildlife Data Sets (6–8)</td>
<td>Marguerite Mary Mason</td>
<td>Room 251 F (Convention Center)</td>
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<tr>
<td>239</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Data Analysis and Probability through Lesson Study (6–12, Teachers of Teachers)</td>
<td>José Francisco Sala García</td>
<td>Room 355 A (Convention Center)</td>
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<td>242</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Activities That Foster Statistical Thinking and Conceptual Understanding (9–12)</td>
<td>Roxy Peck</td>
<td>Room 255 B (Convention Center)</td>
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<tr>
<td>243</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Permutations, Combinations, and Monte Carlo Models: Does It Matter if Order Matters? (9–12, Higher Education)</td>
<td>Susan McMillen</td>
<td>Room 254 A (Convention Center)</td>
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<tr>
<td>275</td>
<td>3:30 p.m.–4:30 p.m.</td>
<td>Learn↔Reflect Reflection Session (General Interest)</td>
<td>Debbie Duvall, Murrell Hoover, Sara Munshin, John Staley</td>
<td>Ballroom F (Convention Center)</td>
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### New Teacher Strand

Look for the New Teacher symbol (NT) throughout the program book to identify the following presentations on Friday, April 11, 2008. See page 16 for more information on the New Teacher strand.

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<th>Session #</th>
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<th>Title</th>
<th>Grade Bands</th>
<th>Lead Speaker</th>
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<tr>
<td>306</td>
<td>7:00 a.m.–7:45 a.m.</td>
<td>New Teacher Kickoff Session</td>
<td>General Interest</td>
<td>James M. Rubillo</td>
<td>Ballroom B/D (Convention Center)</td>
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<tr>
<td>315</td>
<td>8:00 a.m.–9:00 a.m.</td>
<td>What <em>Every</em> Grades Pre-K–2 Teacher Should Know</td>
<td>Pre-K–2</td>
<td>Neil Pateman, Sandy Dawson, Joseph Zilliox</td>
<td>255 A (Convention Center)</td>
</tr>
<tr>
<td>359</td>
<td>8:30 a.m.–10:00 a.m.</td>
<td>Teaching Essentials: Ratio and Proportions</td>
<td>Grades 6–12</td>
<td>Barbara Dougherty</td>
<td>255 F (Convention Center)</td>
</tr>
<tr>
<td>381</td>
<td>9:30 a.m.–10:30 a.m.</td>
<td>What <em>Every</em> Grades 3–5 Teacher Should Know</td>
<td>Grades 3–5</td>
<td>Joseph Zilliox, Neil Pateman, Sandy Dawson</td>
<td>355 A (Convention Center)</td>
</tr>
<tr>
<td>406</td>
<td>10:30 a.m.–12:00 noon</td>
<td>Teaching Essentials: Number and Numeration</td>
<td>Pre-K–5</td>
<td>Sandy Dawson, Joseph Zilliox, Neil Pateman</td>
<td>155 E (Convention Center)</td>
</tr>
<tr>
<td>455</td>
<td>11:00 a.m.–12:00 noon</td>
<td>What <em>Every</em> Grades 9–12 Teacher Should Know</td>
<td>Grades 9–12</td>
<td>Johnny W. Lott, Rick Billstein</td>
<td>255 A (Convention Center)</td>
</tr>
<tr>
<td>476</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>What <em>Every</em> Grades 6–8 Teacher Should Know</td>
<td>Grades 6–12</td>
<td>Rick Billstein, Johnny W. Lott</td>
<td>355 A (Convention Center)</td>
</tr>
<tr>
<td>499</td>
<td>1:00 p.m.–2:30 p.m.</td>
<td>Teaching Essentials: Multiplication and Division</td>
<td>Grades 3–5</td>
<td>Cheryl Lubinski, Alberto Otto</td>
<td>255 F (Convention Center)</td>
</tr>
<tr>
<td>538</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Classroom Management, Motivation, and Math</td>
<td>Grades 6–12</td>
<td>James Middleton</td>
<td>255 C (Convention Center)</td>
</tr>
<tr>
<td>569</td>
<td>3:00 p.m.–4:30 p.m.</td>
<td>Teaching Essentials: Functions</td>
<td>Grades 6–12</td>
<td>Patricia S. Wilson</td>
<td>155 E (Convention Center)</td>
</tr>
<tr>
<td>586</td>
<td>3:30 p.m.–4:30 p.m.</td>
<td>Pre-K–6: Classroom Management, Motivation, and Math</td>
<td>Pre-K–5</td>
<td>Jennifer M. Bay-Williams, Karen Karp</td>
<td>255 A (Convention Center)</td>
</tr>
<tr>
<td>608</td>
<td>4:45 p.m.–5:30 p.m.</td>
<td>New Teacher Celebration Session!</td>
<td>General Interest</td>
<td>Francis (Skip) Fennell</td>
<td>Ballroom B/D (Convention Center)</td>
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## Equity Strand

### Benjamin Banneker Association

<table>
<thead>
<tr>
<th>Session #</th>
<th>Day</th>
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<th>Title</th>
<th>Lead Speaker</th>
<th>Location</th>
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<tbody>
<tr>
<td>310</td>
<td>Friday</td>
<td>8:00 a.m.–9:00 a.m.</td>
<td>Build, Draw, Write Your Way to Math Success!</td>
<td>Renee Hill</td>
<td>Room 251 C (Convention Center)</td>
</tr>
<tr>
<td>368</td>
<td>Friday</td>
<td>9:30 a.m.–10:30 a.m.</td>
<td>An Agenda for Impact: Report on the 2007 Leadership Summit for the Mathematics Education Excellence</td>
<td>Lou Matthews</td>
<td>Hall 2 (Convention Center)</td>
</tr>
<tr>
<td>459</td>
<td>Friday</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Mathematizing African American History</td>
<td>Kwame Scott</td>
<td>Topaz (Hilton)</td>
</tr>
<tr>
<td>541</td>
<td>Friday</td>
<td>2:00 p.m.–3:00 p.m.</td>
<td>Algebra and the Achievement Gap</td>
<td>Lesa Covington Clarkson</td>
<td>Grand Ballroom C (Hilton)</td>
</tr>
<tr>
<td>577</td>
<td>Friday</td>
<td>3:30 p.m.–4:30 p.m.</td>
<td>Diversity: A Resource for Learning</td>
<td>Pamela Seda</td>
<td>Ballroom F (Convention Center)</td>
</tr>
<tr>
<td>628</td>
<td>Saturday</td>
<td>8:00 a.m.–9:30 a.m.</td>
<td>Mathematics of the Underground Railroad Quilts</td>
<td>Edna Loreatta Holbrook, Alicia Jefferson</td>
<td>Room 151 D/E/F (Convention Center)</td>
</tr>
<tr>
<td>666</td>
<td>Saturday</td>
<td>10:00 a.m.–11:30 a.m.</td>
<td>Human Graphs: Making Data Analysis and Probability Accessible to All Students</td>
<td>Shelley Jones</td>
<td>Room 151 G (Convention Center)</td>
</tr>
<tr>
<td>685</td>
<td>Saturday</td>
<td>11:00 a.m.–12:00 noon</td>
<td>Have Radical Learning Techniques Closed the Gap? A Closer Examination of the Algebra Project</td>
<td>Heather Trotter</td>
<td>Room 355 C (Convention Center)</td>
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### TODOS: Mathematics for ALL

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<td>331</td>
<td>Friday</td>
<td>8:00 a.m.–9:00 a.m.</td>
<td>Being Certain about Methods for Teaching ELLs: Learning from Action Research Projects</td>
<td>Joyce Faye Fischer</td>
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<td>389</td>
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<td>9:30 a.m.–10:30 a.m.</td>
<td>Navigating to Teach English Language Learners</td>
<td>Lisa Suarez</td>
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<td>442</td>
<td>Friday</td>
<td>11:00 a.m.–12:00 noon</td>
<td>It Takes a Village: Teachers’ Effectiveness, Lesson Enhancement, and Ongoing Assessment</td>
<td>Jim Barta, Jennifer Harding-Dekam</td>
<td>Grand Ballroom I/J (Marriott)</td>
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<td>478</td>
<td>Friday</td>
<td>12:30 p.m.–1:30 p.m.</td>
<td>Overcoming the Language Barrier in Mathematics</td>
<td>Matthew S. Winsor</td>
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<td>597</td>
<td>Friday</td>
<td>3:30 p.m.–4:30 p.m.</td>
<td>TODOS–TI California Task Force Update</td>
<td>P. Michael Lutz</td>
<td>Topaz (Hilton)</td>
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<td>640</td>
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<td>8:00 a.m.–9:30 a.m.</td>
<td>Unpacking Mathematical Activities with an English Language Learner (ELL) in Mind</td>
<td>Nora G. Ramirez</td>
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<td>651</td>
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<td>9:30 a.m.–10:30 a.m.</td>
<td>Supporting All Students at Navajo Elementary School, the TODOS School</td>
<td>Cathy Jeanne Kinzer</td>
<td>Room 254 C (Convention Center)</td>
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<td>704</td>
<td>Saturday</td>
<td>12 noon–1:30 p.m.</td>
<td>Meeting the Standards for English Learners through Comprehensible Input</td>
<td>Elmano Martins Costa</td>
<td>Room 151 D/E/F (Convention Center)</td>
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Count On Us!

For sustainable solutions to boost math achievement for all students!

Booth #235

Great Source and Marshall Cavendish join together to bring a highly successful K–5 Mathematics program from Singapore to the U.S.!
The Presidents’ Series is a feature of the NCTM Annual Meeting program that highlights connections among the mathematical community at different levels.

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<td>American Mathematical Association of Two-Year Colleges (AMATYC)</td>
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<td>Timothy Kanold</td>
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<td>Arthur L. White</td>
<td>School Science and Mathematics Association (SSMA)</td>
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Annual Meeting and Exposition activities will be held in the Salt Palace Convention Center, the Hilton Salt Lake City Center, and the Marriott Salt Lake City Downtown.

Registration Hours
8:00 a.m.–6:00 p.m. Exhibit Hall A–E (Convention Center)

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 with fire codes, it will be necessary to ask persons sitting on the floor or standing to leave the room.

4:00 p.m.–4:30 p.m.

1. Program Overview and First Timers’ Orientation
(General Interest) Session
All conference registrants attending their first NCTM Annual Meeting and Exposition are encouraged to attend one of these sessions. We will discuss the conference’s format and help attendees make the most of their conference experience.

NCTM Board of Directors
National Council of Teachers of Mathematics, Reston, Virginia

Hall 3 (Convention Center) capacity: 1677

5:30 p.m.–7:00 p.m.

2. Blink
Opening Session
Remarks by NCTM President Francis (Skip) Fennell
In the blink of an eye, the unconscious mind decides lots of (often important) things for us, without our even knowing what we’re doing. The speaker will describe how we make these decisions and why some people are so much better at it than others.

Malcolm Gladwell brings fresh ideas to business from directions you would hardly expect—ideas that generate business value by changing the way we think. He is the author of two New York Times bestsellers, *The Tipping Point* and *Blink*. Currently a staff writer for the *New Yorker*, Gladwell focuses his idea-driven narratives on the everyday and combines research and material that is more personal, social, and historical.

Malcolm Gladwell
Staff Writer for *The New Yorker*, New York, New York

Hall 1 (Convention Center) capacity: 4700

Pick up your copy of the NCTM Daily News for meeting highlights and program changes.
Strengthen Your Mathematics Teaching with the Navigations Series

This exciting series that translates NCTM’s *Principles and Standards for School Mathematics* into action highlights major mathematics content areas and makes them classroom friendly in grade-band specific volumes, which can be used individually or as a set. Supplemental CD-ROMs feature interactive electronic activities, master copies of activity pages, and additional readings.

**Available now!**

**Navigating through Algebra in Prekindergarten–Grade 2**
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  - Stock #753SLP $34.95 (member price $27.96)
- Grades 6–8
  - Stock #754SLP $34.95 (member price $27.96)
- Grades 9–12
  - Stock #755SLP $33.95 (member price $27.16)

**Navigating through Geometry in Prekindergarten–Grade 2**
- Stock #12140SLP $32.95 (member price $26.36)
- Grades 3–5
  - Stock #12173SLP $35.95 (member price $28.76)
- Grades 6–8
  - Stock #12174SLP $35.95 (member price $28.76)
- Grades 9–12
  - Stock #12175SLP $39.95 (member price $31.96)

**Navigating through Problem Solving and Reasoning in Prekindergarten–Kindergarten**
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- Grade 2
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- Grade 3
  - Stock #12719SLP $29.95 (member price $23.96)
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  - Stock #12886SLP $29.95 (member price $23.96)

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**Navigating through Data Analysis and Probability in Prekindergarten–Grade 2**
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  - Stock #12324SLP $32.95 (member price $26.36)

**Navigating through Data Analysis in Grades 6–8**
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- Grades 9–12
  - Stock #12326SLP $39.95 (member price $31.96)

**Navigating through Probability in Grades 6–8**
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- Grades 9–12
  - Stock #12328SLP $39.95 (member price $31.96)

**Navigating through Measurement in Prekindergarten–Grade 2**
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  - Stock #12525SLP $39.95 (member price $31.96)
- Grades 6–8
  - Stock #12778SLP $39.95 (member price $31.96)
- Grades 9–12
  - Stock #12604SLP $43.95 (member price $35.16)

**Navigating through Number and Operations in Prekindergarten–Grade 2**
- Stock #12538SLP $33.95 (member price $27.16)
- Grades 6–8
  - Stock #12875SLP $41.95 (member price $33.56)

For more information or to place an order, call (800) 235-7566 or visit www.nctm.org/catalog.
7:15 a.m.–7:45 a.m.

3 Program Overview and First Timers’ Orientation
(General Interest) Session
All conference registrants attending their first NCTM Annual Meeting and Exposition are encouraged to attend one of these sessions. This session will discuss the conference’s format and help attendees make the most of their conference experience.

NCTM Board of Directors
National Council of Teachers of Mathematics, Reston, Virginia

Ballroom H/J (Convention Center) capacity: 732

7:30 a.m.–9:00 a.m.

4 59th Annual Delegate Assembly
(General Interest) Session
This session is a forum for delegates and designated leaders of NCTM Affiliates to make recommendations to the NCTM Board of Directors concerning activities and policies of NCTM and mathematics education.

Affiliate Services Committee
National Council of Teachers of Mathematics, Reston, Virginia

Ballroom A/C (Convention Center) capacity: 504

8:00 a.m.–9:00 a.m.

5 International Issues and Mathematics Instruction
(General Interest) Session
Sponsored by the United States National Commission on Mathematics Instruction (USNCMI)
This session will discuss current initiatives of the USNCMI and offer participants a summary of recent and forthcoming projects involving international mathematics education.

Francis (Skip) Fennell
President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland

Joan B. Garfield
University of Minnesota, Minneapolis, Minnesota

Sadie Chavis Bragg
Borough of Manhattan Community College, New York, New York

Alfinio Flores
Arizona State University, Tempe, Arizona

Roger Howe
Yale University, New Haven, Connecticut

Ann Lawrence
Capitol Hill Day School, Washington, D.C.

Douglas Ravenel
University of Rochester, Rochester, New York

Joseph G. Rosenstein
Rutgers University, New Brunswick, New Jersey

Patrick Scott
New Mexico Public Education Department, Santa Fe, New Mexico

Grand Ballroom G/H (Marriott) capacity: 187

8:00 a.m.–9:00 a.m.

6 New Paradigms for Grades K–5 Intervention: Case Studies from Two Minnesota School Districts
(General Interest) Research Session
We will describe grades K–5 frameworks for proactive and prompt intervention in numeracy. Using Math Recovery and Add+Vantage MR, our teachers are rethinking their support for struggling students. Achievement data will be shared.

Audrey L. Murray
Anoka-Hennepin Independent School District 11, Coon Rapids, Minnesota

Christina Miller
Independent School District 196, Rosemount, Minnesota

Ballroom I (Convention Center) capacity: 398

All Annual Meeting and Exposition activities will be held in the Salt Palace Convention Center, the Hilton Salt Lake City Center, and the Marriott Salt Lake City Downtown.

Registration Hours
7:00 a.m.–4:00 p.m. Exhibit Hall A–E (Convention Center)

Exhibit Hours
8:00 a.m.–6:00 p.m. Exhibit Hall A–E (Convention Center)

Focus of the Year
Learn↔Reflect strand
EW Exhibitor Workshop

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  Articles with a High Probability of Enhancing Teachers' Learning  
(Teacher of Teachers) Session  
We will share articles from *Teaching Children Mathematics* and *Mathematics Teaching in the Middle School* that are effective in professional development. This collection reflects input from teacher leaders around the country.  
*Jennifer M. Bay-Williams*  
University of Louisville, Louisville, Kentucky  
*Karen Karp*  
University of Louisville, Louisville, Kentucky  
*Room 355 B (Convention Center) capacity: 356*

8  The Power of Ten  
(Pre-K–2) Session  
Do children who can count understand they are working in a base-ten system? Typically not. Experience a host of hands-on materials and activities to strengthen children’s confidence and competence with early counting and operations.  
*Greg Nelson*  
Bridgewater State College, Bridgewater, Massachusetts  
*Ballroom H/J (Convention Center) capacity: 732*

9  Mathematics and Social Justice: Representation and Literature in a Primary Classroom  
(Pre-K–2) Session  
In this session the speaker will share how a yearlong exploration of mathematical ideas culminated in a project on social justice. In this project the children explored social justice issues using Cuisenaire rods to represent their mathematical understanding.  
*M. Shaun Murphy*  
University of Saskatchewan, College of Education, Saskatoon, Saskatchewan, Canada  
*Grand Ballroom A (Hilton) capacity: 171*

10 Children’s Books about Shape: A Resource for Developing Geometric Reasoning, or a Source of Misconceptions?  
(Pre-K–2) Research Session  
This study of children’s books shows that the very books chosen to teach children about shapes may be a source of misconceptions. This session will share the inaccuracies and discuss the implications for parents, teachers, and researchers.  
*Julie Nurnberger-Haag*  
Center of Excellence in Science and Mathematics Education: Opportunities for Success (COSMOS), Bowling Green, Ohio  
*Room 255 C (Convention Center) capacity: 354*

11 The National Board of Professional Teaching Standards’ Mathematics/Science Portfolio: One Early Childhood Teacher’s Journey  
(Pre-K–2, Higher Education, Teacher of Teachers) Session  
An overview of the National Board of Professional Teaching Standards’ Mathematics/Science Portfolio for Early Childhood Generalist Certification and how the process affected the presenter’s mathematics teaching.  
*Hattie Mauch*  
Arlington Public Schools, Alexandria, Virginia  
*Room 355 C (Convention Center) capacity: 237*

12 Math Night: So Easy a Caveman Can Do It  
(Pre-K–5) Session  
Have you wanted to host a math night for your school, but not known where to begin or what to do? We have a formula for implementing a successful math night. Learn how to plan one and get parents and students excited about attending.  
*Joyce Anne Moon*  
Sangaree Elementary School, Summerville, South Carolina  
*Runette Ford*  
Sangaree Elementary School, Summerville, South Carolina  
*Sandra Powers*  
College of Charleston, Charleston, South Carolina  
*Alta/Snowbird/Brighton (Marriott) capacity: 105*

13 Helpful or Harmful? Ten Common Teaching Practices That Backfire!  
(Pre-K–12) Session  
Why are so many kids good in math when they’re young but bad in it when they’re older? Because of the way we teach them! Join *Grapes of Math* author Greg Tang in looking at how we’re hurting kids, but more important, how we can help them.  
*Greg Tang*  
Houghton Mifflin Math, Boston, Massachusetts  
*Ballroom E (Convention Center) capacity: 398*

14 Do You Think You Can Figure It Out?  
(3–5) Session  
Are your students ready for high-stakes tests? Come solve problems like those on many tests. We will use a variety of strategies and manipulatives to solve authentic problems and offer packets of problems and baggies of teacher-made materials.  
*Sandy Cohen*  
Curriculum Associates, South Jamesport, New York  
*Grand Ballroom A/B/C (Marriott) capacity: 180*
15 Standards-Based Math Stations
(3–5) Session
Learn how to develop and implement math stations used to support and reinforce standards-based learning. See how place value, fractions, and multiplication units can be turned into math stations that can be integrated into everyday teaching.
Deborah Gordon
Madison School District, Phoenix, Arizona
Room 250 A (Convention Center) capacity: 123

16 Using the Process Standards to Develop Mathematical Understanding
(3–5) Session
Focusing on the content we teach in the elementary grades should include the best ways to teach it. The Process Standards offer a roadmap to help students develop deeper understanding of the mathematics outlined in Curriculum Focal Points.
Linda M. Gojak
John Carroll University, University Heights, Ohio
Solitude (Marriott) capacity: 70

17 Creating Accessible Lessons: A Framework for Differentiating Mathematics Instruction
(3–5) Session
We will share a framework for differentiating math instruction that includes identifying learning characteristics of special-needs learners, barriers to learning, and using research-based strategies to make lessons more accessible to learners.
LouAnn Lovin
James Madison University, Harrisonburg, Virginia
Maggie Kyger
James Madison University, Harrisonburg, Virginia
Topaz (Hilton) capacity: 80

18 An Investigation of Fourth-Grade Children’s Problem Solving and Language Use in Mathematics
(3–5, Teacher of Teachers) Session
Learn about the results of our study about the problem-solving strategies used by fourth-grade students while solving grade-level mathematics problems through a think-aloud protocol.
Angela Lynn Evans Walmsley
Saint Louis University, Saint Louis, Missouri
Martha K. Brennan
Saint Louis University, Saint Louis, Missouri
Ann M. Rule
Saint Louis University, Saint Louis, Missouri
Joy Swanson
Saint Louis University, Saint Louis, Missouri
Room 254 C (Convention Center) capacity: 99

19 An Adventure in Creativity, Architecture, Design, and the Shapes of Mathematics
(3–8) Session
Shapes of Mathematics gives examples of problem-solving classes in creativity, architecture, and design with geometric shapes, using manipulatives to show the shapes and forms created by squares, circles, and triangles.
Melvin Shivvers
Melvin D. Shivvers, Architect, Des Moines, Iowa
Ballroom B/D (Convention Center) capacity: 732

20 Basic Skills and Conceptual Understanding: Not Dichotomous at All
(3–12) Session
This session will provide strategies to discuss the conceptual understanding versus basic skills debate in a respectful manner. Participants will be involved in activities that can foster change and be supported by all stakeholders.
Eric Milou
Rowan University, Glassboro, New Jersey
Jill Perry
Rowan University, Glassboro, New Jersey
Room 255 B (Convention Center) capacity: 356

21 Pick’s Theorem: Connecting Measurement and Algebra to TI-73 Geoboard Apps
(6–8) Session
Teachers will explore Pick’s theorem, a formula for finding the area of polygons constructed on geodot paper, through an activity from Navigating through Measurement in Grades 6–8. The TI-73 Geoboard Apps will also be used.
Linda Sharp West
Phillip A. Sharp Middle School, Butler, Kentucky
Phyllis Kelsch
Phillip A. Sharp Middle School, Butler, Kentucky
Room 251 A/B (Convention Center) capacity: 234

22 Discrete Math Problem Solving for Middle School Students
(6–8) Session
Many topics from discrete math, such as geometric probability, Pascal’s triangle, and graph theory, are not only interesting (and fun!) for students, but can be used to teach important problem-solving skills. We will discuss several such problems.
David Patrick
Art of Problem Solving, Alpine, California
Ballroom U/I (Marriott) capacity: 187
Build Math Literacy and Reading Fluency

Introduce math concepts with captivating characters in the *Number Pals* collection of leveled readers for grades K-3. Developed to support reading strategies and math concept instruction, these engaging readers and companion practice books build math literacy, reading fluency, vocabulary, oral language, and comprehension skills. View the research, sample lessons, and state correlations at OptionsPublishing.com.

Stop by the Options Publishing Booth #720 for FREE Samples
A Look at Pivotal Developmental Understandings to Focus Learning Goals in Statistics and Data Analysis

(6–8, Teacher of Teachers) Session

Why can’t you find the median of categorical data? What is the difference between value and frequency bar graphs? How do you have a “statistical conversation” about a data problem? This session will provide insights and activities to consider.

Susan N. Friel
University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Room 3 (Convention Center) capacity: 1677

Going on a Geotrek: Gonna Catch a Big One

(6–12) Session

If you like treasure hunting, you will love geocaching. Take your students on a geotrek, using multiple geocaches and a GPS or GoogleEarth. Students are provided clues and resources to help them solve mathematical, problem-based-learning challenges.

Tim Pelton
University of Victoria, Victoria, British Columbia

Leslee Francis Pelton
University of Victoria, Victoria, British Columbia

Karen Moore
University of Victoria, Victoria, British Columbia

Room 251 F (Convention Center) capacity: 158

Using Multiple Representations to Teach Slope

(6–12) Session

The definition of slope and \( m = \frac{dy}{dx} \) contribute little to students’ understanding. Real-world contexts and multiple representations can help. Come explore teaching strategies and classroom lessons that help students make sense of slope.

Dan Dolan
PIMMS, Middletown, Connecticut

Room 355 A (Convention Center) capacity: 264

Visualizing Mathematics with Technology: The Latest and Best Teaching Ideas for Teachers

(6–12, Higher Education) Session

New options are available for creating visual mathematics demonstrations for lines, quadratics, and functions. Come find out about some free and not-so-free tools to connect the ideas of algebra, geometry, and calculus. Bring a laptop computer if you have one.

Richard (Dick) Seitz
Helena High School, Helena, Montana

Room 355 A (Convention Center) capacity: 264

Making Mathematics Meaningful

(6–12, Teacher of Teachers) Session

Doing mathematics can be challenging, and some important mathematical concepts are hard to learn and to teach. Interesting problems set in the right context and with the right technology can make a difference in what students learn.

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

Grand Ballroom C (Hilton) capacity: 388

Mathematizing Real-World Objects Using Technology

(6–12, Teacher of Teachers) Session

With a digital camera and the open-source software GeoGebra, we will examine everyday objects. From a hanging chain to a necklace, from an ice cream cone to a water fountain, we show the effects of all major aspects of related functions.

Lingguo Bu
Florida State University, Tallahassee, Florida

Room 255 A (Convention Center) capacity: 264

Digital Technology in the Mathematics Classroom

(9–12) Session

A scavenger hunt, digital imaging, and the QX5 digital microscope will be used to explore our fascinating world from a mathematical perspective. Bring your digital camera if you have one!

Janet M. Walker
Indiana University of Pennsylvania, Indiana, Pennsylvania

Ballroom F (Convention Center) capacity: 398

Picturing Proportions: Visual Activities That Build Strong Proportional Thinking in Algebra and Geometry

(9–12) Session

Proportional thinking is at the heart of mathematics, yet many students are uncomfortable with their own proportional thinking. Here are some visual tasks that develop skills and confidence in this critical area.

Loring Terry Coes
Rocky Hill School, East Greenwich, Rhode Island

Grand Ballroom B (Hilton) capacity: 171
31 Creative Problem Solving in Calculus (9–12, Higher Education) Session

This session will explore problems that extend the average-value-of-function formula to calculate standard deviation and correlation coefficient, modify the tabular integration technique in integration by parts, and use inverses in integration.

David Collins Wilson
Wake Forest University, Winston-Salem, North Carolina

Room 251 C (Convention Center) capacity: 116

32 Using Technology and Selected Calculus Problems to Shape the Teaching of Precalculus and Calculus (9–12, Higher Education, Teacher of Teachers) Session

We will explore several problems from the point of view of algebra, precalculus, and calculus to see how they fit together. The problems will also be used to explain the proper role of technology in the teaching and learning of mathematics.

Franklin D. Demana
Ohio State University, Columbus, Ohio

Hall 2 (Convention Center) capacity: 1677

33 Manipulatives: Not Just for Kindergarteners (Higher Education) Session

Manipulatives are valuable teaching tools; however, it is difficult to find such tools made for college students. The presenter will share specific examples of children’s manipulatives that work well for teaching statistics to college students.

Jessica Johanningmeier
Cornell College, Mount Vernon, Iowa

Room 254 A (Convention Center) capacity: 99

34 Updating Professional Standards for Teaching Mathematics: Mathematics Teaching Today (Higher Education, Teacher of Teachers) Session

Authors of Mathematics Teaching Today, an update to Professional Standards for Teaching Mathematics, will describe themes and messages in this resource for teachers, supervisors, teacher development professionals, and others.

Tami S. Martin
Illinois State University, Normal, Illinois

Terese Herrera
Ohio Resource Center for Mathematics, Science, and Reading, Columbus, Ohio

Timothy Kanold
President, National Council of Supervisors of Mathematics, Lodi, California

Patrick Ryan
McGill University, Montréal, Quebec

35 Proportional Reasoning: Building Understanding through Activities (General Interest) Gallery Workshop

Students from middle school to college often struggle with proportional reasoning. Participants will explore ways to build an understanding of these concepts by making and confirming conjectures regarding changes in weak acid solutions.

Nancy Crisler
Washington University—Saint Louis, Saint Charles, Missouri

Gary Simundza
 Wentworth Institute of Technology, Boston, Massachusetts

Room 151 D/E/F (Convention Center) capacity: 143
Math Connects
A New PreK-5 Mathematics Program
2009

A comprehensive core program providing a strong, balanced instruction of concepts, skills, and problem solving

IMPACT Mathematics — the NSF component
- Focuses on Investigations and Explorations
- Includes field-tested Performance Assessments, rubrics, and anchor papers

Math Triumphs — a companion intervention program
- Focuses on foundational skills
- Provides intensive Tier 3 Response to Intervention

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Building Brighter Futures
36 How Can We Examine Temperature, pH, Dissolved Oxygen, and Nitrate Levels in Water and Soil?  
(Teacher of Teachers, 6–12) Gallery Workshop  
We will examine a No Child Left Behind, Title 2 grant that collected data using TI-84 Plus SE, Calculator Based Laboratory, and vernier probes to find a relationship to the type of fish, bird, and plant life existing in two diverse areas of Oklahoma.  
Beth Kilday  
University of Nebraska—Kearney, Kearney, Nebraska  
*Deer Valley (Marriott) capacity: 176*

37 Fiveton: The Wise Kingdom of Renaming and Place Value  
(Pre-K–2) Gallery Workshop  
The Focal Points emphasize place value, addition, and subtraction in grade 2. Learn how to use chip trading and a story about the hidden kingdom of Fiveton to get students truly invested in building understanding of these vital concepts.  
Mark Roddy  
Seattle University, Seattle, Washington  
*Room 155 A (Convention Center) capacity: 166*

38 Math and Children’s Literature: Using Stories to Meet Standards  
(Pre-K–2) Gallery Workshop  
The content will be presented in an informal setting using visuals. Participants will have opportunities to ask questions, develop lessons for their students, and leave with a collection of children’s literature that incorporates math.  
Sallie Launius-Harper  
Mississippi State University, Meridian, Mississippi  
*Room 253 A/B (Convention Center) capacity: 135*

39 Hop, Skip, Jump: Building Number Sense and Computational Fluency with Number Lines and Hundreds Charts  
(Pre-K–5) Gallery Workshop  
Encourage visual thinking using multiple models to represent fractions and whole numbers to one hundred and beyond. Explore strategies to increase computational fluency and flexible thinking with a variety of number lines and hundreds chart materials.  
Victoria Bohidar  
Chesterfield County Public Schools, Chesterfield, Virginia  
Kimberly Bender  
Chesterfield County Public Schools, Chesterfield, Virginia  
DeAnna Moreau  
Chesterfield County Public Schools, Chesterfield, Virginia  
Kathryn Munson  
Chesterfield County Public Schools, Chesterfield, Virginia  
*Room 355 D (Convention Center) capacity: 166*

40 Providing a Context for Learning Mathematics through Children’s Literature  
(Pre-K–5) Gallery Workshop  
This workshop will engage participants in hands-on activities using children’s literature as a basis for introducing, teaching, and reinforcing mathematical concepts. Participants will receive a handout that includes classroom-tested activities.  
Toni Harrell  
Kansas Talking Books, Emporia, Kansas  
Nancy L. Smith  
Emporia State University, Emporia, Kansas  
Marvin E. Harrell  
Emporia State University, Emporia, Kansas  
*Room 150 A/B/C (Convention Center) capacity: 143*

41 Using a Numeracy Center to Support Curriculum Focal Points, Grades Pre-K–5  
(Pre-K–5) Gallery Workshop  
Using a numeracy center of calendar, hundreds board, place value, money pocket charts, graphing manipulatives, and fractions kits, teachers will participate in focused inquiry lessons to support grades Pre-K–5 focal points and connections strands.  
Sherry J. Colarusso  
Vennlogic, Inc., Welaka, Florida  
*Room 255 F (Convention Center) capacity: 228*

42 Effective Strategies for Teaching Estimation  
(3–5) Gallery Workshop  
Estimation is more than just rounding! This session will look at a variety of strategies to engage students and teach estimating skills.  
Mari Muri  
PIMMS, Wesleyan University, Middletown, Connecticut  
*Room 155 D (Convention Center) capacity: 180*
**Tesselations, Patterns, and Symmetry—Investigations Style**  
(3–8) Gallery Workshop  
This hands-on workshop will focus on teaching students how to create their own tesselations, algebraic patterns, and symmetrical designs. All who attend will be given ideas, strategies, and handouts to share with their students.

Stacey McMichael  
Pearson Education, Glenview, Illinois

Alicia Todt  
Maplewood Richmond Heights School District, Maplewood, Missouri

*Room 251 D/E (Convention Center) capacity: 219*

**Performing with Pentominoes**  
(3–8) Gallery Workshop  
Come join us as we share how pentominoes revolutionized our classrooms. Pentominoes allow students to create concrete geometric and measurement models that represent data in multiple forms. Check out what these five little squares can do for you!

Patia C. Rountree  
Southeast Bulloch Middle School, Statesboro, Georgia

Tracey Ware  
Southeast Bulloch Middle School, Statesboro, Georgia

*Room 150 G (Convention Center) capacity: 148*

**Sample Simulations for Practical Probability with Particularly Poignant Problems**  
(3–8) Gallery Workshop  
Think that probability is tough for your students? Here are some activities for your use in grades 5–8. Let’s look at the concepts of fair games, simulations, and expected value. The TI 84’s ProbSim will be used for investigation.

Gary S. Luck  
University of Wisconsin—Milwaukee, Milwaukee, Wisconsin

Karen Kahn Corlyn  
Milwaukee Public Schools, Milwaukee, Wisconsin; University of Wisconsin—Milwaukee, Milwaukee, Wisconsin

*Room 255 D (Convention Center) capacity: 166*

**Math Rocks at the Math Bowl!**  
(3–8, Teacher of Teachers) Gallery Workshop  
Star in a mock Math Bowl while building problem-solving strategies. Discover how to run your own competition at the school or district level. Leave with a CD of questions, a presentation template, strategies and tips, and the Math Bowl rock song.

Lia Crawford  
Hillsborough County Elementary Mathematics Council, Tampa, Florida

Jack Fahle  
Hillsborough County Elementary Mathematics Council, Tampa, Florida

Shelley Fritz  
Hillsborough County Elementary Mathematics Council, Tampa, Florida

*Room 155 E (Convention Center) capacity: 228*

**Build, Draw, and Interpret: 3-D Visualization Activities Using Somas and Cubes**  
(3–8, Teacher of Teachers) Gallery Workshop  
Engage in hands-on activities from a visualization intervention program. Build, draw, describe, and interpret 3-D figures using a variety of representations.

Jacqueline Sack  
Rice University, Houston, Texas

*Room 151 A/B/C (Convention Center) capacity: 143*

**But I Taught It! Why Are These Math Scores So Low?**  
(3–8, Teacher of Teachers) Gallery Workshop  
What happens between teaching and test results? Responsibly mesh instruction and test preparation with powerful strategies like multiple representations, feedback, and concept development. Get ready-to-use ideas that make a difference in achievement!

Dottie Whitlow  
Georgia Council of Teachers of Mathematics, Atlanta, Georgia

*Room 155 E (Convention Center) capacity: 228*

**Mathematics Career Carnival**  
(3–12) Gallery Workshop  
Are your students excited about math? Do you find yourself answering the question “When am I ever going to use this?” Connecting math to the real world is the focus of this session, designed to excite and energize the math student.

Mark Stephen Montgomery  
Waco Independent School District, Waco, Texas

Elizabeth Solomon  
Waco Independent School District, Waco, Texas

Rachelle D'Lynn Meyer  
Baylor University, Waco, Texas

*Alpine Ballroom West (Hilton) capacity: 116*
Algebra for All Students: No Child Left Behind (6–8) Gallery Workshop
This workshop will explore a lesson that promotes success in algebra for all students, including English language learners. Come experience a constructivist lesson that provides students with a nontraditional, fun way to learn algebra.
Joyce B. Stevens
Brewster School District, Brewster, Washington
Grand Ballroom D (Marriott) capacity: 180

Navigating through Data with TI-Navigator™ and TI-73 Explorer™ Calculators (6–8) Gallery Workshop
Participants will engage in mathematical explorations that use data as the basis for examining number, algebra, and probability concepts. Come experience a dynamic approach to exploring data using TI-Navigator and TI-73 Explorers.
Judith Olson
Curriculum Research and Development Group, University of Hawaii at Manoa, Honolulu, Hawaii
Melfried Olson
Curriculum Research and Development Group, University of Hawaii at Manoa, Honolulu, Hawaii
Kay A. Wohlhuter
University of Minnesota Duluth, Duluth, Minnesota
Room 155 C (Convention Center) capacity: 228

Comparing Kisses (6–8) Gallery Workshop
Teachers will conduct experiments to determine and compare probabilities of plain and almond Hershey’s Kisses landing on their bases. Box-and-whisker plots will be used to compare and analyze results. Classroom implications will be discussed.
Susan K. Haller
Saint Cloud State University, Saint Cloud, Minnesota
Marlene Pinzka
Loras College, Dubuque, Iowa
Room 155 F (Convention Center) capacity: 228

Create Three-Dimensional Figures Using Nets (6–8) Gallery Workshop
Teachers will create polyhedra using nets and straws. These figures can be used to help students classify polyhedra and discover interesting formulas, such as Euler’s formula and the volume formulas for pyramids and prisms.
Sharon Vestal
South Dakota State University, Brookings, South Dakota
Room 355 F (Convention Center) capacity: 228

Professional Development from NCTM
Conference events and programs are created by educators for educators and bring together respected speakers from around the country.

Expand your mind, identify new techniques, and build your professional network—Join us at an upcoming event!

2008 Regional Conferences and Expositions
Oklahoma City, Oklahoma • October 2–3
Cleveland, Ohio • October 16–17
Reno, Nevada • November 6–7

NCTM 2009 Annual Meeting and Exposition
Washington, DC • April 22–25

For more information on NCTM’s events, visit www.nctm.org/meetings or call (800) 235-7566.
55
Baseball, Beans, and Binomials

(6–12) Gallery Workshop
What do a batter’s number of hits on a given day or the number of
germinating seeds have to do with binomial coefficients? See how
Pascal’s triangle helps us make predictions about real-world data in
TIMS inquiry activities for grades 6–12 students.

Philip Wagreich
University of Illinois at Chicago, Chicago, Illinois

Grand Ballroom F (Marriott) capacity: 220

56
Graphing Calculator Applications (APPS) to
Close Gaps in Students’ Knowledge

(6–12) Gallery Workshop
Learn to use graphing calculator APPS (Transformation Graphing,
Probability Simulations, Inequality Graphing, Area Formulas, and
more) to review key concepts and develop conceptual understanding
of new content. Bring a TI-84 Plus calculator.

Holly Anthony
Tennessee Tech University, Cookeville, Tennessee

Room 254 B (Convention Center) capacity: 162

57
Rich Experimental Probability Tasks That
Promote Mathematical Thinking

(9–12) Gallery Workshop
This hands-on workshop will explore how a contestant on Deal
or No Deal can use expected value. Also, other activities will be
investigated that make connections between experimental proba-

bility and chance events.

Nicole Lee Williams
Winona State University, Winona, Minnesota

Cheryl Quinn Nelson
Winona State University, Winona, Minnesota

Alpine Ballroom East (Hilton) capacity: 116

58
Encouraging Chaos in Your Classroom:
Exploring Similarity and Complex Numbers
with Fractals

(9–12) Gallery Workshop
Fractals can be used in a geometry class to introduce the study
of similarity, including patterns in nature, such as in ferns and
mountainscapes. You can also use fractals to facilitate computation
with complex numbers. Curious? Come find out how!

Susan M. Forster
Bismarck High School, Bismarck, North Dakota

Room 151 G (Convention Center) capacity: 194

59
Backwards Design in Action: Urban Learners
in a Performance-Based Mathematics
Environment

(9–12) Gallery Workshop
Participants will be introduced to the backwards design model for
establishing a performance-based classroom for urban learners,
examine an assessment task, and engage in the instructional tasks
designed to develop students’ learning.

Christine Darling Thomas
Georgia State University, Atlanta, Georgia

Desha L. Williams
Georgia State University, Atlanta, Georgia

Kimberly Gardner
Clayton State University, Morrow, Georgia

Room 250 B/C (Convention Center) capacity: 186

60
Unit Origami and Three-Dimensional Models in
Geometry

(9–12) Gallery Workshop
Participants will use authentic origami paper and unit origami to
make a cube and a triangular hexahedron. The surface area and vol-

ume of the solids will be calculated using an original and classroom
tested activity worksheet.

Marian Elaine Avery
Great Valley High School, Malvern, Pennsylvania

Room 355 E (Convention Center) capacity: 228

61
Who Says Calculus Is Boring?! Problems and
Projects to Add Meaning and Fun to Your Class
(9–12, Higher Education) Gallery Workshop
Get your hands dirty and brain exercised doing calculus like you’ve
never done it before! Low-tech and high-tech activities incorporate
popular culture, real-life applications, or just silly stories. Make
class more insightful and engaging.

Brian Shay
Canyon Crest Academy, San Diego, California

Room 150 D/E/F (Convention Center) capacity: 143

62
Becoming More Certain about Conceptual
Understanding in Calculus

(9–12, Higher Education, Teacher of Teachers) Gallery
Workshop
Calculus concepts are often presented algebraically. However,
when one is presented using technological, visual, and hands-on
approaches, more meaningful understanding results. Conceptual
problems from unique multiple perspectives will be explored.

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

Grand Ballroom E (Marriott) capacity: 180
63
Using Data Analysis and Probabilistic Models to Solve Real-World Problems from Business and Industry
(9-12, Higher Education, Teacher of Teachers) Gallery Workshop
Using data analysis or probability, participants will solve real application problems. Emphasis will be on how mathematics affects decision-making in business and government and how that influence can be used to encourage the study of mathematics.

Thomas G. Edwards
Wayne State University, Detroit, Michigan
Room 155 B (Convention Center) capacity: 228

64
Mathematics at the United States Department of Education
(General Interest) Session
This session will provide an overview of programs and initiatives supporting mathematics learning in the U.S. Department of Education. We will look at programs and research initiatives that support mathematics learning, and discuss what they mean for teachers and administrators throughout the country.

Patricia Johnson
United States Department of Education, Washington, D.C.
Room 254 C (Convention Center) capacity: 99

65
Is it an “Achievement” Gap or Is It an “Instructional” Gap?
(General Interest) Session
Do we know anything from research than can help us close the achievement gap? The answer is yes, and this session will dispel persistent myths and examine important findings from the research community that can help us close the “instructional gap.”

Matthew Larson
Lincoln Public Schools, Lincoln, Nebraska
Grand Ballroom A/B/C (Marriott) capacity: 195

66
The American Revolution, Self-Evident Truths, and Mathematics Education
(General Interest) Invited
In a time of increasing conflict over pedagogy, curriculum, and educational policies, where can a mathematics educator find certainty? This talk will raise some issues for you to think and talk to about with colleagues.

Julian Weissglass is a professor of education at the University of California, Santa Barbara. He has taught mathematics to elementary school classes, written about education and educational change, and presented on learning and educational change in the United States, Europe, Australia, and Mexico. He educates on racism, multicultural education, and educational equity. With colleagues, he started the National Coalition for Equity in Education, which he directs.

Julian Weissglass
University of California Santa Barbara, Santa Barbara, California
Hall 1 (Convention Center) capacity: 2000

67
Report of the National Math Panel
(General Interest) Session
In this session, members of the National Math Panel will share highlights of the report.

Camilla Benbow
Vanderbilt University, Nashville, Tennessee
Russell Gersten
Instructional Research Group, Long Beach, California
Larry Faulkner
Houston Endowment, Inc., Houston, Texas
Ballroom E (Convention Center) capacity: 398

68
An Analysis of State Mathematics Standards and Assessments, Grades K-8, with NCTM’s Curriculum Focal Points
(General Interest) Session
This session will present an analysis of four states’ grades K–8 mathematics standards of how they align with the recommendations in NCTM’s Curriculum Focal Points. We will also discuss the process involved in conducting the analysis.

Charles S. Thompson
University of Louisville, Louisville, Kentucky
Jennifer M. Bay-Williams
University of Louisville, Louisville, Kentucky
Elizabeth Todd Brown
University of Louisville, Louisville, Kentucky
William S. Bush
University of Louisville, Louisville, Kentucky
Maggie B. McGatha
University of Louisville, Louisville, Kentucky
Room 355 C (Convention Center) capacity: 237
69  Internet Challenges for Math from Wikipedia to Data Overload  

Learn→Reflect Kickoff Session 
(teacher of teachers) session RLC  

Using information (e.g., from Wikipedia) and data from the Internet in data analysis and probability lessons can bring good challenges and good learning opportunities. Deciding which data can be used reasonably in classrooms requires careful thought.  

Johnny W. Lott  
Past President, National Council of Teachers of Mathematics;  
University of Mississippi, University, Mississippi  

Ballroom B/D (Convention Center) capacity: 732  

70  Navigating Our World of Uncertainty: Statistics as a Vehicle for Empowerment  

(teacher of teachers) session  

Equality is uncertain. We’ll explore big ideas, some from the speaker’s Journal of Statistics Education papers, on how statistics connects with the domains of ethics, equity, social justice, and action research. We will share lessons learned from predominantly Latina/o teachers.  

Larry M. Lesser  
University of Texas at El Paso, El Paso, Texas; TODOS:  
Mathematics for ALL, El Paso, Texas  

Topaz (Hilton) capacity: 80  

71  Preservice Teachers’ Misconceptions of Representations When Teaching Mathematics  

(teacher of teachers) research session  

Results will be discussed of a study of teachers’ use of representations (concrete, representational, and abstract) in the development of instruction, including misconceptions. Participants will analyze their own conceptions of representations.  

Enrique Ortiz  
Universiy of Central Florida, Orlando, Florida  

Room 254 A (Convention Center) capacity: 99  

72  Best Practices in Mathematics Education: A Workshop Approach  

(Pre-K–2) session  

Explore a math workshop in an elementary school classroom, develop understanding of three types of workshop models, incorporate ways to assess students formatively through a workshop lesson, and make lesson plans. PowerPoint copies will be provided.  

Amy L. Ashley  
Chattanooga Valley Elementary School, Flintstone, Georgia  

Tracy Llewellyn  
Chattanooga Valley Elementary School, Flintstone, Georgia  

Grand Ballroom A (Hilton) capacity: 171  

73  The Algorithm: Have Our Students Really Learned What They Need to Know?  

(Pre-K–2) session  

Computational fluency depends on understanding number relationships and place value. We will view video clips of children using the standard U.S. algorithm and alternative algorithms to see what mathematics they show evidence of understanding.  

Kathy Richardson  
Math Perspectives Teacher Development Center, Bellingham, Washington  

Room 255 C (Convention Center) capacity: 354  

74  Making the Connection: The Link between Math and Literature  

(Pre-K–5) session  

This session will include motivating, practical instructional strategies for making math and literature relevant to the real world. Motivate students while teaching mathematical concepts through real-world literature and problem solving.  

Stephen Alan White  
Options Publishing, Houston, Texas  

Grand Ballroom I/J (Marriott) capacity: 187  

75  True Understanding of Arithmetic Using Physical Models  

(Pre-K–5, teacher of teachers) session  

The key to true understanding is insistence on the why in every step. But arithmetic involves many difficult steps that not all children grasp through abstract reasoning. See how manipulatives can make arithmetic intuitively obvious to children.  

Elon Kohlberg  
Harvard University, Cambridge, Massachusetts  

Solitude (Marriott) capacity: 70
9:30 a.m.–10:30 a.m.

76
How to Create Scoring Rubrics: Appropriate Assessment for Math Today
(PreK–8) Session
This session focuses on methods to develop rubrics to facilitate assessment. Attendees will create rubrics, use rubrics to assess sample work, review student-created rubrics, and share experiences. Sample rubrics and resources will be provided.
Audrey M. Quinlan
Seton Hill University, Greensburg, Pennsylvania
Room 251 C (Convention Center) capacity: 116

77
Making Metrics Meaningful
(PreK–8, Teacher of Teachers) Session
Want to learn more about metrics? Lucky teachers at this session will dance, create, and measure in ways few knew were possible. Using inexpensive materials, we will engage in hands-on activities that will be ready for Monday morning.
Jennifer Hataway
Beacon Cove Intermediate School, Jupiter, Florida
Ballroom I (Convention Center) capacity: 398

78
Strategies for Teaching Mathematics to Students with Special Learning Needs in Inclusive Settings
(3–5) Session
Participants will learn how to teach mathematical concepts explicitly using the concrete-semiconcrete-abstract technique for students with special needs. Individuals will receive a resource packet that contains instructional strategies.
Joseph Sencibaugh
Harris Stowe State University, Saint Louis, Missouri
Grand Ballroom B (Hilton) capacity: 171

79
Making a Difference in Students’ Achievement through Differentiated Instructional Strategies
(3–5) Session
This session will provide teachers with different strategies on the use of differentiated instruction in the grades 3–5 classroom. The audience will participate in demonstration lessons and receive a comprehensive handout.
Joan Josephine Vas
Kean University, Union, New Jersey
Mary J. Mitchell
Irvington Public Schools, Irvington, New Jersey
Grand Ballroom G/H (Marriott) capacity: 187

80
A Developmentally Appropriate Approach to Teaching Math
(3–5) Session
Proven, hands-on activities based on children’s literature books allow students to truly understand measurement, fractions, and more. Make your students ready for state tests by stepping beyond mere memorization.
Carol L. Klages
University of Houston–Victoria, Victoria, Texas
Room 251 A/B (Convention Center) capacity: 234

81
Multiplication Facts: A Gateway to Number Theory
(3–8) Session
Enrichment activities designed to connect core number theory concepts with multiplication facts while addressing the academic needs of the deliberate, average, and advanced learners.
Ralph J. Blose
Miami-Dade Public Schools, Division of Advanced Academic Programs, Miami, Florida
Hall 2 (Convention Center) capacity: 1677

82
Summing It Up: Laughing Counts!
(3–8) Session
This interactive session will provide participants with an hour of laughter as well as activities that they can take back to their classrooms and use immediately. This is a great opportunity to lighten up, learn, laugh, and leave with loads of ideas.
Janet (Jan) K. Scheer
Create A Vision, Foster City, California
Hall 3 (Convention Center) capacity: 1677

83
Patterns, Contexts, and Algebraic Thinking: Deepening Students’ Understanding
(3–8) Session
The speaker will share activities and students’ work from a student-centered, algebraic-thinking unit. Students describe, extend, and generalize patterns; see relationships among tables of data, graphs, and rules; and solve algebraic equations in a context.
Pamela Wells
Grand Valley State University, Allendale, Michigan
Ballroom H/J (Convention Center) capacity: 732
9:30 a.m.–10:30 a.m.

**84**

Let’s Be Rational: Developing a Rich Understanding of Rational-Number Concepts and Operations  
(*3–8, Teacher of Teachers*) Session  
Why do students think 15 is a good estimate for $7/8 + 8/9$ or that $2/3 + 3/4 = 5/7$? Come investigate proven activities for challenging and correcting these and other misconceptions through rich problems, questioning strategies, and discourse.  
Linda Jensen Sheffield  
University of Kentucky, Lexington, Kentucky  
*Ballroom F (Convention Center)* capacity: 398

**85**

Yours Is to Reason Why, Not Just Invert and Multiply  
(*3–8, Teacher of Teachers*) Session  
In this session, we will explore how Japanese math textbooks teach the multiplication and division of fractions for understanding through the use of problems and both visual and symbolic representations.  
William Jackson  
Public School No. 2, Paterson, New Jersey  
*Room 255 A (Convention Center)* capacity: 264

**86**

Using PDAs, iPhones, iPods, GPS, and More to Enhance Your Mathematics Curriculum  
(*3–12, Teacher of Teachers*) Session  
The presenter will showcase lessons that involve the use of iPhones, palms, GPS units for geocaching, iPods for videocasting, and other technologies so that participants can see how easily technology can be infused into their teaching.  
Karen S. Norwood  
Ewing Marion Kauffman Foundation, Kansas City, Missouri  
*Room 255 B (Convention Center)* capacity: 356

**87**

Accelerating Mathematics Learning for All Middle School Students  
(*6–8*) Session  
Examine problems that start with questions accessible to all but increase in difficulty to allow all students to succeed at some level, and encourage the most able students to deepen their knowledge about important concepts.  
Carol Reed Findell  
Boston University, Boston, Massachusetts  
*Ballroom A/C (Convention Center)* capacity: 504

**88**

Enspire Your Math Students through TI-Nspire™ Computer Algebra System (CAS)  
(*6–12*) Session  
Using CASs for teaching mathematics is an enrichment for the classroom. We provide a framework for the three main assets of technology in teaching: automation, compensation, and experimentation with examples using TI-Nspire CAS.  
Bernhard Kutzler  
Austrian Center for Didactics of Computer Algebra, Linz, Upper Austria, Austria  
*Room 250 A (Convention Center)* capacity: 123

**89**

Algebra Intervention  
(*6–12*) Session  
Are your students struggling with Algebra 1? Come hear about classroom-proven strategies that make algebra more active and engaging. Guided practice, guided note taking, games, and manipulatives make algebra more accessible to all students.  
Emily R. Smith  
Teacher Created Materials, Bristow, Virginia  
Karie Feldner Gladis  
Teacher Created Materials, Huntington Beach, California  
*Room 251 F (Convention Center)* capacity: 158

**90**

The Perils of P-Values  
(*9–12*) Session  
The p-value is commonly interpreted ambiguously, both as a kind of “empirical alpha” and as a measure of evidence against the null hypothesis. We will explore the origins of this hybrid interpretation and discuss an alternative approach.  
Reg Dunn  
MedStar Research Institute, Baltimore, Maryland  
*Alta/Snowbird/Brighton (Marriott)* capacity: 105

**91**

Spinning Around: Using Sketchpad and a Ferris Wheel to Facilitate an Entire Trigonometry Unit  
(*9–12*) Session  
By modeling the motion of a Ferris wheel in Sketchpad, an entire unit of trigonometry can be facilitated. Students can discover and develop trigonometry concepts from graphing, the unit circle, and even polar coordinates. Sketches will be shared.  
Kevin Thompson  
University High School, Normal, Illinois  
*Ballroom G (Convention Center)* capacity: 398
NUMB3RS in the Classroom: Activities and Implementation Ideas

(9–12) Session

The presenters have led teams that wrote activities for the CBS crime drama NUMB3RS for the first three seasons, all now on DVD. This session will provide samples, show episode clips, and present ways to support and enhance the math classroom.

Chuck Biehl
Charter School of Wilmington, Wilmington, Delaware

Patrick John Flynn
Kansas City Area Teachers of Mathematics, Kansas City, Kansas

Grand Ballroom C (Hilton) capacity: 388

Integrate Probability into Your Geometry Classroom!

(9–12, Teacher of Teachers) Session

This presentation will challenge geometry teachers to incorporate probability into their classes. Attendees will receive more than fifty copy-ready activities to energize geometry classes and foster an understanding of spatial ratios.

Richard Smith
University of Dubuque, Dubuque, Iowa

Room 355 A (Convention Center) capacity: 264

Preparing Teacher Education Students to Analyze Their Students’ Mathematics Work: Questions, Challenges, and Successes

(Higher Education) Session

Teacher candidates must analyze students’ mathematics work thoughtfully and in light of conceptual frameworks and NCTM Standards. This session will provide examples of teachers’ work samples and generate discussion on future directions.

William Otis Lacefield
Mercer University, Atlanta, Georgia

Room 355 B (Convention Center) capacity: 356

Teachers for Learners/Educhange, Inc.

Constructing Concepts, Building Vocabulary

Confused or constrained by literacy initiatives for the math classroom? Wondering how to maintain math content rigor and meet standards? Find out what best-practice vocabulary acquisition looks like using our instructional tool Concept Constructions.

Room 250E (Convention Center) capacity: 100

Focus on Math: With Pearson’s K–12 NSF Math Curricula

Review how Investigation in Number, Data, and Space (K–5), Connected Math Project 2 (6–8) and CME (9–12) focus on mathematics, connect across grades in content and features to increase student achievement in mathematics K–12.

Room 250F (Convention Center) capacity: 100

Target NCTM Curriculum Focal Points through Problem Solving

(General Interest) Gallery Workshop

Participate in solving open-ended problems that target NCTM Curriculum Focal Points, and take them back to your students. Stretch your thinking with rich tasks that can be extended through grades K–8. Represent problems several ways.

Kathleen Barta
Teacher to Teacher Publications, Lake Oswego, Oregon

Winnie Miller
Oregon Council of Teachers of Mathematics, Lake Oswego, Oregon

Deer Valley (Marriott) capacity: 176

Geometry on a Hub Cap

(Teacher of Teachers, 9–12, Higher Education) Gallery Workshop

What geometry can exist on the surface of a hub cap, a chocolate Kiss, or a donut? Teach geometry effectively by having students create their own geometries. Learn how to create definitions, form shapes, and formulate and prove theories.

David Eugene Ewing
University of Central Missouri, Warrensburg, Missouri

Grand Ballroom D (Marriott) capacity: 180
Place Value: Beyond Bundles of Straws
(Pre-K–2 Gallery Workshop)
We'll view and analyze videotaped student assessment interviews as a basis for investigating activities that help children develop an understanding of the structure of our number system.

Melissa Conklin
Math Solutions, Dallas, Texas

Alpine Ballroom West (Hilton) capacity: 116

Understanding and Helping Students:
A Systematic Approach to Integrating Assessment and Instruction in Early Math
(Pre-K–2 Gallery Workshop)
A new math assessment tool has been developed for grades pre-K–2. This session will present in theory and practice how to link the assessment results with effective instructional practices. Software will be demonstrated that assists with this task.

Michael P. Mueller
The Hospital for Sick Children, Toronto, Ontario; SES Scientific and Educational Services, Toronto, Ontario

Room 151 G (Convention Center) capacity: 194

Making Measurement a Meaningful and Accessible Experience for Young Children
(Pre-K–2 Gallery Workshop)
This workshop reviews a suggested, research-supported developmental sequence for introducing measurement concepts to young children. Come learn strategies that put developmental mathematical theories into playful learning practices for kids.

Brian Nelson Mowry
Austin Independent School District, Austin, Texas

Room 155 D (Convention Center) capacity: 180

Sharky’s Probability Adventures: Integrating Math and Science in a Study of Data, Chance, and Probability
(Pre-K–2 Gallery Workshop)
This presentation deals with hands-on activities that explore mathematical ideas about outcomes, likelihood and its presentation, and probability. They focus on enhancing problem solving, reasoning, and making connections.

Shannon Lorenzo-Rivero
Kachina Country Day School–North, Scottsdale, Arizona

Room 355 E (Convention Center) capacity: 228

Problem Solving the Write Way: Using Algorithms for Writing about Math
(Pre-K–5 Gallery Workshop)
Participants will link the math processes of problem solving with the processes of explanatory writing through the use of a writing algorithm (template) and an analytic rubric for assessment.

Nancy L. Gallenstein
Coastal Carolina University, Conway, South Carolina

Jackie Collier
Wright State University, Dayton, Ohio

Grand Ballroom E (Marriott) capacity: 180

Helping Young Children Develop Essential Mathematical Concepts and Critical-Thinking Skills
(Pre-K–5 Gallery Workshop)
The speaker will offer instructional strategies to teach essential mathematical concepts, skills and processes. Problem-solving strategies and appropriate use of manipulatives and supportive resources will be included. Handouts will be provided.

Donna L. Knoell
Consultant, Shawnee Mission, Kansas

Room 253 A/B (Convention Center) capacity: 135

Graphing ‘Round Your School: Unlocking Your School’s Mysteries
(Pre-K–5 Gallery Workshop)
Help your students open hidden nooks and crannies with data analysis. We will do a cooperative group miniproject that explores data collection, data analysis, and questioning as we have done in successful school projects since 1992.

Gretchen Murphy
Fairbanks Northstar School District, Fairbanks, Alaska

Alpine Ballroom East (Hilton) capacity: 116

No Conceptualization without Representation:
A Cry for Equity
(PreK–8 Gallery Workshop)
Participants will use concrete, pictorial, virtual, and verbal representations that support English language learner students by integrating content with academic language, attending to high cognitive demand, and using multimodal communication.

Carolyn M. Moore
SRA/McGraw-Hill, Columbus, Ohio

Room 150 A/B/C (Convention Center) capacity: 143
105
Differentiating in the Elementary School Mathematics Classroom: How to Reach All Learners
(3–5) Gallery Workshop
How do you reach every child during a math lesson? Come learn how differentiation shapes instruction to reach all students. This is an interactive workshop that includes hands-on activities and children’s literature.

Donna Long
Macmillan/McGraw-Hill, Columbus, Ohio

Jim Zwick
Metropolitan School District of Pike Township, Indianapolis, Indiana

Grand Ballroom F (Marriott) capacity: 220

106
Chances Are: A Probability Exploration
(3–5) Gallery Workshop
Is this game fair? Dice, coins, spinners, and cards will be used to explore probability outcomes and strategies for determining fairness. Data collected will generate charts and graphs to provide statistical analysis and conceptual understanding.

Judy Bippert
San Diego State University, San Diego, California

Room 150 D/E/F (Convention Center) capacity: 143

107
Making Algebra Child’s Play!® in Grades 3–5
(3–5) Gallery Workshop
Experience the visual and kinesthetic approach of Hands-On Equations, a motivational, game-like approach that will make algebraic equations and verbal problems fun for young students.

Linda Bailey
Borenson and Associates, Inc., Allentown, Pennsylvania

Room 254 B (Convention Center) capacity: 162

108
Fact Fluency: It’s All about Patterns
(3–5) Gallery Workshop
Did you know there are only 10 multiplication facts to memorize, not 100? Participants will have an interactive opportunity to investigate patterns that will develop fact fluency. Related standards, literature, and games for parents will be shared.

Karen Morris
Rochester City School District, Rochester, New York

Room 255 F (Convention Center) capacity: 228

109
Algebra before Algebra: Snapshots of Success
(3–5, Teacher of Teachers) Gallery Workshop
Students can learn to use algebraic reasoning effectively long before they take algebra formally, but they must get used to using algebra’s foundational ideas. This workshop will show teachers how to foster these ideas easily in traditional, blended, or reform programs.

Wayne S. Watson
DeSales University, Center Valley, Pennsylvania

Room 155 B (Convention Center) capacity: 228

110
Computational Fluency + the Process Standards = Effective Instruction
(3–5, Teacher of Teachers) Gallery Workshop
Participants will be engaged in hands-on activities that combine the components of computational fluency with the NCTM Process Standards. Ideas for incorporating problem solving, connections, communication, representation, and reasoning will be shared.

Kay B. Sammons
Howard County Public Schools, Ellicott City, Maryland

Room 355 D (Convention Center) capacity: 166
What Is the Possibility That Our Students Will Understand Two-Digit Multiplication?
(3–8) Gallery Workshop
Look at a variety of strategies and algorithms for multiplying two-digit numbers to make sense of rules and procedures, including manipulatives, models, and algorithms from other countries. Handouts will be available.

Trudy Mitchell
Math Learning Center, Salem, Oregon
Room 155 F (Convention Center) capacity: 228

New Fraction Lessons from the Rational Number Project
(3–8) Gallery Workshop
Participants will work with selected lessons from the new NSF-funded curriculum on fractions, decimals, and percents. The curriculum uses a variety of representations that help children as they develop and make sense of algorithms.

Terry R. Wyberg
University of Minnesota–Twin Cities, Minneapolis, Minnesota
Kathleen Cramer
University of Minnesota–Twin Cities, Minneapolis, Minnesota
Seth Leavitt
Minneapolis Public Schools, Minneapolis, Minnesota
Canyon Room (Hilton) capacity: 250

Kou-Ko and the Peacock’s Tail
(3–8) Gallery Workshop
Participants will use the Pythagorean theorem to explore significant relationships among measurement, geometry, and algebra. Activities and multiple entry points will be used to build understanding of this important mathematical concept.

Mary Mooney
Milwaukee Public Schools, Milwaukee, Wisconsin
Paige Richards
Milwaukee Public Schools, Milwaukee, Wisconsin
Lee Ann Pruske
Milwaukee Public Schools, Milwaukee, Wisconsin; University of Wisconsin–Milwaukee, Milwaukee, Wisconsin
Room 255 E (Convention Center) capacity: 228

Effective Strategies for Teaching Mathematics Content to English Learners
(3–12) Gallery Workshop
Teachers who know the mathematics they are teaching are better able to teach it to their students. They need to understand the language challenges that Academic English presents to English language learners while learning mathematics.

Harold Asturias
Lawrence Hall of Science, University of California at Berkeley, Berkeley, California; TODOS: Mathematics for ALL, Berkeley, California
Susie Hakansson
University of California at Los Angeles, Los Angeles, California
Room 155 A (Convention Center) capacity: 166

An Exploration of a Solid
(6–8) Gallery Workshop
Participants will create the net of a rectangular prism proportional to a given net. On completion of these nets, we will explore the relationships among the dimensions, surface areas, and volumes of the constructed prisms.

Kathleen Bunt Jackson
West Chester University of Pennsylvania, West Chester, Pennsylvania
Room 255 D (Convention Center) capacity: 166

The Power of Uncertainty: Tapping into Students’ Natural Curiosity about Probability
(6–8) Gallery Workshop
A variety of activities will develop students’ awareness of the power of data analysis and probability. Connections among data collection, analysis, and graphical representation will be fostered through the exploration of games of chance.

Gail Rowe Englert
Norfolk Public Schools, Norfolk, Virginia
Alfreda Jernigan
Norfolk Public Schools, Norfolk, Virginia
Room 150 G (Convention Center) capacity: 148

Walk This Way and Other Engaging Activities
(6–12) Gallery Workshop
Participants will collect and analyze real-world data using a variety of hands-on techniques including technology in an effort to help students answer the age-old question “When are we ever going to need this?”

Sherri Abel
Eastside High School, Taylors, South Carolina
Room 155 E (Convention Center) capacity: 228
118
Logical Line Fitting: One Step in the EDA Process

(6–12) Gallery Workshop

Use graphing calculators to analyze real-world data through scatterplots and line fitting. Explore multiple models for line of best fit. Discuss effects of outliers and why linear or nonlinear regression may not be the best place to start.

Shannon Guerrero
Northern Arizona University, Flagstaff, Arizona

Room 251 D/E (Convention Center) capacity: 219

119
Using Manipulatives and Investigations in Geometry

(6–12) Gallery Workshop

Participants will use hinged mirrors, rubber bands, patty paper, and other manipulatives and investigations to develop geometry concepts, such as similarity and triangle congruences, transformations, central angles and polygons, area, and more.

Chris Mikles
College Preparatory Mathematics Educational Program, Sacramento, California

Room 355 F (Convention Center) capacity: 228

120
Scaffolding Students’ Development of Dynamic Spreadsheets as a Mathematics Learning Tool

(6–12, Teacher of Teachers) Gallery Workshop

Explore how you can design algebra and prealgebra to focus on extending mathematics problems while also helping students gain skills in creating dependable and dynamic spreadsheets as a tool for learning mathematics.

Margaret Niess
Oregon State University, Corvallis, Oregon

Room 250 B/C (Convention Center) capacity: 186

121
Algebra for All: Using Cabri® Junior on the TI-84 Plus™ to Teach It

(9–12) Gallery Workshop

Participants will use the Cabri Junior application on the TI-84 Plus to experience many examples that will help their students understand slope, intercepts, and other characteristics of linear equations. No prior experience with Cabri Junior is necessary.

Donald C. Karlgaard
Texas Instruments, Brainerd, Minnesota

Room 151 D/E/F (Convention Center) capacity: 143

122
1!, 2!, 3!, 4! … Let’s Count!

(9–12, Higher Education) Gallery Workshop

Participants will be led in a series of activities that involve problems in discrete mathematics. The problems presented will require some routine and nonroutine counting methods in the solution process. Some graph theory will also be introduced.

Clifton Wingard
Delta State University, Cleveland, Mississippi

Room 151 A/B/C (Convention Center) capacity: 143

123
Experience How to Incorporate Multiple Representations and Assessment Creatively Using TI-Nspire™ and SMART Boards™

(9–12, Teacher of Teachers) Gallery Workshop

Get hands-on instruction in how to integrate graphs, geometry, spreadsheets, and algebra into your instruction and assessment. Obtain several innovative and exciting activities that emphasize problem solving. Integrate into your classroom immediately.

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

Room 155 C (Convention Center) capacity: 228

124
Let’s Teach Data Analysis Using Class Assessment Data

(General Interest) Session

Classroom assessment data offers a rich, relevant environment for teaching and exploring data analysis. Collaborative analysis and goal-setting between students and the teacher encourage a common vision and shared governance.

Jim Bohan
Lancaster Lebanon Intermediate Unit 13, Lancaster, Pennsylvania

Ballroom F (Convention Center) capacity: 398
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- **Recognize** the need for intensive intervention when appropriate
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125

Spaceflight through a Teacher’s Eyes
(General Interest) Session
Teacher and Astronaut Barbara Morgan, who recently served on Space Shuttle mission STS-118, will share her insights.

Morgan began her teaching career in 1974 on the Flathead Indian Reservation, Arlee, Montana, where she taught reading and math. She later taught second, third, and fourth grades at McCall-Donnelly Elementary School in McCall, Idaho. Morgan was selected as the backup candidate for the NASA Teacher in Space Program and trained with Christa McAuliffe and the Challenger crew at NASA’s Johnson Space Center, Houston, Texas. Her duties as Teacher in Space Designee included public speaking, educational consulting, curriculum design, and serving on the National Science Foundation’s Federal Task Force for Women and Minorities in Science and Engineering. She was assigned technical duties in the Astronaut Office, Space Operations Branch. She served in the Astronaut Office Capsule Communicator Branch, working in Mission Control as prime communicator with on-orbit crews. Morgan has logged more than 305 hours in space, completing her first space flight in 2007 as a mission specialist on the crew of mission STS-118.

Barbara Morgan
NASA Johnson Space Center, Houston, Texas

Hall 1 (Convention Center) capacity: 2,000

126

Improving the Quality of Mathematics Discussions: Linking Research and Practice
(General Interest) Research Session
Facilitating discussions that make use of student thinking while moving toward essential mathematical understandings is challenging work. We will share research-based ideas that can enhance the quality of classroom discussions.

Journal for Research in Mathematics Education (JRME) Editorial Panel
National Council of Teachers of Mathematics, Reston, Virginia

Research Committee
National Council of Teachers of Mathematics, Reston, Virginia

Room 255 C (Convention Center) capacity: 354

127

Are You Asking the Right Questions?
(Teacher of Teachers, 3–8) Session
Asking the right kinds of questions is crucial to thought-provoking discourse in the problem-solving classroom.Preserve and in-service teachers learn strategies for using Bloom’s revised taxonomy to develop such questions.

Sharon L. Young
Seattle Pacific University, Seattle, Washington

Room 254 C (Convention Center) capacity: 99

128

Here’s One for the Little Guy: Fitting Math into the Early Childhood Curriculum
(Pre-K–2) Session
Uncertain how to squeeze math into an already crowded curriculum? You’ll leave this session with five easy principles and plenty of lesson ideas for integrating worthwhile mathematics with students’ natural curiosity, literacy, assessment, and play.

Carrie S. Cutler
University of Houston, Houston, Texas

Grand Ballroom A/B/C (Marriott) capacity: 180

129

Young Children Dealing with Data and Chance
(Pre-K–2) Session
Data and chance involve visual literacy and specific language in early childhood. This session will focus on appropriate approaches and resources to support data-and-chance concepts and processes to help design data-and-chance activities.

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

Room 250 A (Convention Center) capacity: 123

130

A Graph a Day Builds Math Understanding and Vocabulary for English Language Learners (Yay!)
(Pre-K–2) Session
Using daily graphs with English language learners fosters idea communication and increases language development. Different graphing questions and strategies will be shared. Students’ samples from a first-grade ESL classroom will be highlighted.

Heather McVarish
New York University, New York, New York

Room 255 B (Convention Center) capacity: 356

131

Tweaks of Curriculum Focal Points: Toward Even More Balance and Coherence
(Pre-K–5) Research Session
Using research in many grades K–5 classes, the speaker will discuss modifications of Curriculum Focal Points that increase coherence and international competitiveness. She will summarize classroom features that create success for all students.

Karen C. Fuson
Northwestern University, Evanston, Illinois

Grand Ballroom B (Hilton) capacity: 171
The Visuals Tell the Story, and It’s All about Math!
(Pre-K–5, Teacher of Teachers) Session
The award-winning author will demonstrate how the three ingredients that he puts together to tell stories—pictures, words, and math—can be used to engage children, motivate them, and encourage them to communicate about math.

Stuart J. Murphy

132

Developing Mathematical Discourse in a Kindergarten Classroom
(Pre-K–5, Teacher of Teachers) Session
A kindergarten teacher, with a researcher, videotaped her classroom discourse for a year, documenting great increases in the mental complexity of her students’ participation. The discourse and the teacher acquisitions that promoted it will be described.

Damon Bahr
Brigham Young University, Provo, Utah

Kim Bahr
Alpine School District, American Fork, Utah

133

How to Improve Problem-Solving Skills through the Use of Differentiated Math Stations in the Classroom
(3–5) Session
Teachers will receive and learn about materials to use for various problem-solving math stations in the classroom. Also, teachers will learn about a whole-class, differentiated station called The Travel Game.

Jennifer Carin Brown
Hewitt School, New York, New York

134

Step Right Up to a Student-Led Math Family Fun Night!
(3–5) Session
As students plan and lead a Math Family Fun Night, teachers step out of the way as students step up! The learning possibilities are endless, and so is the fun. Handouts include ideas and practical suggestions for starting a new school tradition.

Wendy Petti

135

What Are My Chances?
(3–5) Session
Participate in probability activities that focus on your students’ conceptual understanding and critical-thinking skills. Formulate hypotheses, perform experiments, report findings, and use written and oral methods to describe your work.

Judy Kasabian
El Camino College, Torrance, California

136

Lemonade and Pistachios
(3–5) Session
We will use Math Start books to launch two lessons on data collection and probability. Participants will also have the opportunity to examine other literature sources that launch math lessons in the elementary grades.

Jane Martain
Jordan School District, Salt Lake City, Utah

137

Making Sense of Fractions: Laying the Foundation for Success in Algebra
(3–8) Session
A deep understanding of fraction concepts and operations develops reasoning and lays the foundation for success in algebra. This session will explore how to use models and real-world situations to help students make sense of fractions.

Nadine Bezuk
San Diego State University, San Diego, California

Steve Klass
San Diego State University, San Diego, California; Encinitas Union School District, Encinitas, California

138

Can We All Be Average? Let’s Analyze This and Other Claims about Data and Statistics
(3–8) Session
We’ll explore some data-based claims and consider the choice of mean, median, or mode in justifying conclusions. These activities will strengthen students’ reasoning ability and encourage their critical thinking about data.

Susan Gay
University of Kansas, Lawrence, Kansas

Jeanine Haistings
William Jewell College, Liberty, Missouri

139
What Does It Mean to Discover Middle School Mathematics?

(6–8) Session

How do we bridge students from inquiry activities to abstract mathematics? How do we elicit math concepts and skills from middle school students as they investigate math situations? Assessment is an essential tool. Come explore important assessment ideas.

Pamela Weber Harris
Consultant, Kyle, Texas

*Ballroom G (Convention Center) capacity: 398*

MI-PALS: Multiple Intelligences (MI) in Patterns, Algebra, and Logic in the Standards

(6–8) Session

Algebra in middle school? Absolutely. The speaker will explore algebra, patterns, and logic by working through several classroom-ready examples. We will participate in activities that encourage us to address MI when we plan our lessons.

Fredrick Paul Strand
North Dakota Council of Teachers of Mathematics, Hatton, North Dakota

*Grand Ballroom C (Hilton) capacity: 388*

Another Great Problem

(6–8) Session

Participants will solve the painted cube problem. Connections, mathematics, and differentiation in the classroom will be modeled. There will be equal opportunity for fun and rich mathematics for all.

Jean Kelly Howard
Montana Learning Center, Helena, Montana

*Solitude (Marriott) capacity: 70*

Constructing Regular Pentagons: Exploring the Geometry of the Golden Ratio with Sketchpad®

(6–12) Session

Learn how to construct a regular pentagon and see where the golden ratio appears in a regular pentagram. Examine why the golden cut construction results in the value of the golden ratio and how this value is related to Fibonacci numbers and spirals.

Andres Marti
Key Curriculum Press, Emeryville, California

*Alta/Snowbird/Brighton (Marriott) capacity: 105*

History of Mathematics in the Classroom: How to Make It Work

(6–12) Session

How do you pronounce Al-Khwarizmi? Interested in African American hair weaving and patterns? Eager to sing about Copernicus? Who is the father of modern algebra? We will discuss all this and more in a fun-filled session!

Lisa Lavelle
District of Columbia Fellows for the Advancement of Mathematics Education, Washington, D.C.

Kathryn Procope
District of Columbia Fellows for the Advancement of Mathematics Education, Washington, D.C.

Mia Abeles
District of Columbia Fellows for the Advancement of Mathematics Education, Washington, D.C.

Gina McGovern
District of Columbia Fellows for the Advancement of Mathematics Education, Washington, D.C.

Elaine Abbas
District of Columbia Fellows for the Advancement of Mathematics Education, Washington, D.C.

*Grand Ballroom I/J (Marriott) capacity: 187*
145
Keeping It Real
(6–12) Session
Get your students interested in data analysis with real data from your students’ interests and hands-on activities. Handouts are geared toward using frequency tables, box-and-whisker plots, or scatter plots but can be adapted.
Kelly Sullivan
Wicomico County Schools, Salisbury, Maryland
Room 355 A (Convention Center) capacity: 234

146
Dynamic Mathematics with GeoGebra
(6–12) Session
GeoGebra is free, multiplatform software that links dynamical geometry, algebra, and calculus in one easy-to-use package for middle and high school. Examples of successful use in classrooms and free materials created by teachers will be provided.
Markus Hohenwarter
Florida Atlantic University, Boca Raton, Florida
Grand Ballroom G/H (Marriott) capacity: 187

147
Probability Laws: Learn Them All with Dice Games!
(6–12) Session
Entice students to learn probability while playing dice games. The laws of probability evolve naturally through classroom games. These activities are included in MSTP, an NSF-funded project for ten low-performing school districts in New York.
Sharon Whitton
Hofstra University, Hempstead, New York
Room 255 A (Convention Center) capacity: 264

148
Using Geometric Pattern Tasks to Develop Mathematical Understandings and Set Classroom Norms
(6–12, Teacher of Teachers) Session
This session will focus on using patterning tasks to help students develop algebraic reasoning skills and establish classroom norms. Participants will analyze classroom artifacts and discuss the mathematical and social potential that patterning tasks hold.
Margaret Smith
Board of Directors, National Council of Teachers of Mathematics; University of Pittsburgh, Pittsburgh, Pennsylvania
Amy F. Hillen
Robert Morris University, Moon Township, Pennsylvania
Christy Catania
Dorseyville Middle School, Pittsburgh, Pennsylvania
Hall 3 (Convention Center) capacity: 1677

149
Opening the Door to Algebra, Accessibility, and Rigor
(9–12) Session
If we really believe that algebra is for all, we need to do something to make it happen. This session will challenge your thinking about how we can create successful experiences for all students in algebra.
Reggie Alan Nelson
Consultant, La Conner, Washington
Ballroom E (Convention Center) capacity: 398

150
e: The True Precalculus Story
(9–12) Session
The inside scoop on e’s deepest secrets: a true story of math connections that will shock you by revealing what precalculus is really all about! See why e is more interesting than compound interest!
Ralph Steven Pantozzi
Mount Olive Public Schools, Flanders, New Jersey
Ballroom I (Convention Center) capacity: 398

151
The Mona Lisa, The DaVinci Code, and Standards-Based Mathematics Teaching
(9–12, Higher Education, Teacher of Teachers) Session
Lessons can be learned from Leonardo da Vinci about the mathematics of art and the art of mathematics teaching. This session will explore how DaVinci’s modus operandi can give clues to guide the teaching of standards-based mathematics.
Richelle (Rikki) Blair
Lakeland Community College, Kirtland, Ohio; American Mathematical Association of Two-Year Colleges, Kirtland, Ohio
Room 355 B (Convention Center) capacity: 356

152
Fractal Dimension: A Classroom Activity
(9–12, Higher Education, Teacher of Teachers) Session
Participants will learn how Fractal Dimension can be used to understand the concept of one, two, and three dimensions better. Illustrations, applications, and classroom activities will be provided for participants to use in their classroom.
David Buhl
Northern Michigan University, Marquette, Michigan
Room 251 C (Convention Center) capacity: 116
11:00 a.m.–12:00 noon

153
Conditional Probability, Independence, and Mutual Exclusivity: How to Teach Them Correctly in the First Place!
(9–12, Teacher of Teachers) Session

By teaching these topics separately and trying to scaffold their difficulty, we often make two simple rules seem like four (or six) very complicated ones. Probability makes common sense: even the notation can help if you look at it correctly!

Ruth Miller
Roland Park Country School, Baltimore, Maryland

Room 251 A/B (Convention Center) capacity: 234

154
Characteristics of Mathematics Professional Development That Advance Teachers’ Content Knowledge
(Higher Education, Teachers of Teachers) Session

This session will share characteristics of mathematics professional development that resulted in score gains, as measured by the Diagnostic Teacher Assessments in Mathematics and Science for grades K–8 teacher participants.

Elizabeth Todd Brown
University of Louisville, Louisville, Kentucky
Robert Ronau
University of Louisville, Louisville, Kentucky

Topaz (Hilton) capacity: 80

11:30 a.m.–12:30 p.m.

155
Mathematics Education Trust Grants for Classroom Teachers: Tips for Proposals
(General Interest) Session

This session will convey the important tips to classroom teachers and preservice teachers for writing proposals and receiving awards and grants from the Mathematics Education Trust of NCTM.

Mathematics Education Trust
National Council of Teachers of Mathematics, Reston, Virginia

Alta/Snowbird/Brighton (Marriott) capacity: 105

156
Native Power, Pedagogy, and Place: Strengthening Mathematics Education through Indigenous Knowledge and Ways of Knowing
(General Interest) Session

This presentation will explore ways in which well-developed indigenous knowing, learning, and problem solving can be understood and used in the schooling of indigenous students.

Sharon Nelson-Barber is a sociolinguist and directs the Center for the Study of Culture and Language in Education Research at WestEd. Her work explores ways in which teachers can more effectively teach the full spectrum of students in today’s classrooms and centers on the teaching knowledge and abilities of educators in nontraditional settings. She is cofounder of the Pacific/Polar Opportunities to Learn, Advance and Research Indigenous System, and she teaches at Stanford University’s Center for Comparative Studies in Race and Ethnicity.

Sharon Nelson-Barber
WestEd, San Francisco, California

Hall 3 (Convention Center) capacity: 1677
157
Renew Yourself by Teaching Math in Another Country
(General Interest) Session
Sponsored by the United States National Commission on Mathematics Instruction
Whether you are a new teacher, a seasoned veteran, or retired, you have much to offer and learn by teaching in another country. An experienced panel will share their experiences and respond to your ideas and questions about teaching internationally.

Stuart Moskowitz
Humboldt State University, Arcata, California
Cathy L. Seeley
Past President, National Council of Teachers of Mathematics; Charles A. Dana Center, University of Texas at Austin, Austin, Texas
Joseph G. Rosenstein
Rutgers University, New Brunswick, New Jersey
Krista Miller
Coastal Grove Charter School, Arcata, California
Diane Schnellhammer
Department of Defense Dependent Schools, Ramstein High School, Ramstein Air Base, Germany

Room 251 C (Convention Center) capacity: 116

158
Geometry: Make It Visual
(General Interest) Session
All students benefit from visual models and teaching approaches that enable geometric concepts to be seen. The speaker will present dozens of ways to use such items as sewing snaps, transparencies, tennis cans, and periscopes.

Laurie Boswell
The Riverside School, Lyndonville, Vermont

Topaz (Hilton) capacity: 80

159
Looking for a Good Coaching Model?
(Teacher of Teachers) Session
In this session you will learn about several coaching models that can be used to support mathematics coaching. You will also learn how the research on coaching can help you create a successful coaching program.

Maggie B. McGatha
University of Louisville, Louisville, Kentucky

Room 255 C (Convention Center) capacity: 354

160
Think! Communicate! Justify!
(Pre-K–2) Session
Ideas and activities will be shared to empower your students to become confident problem solvers, good questioners, and critical thinkers.

Mickey Jo Sobierajski
Fulton City Schools, Fulton, New York

Ballroom G (Convention Center) capacity: 398

161
Using Picture Books and Manipulatives for Data Analysis and Algebraic Concepts
(Pre-K–2) Session
The participants will use picture books and manipulatives to communicate or represent relationships involving data collection and algebraic concepts.

Catheline Jones
Normandy School District, Saint Louis, Missouri
Jacqueline Austin
Ford CEC Elementary School, Saint Louis, Missouri
Karen Darris
Gateway Elementary School, Saint Louis, Missouri

Room 251 A/B (Convention Center) capacity: 234
162 Grappling with Graphing (Pre-K–2) Session

Explore the possibilities! Get students energized about graphing. Experience hands-on strategies for gathering data, creating graphical representations, and interpreting data. Leave with activities and differentiated instructional strategies.

Julie Norflus-Good
Felician College, Lodi, New Jersey

Room 255 A (Convention Center) capacity: 264

163 Low-Fat Homework for the Active Mind (Pre-K–5, Teacher of Teachers) Session

Through a concerted effort of teachers and administration, a small, rural elementary school has created a dynamic set of homework problems, for all grades, that are closely tied to NCTM and state mathematics standards.

Brice William Seifert
Illinois State University, Normal, Illinois
Maxine Hicks
North Franklin School District, Connell, Washington

Grand Ballroom A/B/C (Marriott) capacity: 180

164 Can You Name All the People in the World? (3–5) Session

Could anybody name all those people? How many people would that be, anyway? How could you count them all? We’ll see how third- and fourth-grade students explored these questions, using data analysis, probability, and more.

Stephen Currie
Poughkeepsie Day School, Poughkeepsie, New York

Room 355 A (Convention Center) capacity: 264

165 Meeting the Needs of Students in a Multicultural Classroom through Math Differentiation (3–5, Teacher of Teachers) Session

This session will focus on a teacher’s efforts to meet students’ needs in an extremely diverse classroom while making an impact on students’ achievement schoolwide. A tool kit for differentiating math for all learners will be provided.

Janith Todd
Simonton Elementary School, Lawrenceville, Georgia
Kathy Spruill
Gwin Oaks Elementary School, Lawrenceville, Georgia
Christy LeMaster
Simonton Elementary School, Lawrenceville, Georgia
Dot Schoeller
Simonton Elementary School, Lawrenceville, Georgia

Ballroom B/D (Convention Center) capacity: 732

166 Helping Students Catch Up and Keep Up: Intervention in Number and Operations, Grades 2–6 (3–5, Teacher of Teachers) Session

This session focuses on meeting the needs of intervention students in grades 2–6 who struggle in the content area of Number and Operations. It will present ways to use assessment strategies and instructional techniques to meet these students’ needs.

Marilyn Burns
Math Solutions Professional Development, Sausalito, California

Hall 1 (Convention Center) capacity: 2000

167 Are You Game? Explorations in Probability for Grades 3–6 (3–8) Session

Participants will explore teacher-created, hands-on games that allow students to explore, analyze, and correct unfair games from the Game Factory. All participants will receive a copy of the booklet Are You Game? Explorations in Probability.

Kimberly Rimbey
Rodel Charitable Foundation of Arizona, Phoenix, Arizona

Room 251 F (Convention Center) capacity: 158

168 Do the Curriculum Focal Points Mean the End of Problem Solving? Absolutely Not! (3–8) Session

Teachers are concerned with how to teach both problem solving and the traditional arithmetic skills suggested by the Focal Points. The speaker will discuss how to do both by carefully selecting problems.

Stephen Krulik
Temple University, Philadelphia, Pennsylvania

Room 355 B (Convention Center) capacity: 356


Art is never so brilliantly displayed as it is in math. Through tessellations, graphing solutions to form pictures, geometry through origami, and three-dimensional art with compass drawings, art is used as another teaching tool to reach students.

Regina Marie Brown
Scottsdale Unified School District, Scottsdale, Arizona

Grand Ballroom A (Hilton) capacity: 171
Bar Graph or Histogram? How to Be Certain It’s the Right Graph!
(3–8, Teacher of Teachers) Session
Bar graphs and histograms are similar while also having significant differences. Examine similarities and differences for what matters when using these graphs to represent data. Examples appropriate for middle grades students will be shared.

Susan L. Hillman
Saginaw Valley State University, University Center, Michigan
Cathy M. Malotka
Saginaw Public School District, Saginaw, Michigan
Room 254 A (Convention Center) capacity: 99

Transparent Area Modules™: A Tool Proven Successful for Teaching Rational Numbers to All Students
(6–8) Session
Do your students have problems with rational numbers? Do they understand them, use the language, and write equations? Participants will use the speaker’s Transparent Area Modules to practice removing roadblocks to rational-number understanding.

Dorothy S. Strong
Benjamin Banneker Association, Olympia Fields, Illinois
Ballroom H/J (Convention Center) capacity: 732

Patterns, Problem Solving, and Literature in Middle School
(6–8) Session
Experience activities designed to build mathematical knowledge through patterns, problem solving, literature, and discourse. Focus on cooperative learning structures and replication in participants’ classrooms.

Belinda Gail Langham
Drury University, Springfield, Missouri
Grand Ballroom G/H (Marriott) capacity: 187

A Sure Thing: Probability Activities for Your Classroom
(6–8) Session
Discuss, explore, and illustrate probability activities for middle grades classrooms—experimental and theoretical probability, simulation, geometric probability, and more. Gain ideas for integrating probability into your curriculum and instruction.

Roger Day
Pontiac Township High School, Pontiac, Illinois
Room 255 B (Convention Center) capacity: 356

Off the Page and into the Classroom: Make Mathematics Teacher (MT) Work for You
(6–12) Session
Members of the MT Editorial Panel will share ideas for using the journal to spark creative lessons. Whether you’re in search of a three-minute activity or a class-length activity, MT is an invaluable resource.

Blake E. Peterson
Brigham Young University, Provo, Utah
Margaret Coffey
Saint Andrew’s School, Middleton, Delaware
Ballroom A/C (Convention Center) capacity: 504

Using Virtual Manipulatives to Catalyze Research-Based Mathematics Instruction
(6–12) Session
This session will help teachers learn how to use virtual manipulatives to put Marzano’s research about effective instructional strategies into practice in secondary school mathematics classrooms.

David B. Shuster
ExploreLearning, Charlottesville, Virginia
Grand Ballroom B (Hilton) capacity: 171

Fantasy Sports and Mathematics
(6–12, Higher Education) Session
Learn how fantasy sports address all learning styles and increase motivation and achievement in fifth grade and up. Integrate fractions, decimals, percents, graphs, and algebra into dynamic games played by millions. fantasysportsmath.com

Dan Flockhart
Fantasy Sports and Mathematics, Fortuna, California
Hall 2 (Convention Center) capacity: 1677

What Students Need to Know to Succeed in Algebra
(6–12, Higher Education, Teacher of Teachers) Session
Too many of our students can’t make sense of algebra because we haven’t prepared them to do so. What mathematics do they need to know before beginning algebra, so that they can succeed?

Judith Sowder
San Diego State University, San Diego, California
Ballroom E (Convention Center) capacity: 398
12:30 p.m.–1:30 p.m.

178

Misconceptions in Interpreting Center and Variability in Graphical Representations

(6–12, Higher Education, Teacher of Teachers) Session

How well can your students interpret data presented graphically? We will identify and discuss students’ misconceptions in making judgments of center and variability when data are presented by histograms and stem-and-leaf plots.

Linda Cooper
Towson University, Towson, Maryland
Felice Shore
Towson University, Towson, Maryland

Grand Ballroom C (Hilton) capacity: 388

179

“What’s My Line?” Fun and Interesting Ways to Explore Real-Life Data and Regression Models

(6–12, Higher Education, Teacher of Teachers) Session

Participants will explore how tongue-twisters and movie box-office data can be used to explore different regression models. A project, “To Be or Not to Be,” will be presented. Bring your TI-83 or -84 graphing calculator, and be prepared to have fun.

Patricia Fairwood
Cheshire High School, Cheshire, Connecticut
Terri Schulman
Cheshire High School, Cheshire, Connecticut

Room 355 C (Convention Center) capacity: 237

180

Mentoring and Coaching Activities That Promote Mathematical Learning and Professional Growth

(9–12) Session

Activities from a nine-year collaborative project designed to enhance mentoring will be shared. These activities promote professional growth and focus on students’ mathematical thinking. Implications for learning communities will be discussed.

Ginger Rhodes
University of Georgia, Athens, Georgia
Patricia S. Wilson
University of Georgia, Athens, Georgia

Grand Ballroom UJ (Marriott) capacity: 187

181

What’s the Deal with Deal or No Deal?

(9–12) Session

By mining data from the game show Deal or No Deal, we’ll analyze the offers a contestant receives using the concept of expected value and seek a function that models observed patterns. No prior familiarity with the game is needed.

Dave Kennedy
Shippensburg University, Shippensburg, Pennsylvania

Room 250 A (Convention Center) capacity: 123

182

Handheld and Computer Technology to Make Multiple Representation Accessible to All Students

(9-12) Session

Connecting algebra and geometry through multiple representations on one screen will address learning style needs of all students. TI-Nspire will catapult you and your students into the future by providing power beyond belief!

Jerry Cummins
National Council of Supervisors of Mathematics, Western Springs, Illinois
Timothy Kanold
President, National Council of Supervisors of Mathematics, Lodi, California

Room 254 C (Convention Center) capacity: 99

183

Climbing the Number Line of Success in Algebra 1 and Beyond

(9–12) Session

A variety of creative number-line activities will be explored. A lesson opener, a formative assessment, and a group activity will be shared that can appeal to all different types of learners in the classroom.

Yvonne Mendolia
Miami Lakes Educational Center, Miami, Florida
Laura Leigh Rampey
Design and Architecture Senior High School, Miami, Florida

Solitude (Marriott) capacity: 70

184

Fibonacci, the Golden Rectangle, and Connections

(9–12, Teacher of Teachers) Session

This session will explore the unexpected connections among the Fibonacci sequence, the golden triangle, the golden rectangle, and regular pentagons. The talk will feature some algebra, lots of geometry, and some constructions.

Janice Shultz
Northwood High School, Irvine, California

Ballroom F (Convention Center) capacity: 398
12:30 p.m.–1:30 p.m.

185

Preparing for Your Institution’s NCATE Program Review
(Higher Education, Teacher of Teachers) Session
Learn to navigate the NCATE program review process and prepare the required documents. This session provides information about the overall review system and what is needed to prepare mathematics education program reports.

Monique C. Lynch
National Council of Teachers of Mathematics, Reston, Virginia

Ballroom I (Convention Center) capacity: 398

1:00 p.m.–2:00 p.m.

EW10
Kendall/Hunt Publishing Company

Newly Released—Math Trailblazers, 3rd Edition
See the newest edition of Math Trailblazers, K–5! Backed by more than 20 years of research, this NSF-funded curriculum boasts strong problem solving while integrating science and language arts. Take-home samples.

Room 250D (Convention Center) capacity: 100

EW11
Great Source Education Group

Model Drawing to Solve Word Problems, Grades K–5
Experience the power of the Singapore approach using model drawings to develop a bridge from concrete to abstract and a strategy for multistep problems. See how these techniques create mathematical coherence. Receive a free Math Handbook.

Room 250E (Convention Center) capacity: 100

EW12
Pearson

Math XL®: Change the Way You Teach and How your Students Learn
Create online homework and tests, manage your class with the online grade book, and get ready for your students scores to rise with Math XL®—a powerful online homework, tutorial, and assessment system.

Room 250F (Convention Center) capacity: 100

1:00 p.m.–2:30 p.m.

186

Farther beyond Sudoku: Using New Puzzles to Develop Students’ Logical-Thinking Skills
(General Interest) Gallery Workshop
Following the popularity of Sudoku and Kakuro puzzles, other types are now appearing. Participants will explore many new puzzles, their solution strategies, and how these puzzles can be used in the classroom to improve students’ reasoning skills.

Jeffrey J. Wanko
Miami University, Oxford, Ohio

Canyon Room (Hilton) capacity: 250

187

New and Preservice Teacher Workshop
(General Interest) Gallery Workshop
Get ideas and answers to your questions on management, parents, and homework; ways to preserve your sanity; and more! Connect with new teachers. Have fun, and get resources, materials, and prizes. This session is open to those in their first three years of teaching or to those seeking certification.

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

Room 155 E (Convention Center) capacity: 228

188

Using Data Analysis to Unlock the Secret Compartments of Mathematics Content and Instructional Practices
(Teacher of Teachers) Gallery Workshop
Identify underlying causes of learning problems. Investigate students’ misconceptions, the lack of alignment in content and instruction, and the lack of alignment with cognitive demand. Examples of local results will be included.

Diana Nunnaley
TERC, Cambridge, Massachusetts

Mary Wermers
Danvers Public Schools, Danvers, Massachusetts

Alpine Ballroom East (Hilton) capacity: 116
Looking for activity-based learning?

Take a closer look at the new MathThematics!

The revised and updated MathThematics provides exceptional activity-based learning with new, flexible teacher tools that help you reach all students.

GET PROACTIVE with the new wraparound Teacher’s Edition, giving you immediate, differentiated student support at point of use!

GET INTERACTIVE with the new Technology Book, providing expanded math explorations using the latest technology tools!

Funded by the National Science Foundation
Reducing the Anxiety of, Motivating, and Inspiring Preservice Teachers through Meaningful, Fun Instruction
(Teacher of Teachers) Gallery Workshop
What’s the secret to preparing preservice elementary school teachers? Come find out how research that the speaker has done revealed the answer. Experience her methods, and leave with activities for your classroom.
Norma Boakes
Richard Stockton College of New Jersey, Pomona, New Jersey
Room 251 D/E (Convention Center) capacity: 219

Reasoning with the Rekenrek
(Pre-K–2) Gallery Workshop
Learn how this tool helps grades K–2 students develop strong number relationships, forming the basis for efficient calculation and quick recall of math facts.
Angela Giglio Andrews
National Louis University, Chicago, Illinois
Diane Cushing Liesen
Naperville District 203, Naperville, Illinois
Room 150 G (Convention Center) capacity: 148

Partner Games for Assessment and Intervention in a Title I School
(Pre-K–2, Teacher of Teachers) Gallery Workshop
Experience partner games that make use of visual models, ten grids, and counters to help young children develop instant recognition, master facts, group, count, and use place value. Focus on use as a tool to model and observe math language.
Janet Gillespie
Great Source Education Group, Wilmington, Massachusetts
Room 355 D (Convention Center) capacity: 166

Bridges and Barriers to Mathematical Understanding: How Language Can Clear or Muddy the Path
(Pre-K–5) Gallery Workshop
Why do we “borrow” when we don’t give it back, “reduce” fractions when we don’t make them smaller? Examine how language can promote or obscure understanding, can construct bridges to concept development, or erect barriers leading to misconceptions.
Christine Moynihan
Newton Public Schools, Newton, Massachusetts
Room 150 A/B/C (Convention Center) capacity: 143

Establishing Your Students’ Parents as Partners
(Pre-K–5) Gallery Workshop
As schools move ahead in providing standards-based mathematics instruction, the parents of our students need to be included. This session will present a year’s worth of parent meetings based on the Investigations curriculum.
Miles H. Reck
Durham Public Schools, Durham, North Carolina
Carolyn B. Kirkland
Central Park School for Children, Durham, North Carolina
Room 151 A/B/C (Convention Center) capacity: 143

Rhythm and Hues
(Pre-K–5, Teacher of Teachers) Gallery Workshop
Discover how music, literature, manipulatives, TI-10, and Smart Board build conceptual understanding and make mathematics fun! Activities will include data analysis and probability. Special needs will be addressed; take home ready-to-use lessons.
Christine Ruda
Teachers Teaching with Technology, Miami, Florida
Room 155 F (Convention Center) capacity: 228

It Ain’t Easy Being a Bean!
(Pre-K–5, Teacher of Teachers) Gallery Workshop
Beans! Beans! Beans! Who knew you could do so much with the cheapest math manipulative out there? Learn how to use beans to teach a variety of math concepts. Practical ideas, materials, and “bean” story will be provided. Got beans?
Marquitis Adams
Simonton Elementary School, Lawrenceville, Georgia
Room 254 B (Convention Center) capacity: 162

Using Sketchpad® Activities to Enrich Textbook Lessons, with Examples from Math Trailblazers™
(3–5) Gallery Workshop
Explore how dynamic representations help students find patterns and make predictions in both exact and uncertain contexts while laying foundations for multiplicative and algebraic reasoning. Examples will come from Math Trailblazers.
Rhea Irvine
Key Curriculum Press, Emeryville, California
Philip Wagreich
University of Illinois at Chicago, Chicago, Illinois
Alpine Ballroom West (Hilton) capacity: 116
1:00 p.m.–2:30 p.m.

197
Is It “Fair” at the Fair? What Are the Chances?
(3–5) Gallery Workshop
Discover fun investigations to explore experimental and theoretical probability and the law of large numbers. Learn strategies to analyze whether events are equally likely. Create a game that is unfair but not so obvious that no one will play it.
Ann Marie Spinelli
University of Connecticut, Storrs, Connecticut
Grand Ballroom D (Marriott) capacity: 180

198
Take a Chance: A Probability Workshop
(3–5) Gallery Workshop
Explore hands-on activities that can be used when instructing topics of probability using games and simulations. Your reward will be a unit of worthwhile, minds-on experiences for you and your students.
Tisha Hyman
Norfolk Public Schools, Norfolk, Virginia
Room 155 C (Convention Center) capacity: 228

199
Stretching Talent at the Funkytown Fun House
(3–8) Gallery Workshop
Creativity and geometry knowledge meet at the Funkytown Fun House! Challenge your talented students with classroom-tested explorations of proportional reasoning and similarity. Investigations have students think deeply and include differentiation.
Jill L. Adelson
University of Connecticut, Neag Center for Gifted Education/Talent Development, Storrs, Connecticut
Room 250 B/C (Convention Center) capacity: 186

200
Fantastic Folding Feats
(3–8) Gallery Workshop
In this workshop, participants create familiar, two-dimensional shapes by folding metric paper. The simple steps yield some captivating patterns and designs—a truly fantastic way to represent and examine two-dimensional shapes and their properties.
Allan Turton
Origo Education, Brisbane, Queensland, Australia
Room 355 F (Convention Center) capacity: 228

201
Test Preparation versus Education: Can We Do Both?
(3–12) Gallery Workshop
Students must learn traditional basics and higher-order thinking skills and appreciate the beauty and usefulness of mathematics. Using common sense, statistics, games, and other proven methods, we will show how to achieve all these simultaneously.
Steve Willoughby
Past President, National Council of Teachers of Mathematics; University of Arizona, Tucson, Arizona
Room 151 D/E/F (Convention Center) capacity: 143

202
Meaningful Math in the Middle
(6–8) Gallery Workshop
Participants will explore activities, games, and manipulatives to address number and operations, geometry, and algebra concepts. All activities are tied to NCTM standards and Curriculum Focal Points in the middle grades. Free samples!
Johnette R. Winfrey
East Baton Rouge Parish School District, Baton Rouge, Louisiana
Grand Ballroom E (Marriott) capacity: 181

203
NASA Smart Skies: The “Plane” Truth about Understanding \( D = R \times T \)
(6–8) Gallery Workshop
Explore distance-rate-time flight problems with an experiment, an online graphing tool, and an air traffic control simulator. Use multiple representations to make connections among equations, graphs, and real-world scenarios. All materials free.
Gregory Condon
NASA Ames Research Center, Moffett Field, California
Miriam F. Landesman
NASA Ames Research Center, Moffett Field, California
Room 151 G (Convention Center) capacity: 194

204
Putting a Positive Spin on Negative Numbers
(6–8) Gallery Workshop
This session will demonstrate a variety of integer-based activities: a “Cauldron” card game, bingo, an integer recital, miniature golf, a fashion show, multipurpose Concentration cards, and a Powerpoint Jeopardy review game.
Shelley Rea Hunter
Florenceville Middle School, Florenceville, New Brunswick
Room 255 F (Convention Center) capacity: 228
The content you need to see your students succeed

- Real-world content you can trust
- Active learning that connects math to your students’ lives
- Flexible lesson development with easy options for differentiation
- Standards-driven practice for success on high-stakes tests

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Ratcheting Up the Curriculum: Experiencing Calculus in the Middle School
(6–8, Teacher of Teachers) Gallery Workshop
Participants will engage in hands-on, data-gathering activities and explore functions that model the data. Technology will provide the vehicle for analyzing behavior and rate of change.

Vicki Phillips
School District of Oconee County, Walhalla, South Carolina
Bob Horton
Clemson University, Clemson, South Carolina

Room 155 D (Convention Center) capacity: 180

Johnny Appleseed: The Power of Data Self-Generation
(6–8, Teacher of Teachers) Gallery Workshop
Create your own data and then follow it through all three phases of statistical analysis. Examine such topics as frequency distribution, central tendency, and graphing. Please bring your TI-73 Explorer calculators.

Tim McNamara
Retired, Webster, New York

Room 255 D (Convention Center) capacity: 166

You Can Learn a Lot from a Notecard: A Mathematics Manipulative for All Students
(6–12) Gallery Workshop
The seemingly simple but deceptively versatile notecard can be used to explore interesting, challenging problems that integrate the NCTM Content and Process Standards. Notecards, activities, and ideas you can use on Monday will be provided!

Robert Mann
Western Illinois University, Macomb, Illinois

Deer Valley (Marriott) capacity: 176

Helping Teachers Reach the “Tough to Teach” in Algebra
(6–12) Gallery Workshop
Today more special-needs students are in mathematics classrooms. An intervention model can help rescue these students. It will include assessment and concept-development activities, practice activities, and problem-solving activities.

Larry D. Bradby
Jefferson County Public Schools, Lakewood, Colorado

Room 150 D/E/F (Convention Center) capacity: 143

A Professional Learning Community for Improving Instruction in Geometry
(6–12, Higher Education) Gallery Workshop
Teachers in grades 6, 10, and at a university use geometry problems to show how geometry became the center of their professional learning community. Gain hands-on experience with the problems and analyzing students’ work. A CD will be available.

Jean J. McGehee
University of Central Arkansas, Conway, Arkansas
Cathy Holman
Westside Middle School, Jonesboro, Arkansas
Cindy Chadwick
Valley View High School, Jonesboro, Arkansas

Grand Ballroom F (Marriott) capacity: 220

Geometry Comes Alive Using the Cabri® Junior Application on the TI-84
(6–12, Teacher of Teachers) Gallery Workshop
Participants will use Cabri Junior to dynamically explore inclusive definitions, measure figures, animate drawings, and investigate locus situations. They will see how their students can develop a sense of adventure with geometry through conjecturing.

William K. Kring
Educational Service District 112, Vancouver, Washington

Room 155 B (Convention Center) capacity: 228

Can You Build the Best Boat? We’ll Have Supplies; You Bring the Mathematics!
(9–12) Gallery Workshop
Algebra 2 and calculus students will see the power of mathematics by sinking paper boats; collecting and analyzing data on an open-ended, real-life problem; and employ engineering and problem-solving skills to model, optimize, and build a paper boat.

Matt Kaufmann
Illinois State University, Normal, Illinois

Room 155 A (Convention Center) capacity: 166

Multiple Representations in Data Analysis and Statistics: A Model for Statistical Thinking
(9–12) Gallery Workshop
Students solve math problems using graphical, numerical, algebraic, and verbal representations. Participants will use a new model involving five representations to solve real-world data analysis and statistics problems with a TI-83 or -84.

Daren Starnes
Lawrenceville School, Lawrenceville, New Jersey

Room 255 E (Convention Center) capacity: 228
213
AP Statistics: Data Projects to Engage, Instruct, and Assess Learning
(9–12) Gallery Workshop
Data used as an instructional tool to introduce a topic, engage the classroom, and help comprehend a concept is a focus of AP Statistics. M&M’s and chocolate chip cookies are tools of effective instruction in the statistics classroom.
Ron Millard
Shawnee Mission South High School, Overland Park, Kansas
Room 355 E (Convention Center) capacity: 228

214
Inverse Functions: They’re Miraculous!
(9–12, Teacher of Teachers) Gallery Workshop
Explore inverse functions geometrically and algebraically using a hands-on activity. Represent and analyze these “miraculous” functions numerically, symbolically, and graphically. See real-world applications, and leave with classroom-ready materials.
Teri Willard
Central Washington University, Ellensburg, Washington
Room 253 A/B (Convention Center) capacity: 135

215
The World Is Metric, and U.S. Students Are Losing Out
(General Interest) Session
For the United States to be competitive, it makes no logical sense still to have two types of measurement. NCTM and similar educational groups should push for national legislation to switch finally. Hear a plan to coordinate such efforts.
Tom J. Price
Norris Public Schools, Firth, Nebraska
Grand Ballroom A (Hilton) capacity: 171

216
Teaching and Learning Mathematics: Fifty Years Ducking the Pendulum
(General Interest) Session
This session is a reminiscence of fifty years of change in mathematics education as lived by the speaker, along with a vision for the future. We will explore one person’s biases.
Jack Price
Past President, National Council of Teachers of Mathematics, Newport Beach, California
Grand Ballroom B (Hilton) capacity: 171

217
What Do We Know from Research and Practice about Teaching English Language Learners (ELL), and All?
(General Interest) Session
ELL and all students need fluency in academic language! We will discuss teaching strategies that lead to success for ELLs and help other learners. These strategies are based on research and supported by best practices. Learn and share!
Miriam Leiva
TODOS: Mathematics for ALL, Harrisburg, North Carolina
Hall 2 (Convention Center) capacity: 1677

218
The Complexity of Teachers’ Mathematics Knowing
(Teacher of Teachers) Session
We will take from the domains of arithmetic and algebra to foreground the images, metaphors, and explanations that teachers use in the context of doing mathematics to illustrate the complexity of their mathematics for teaching.
Elaine Simmt is a former secondary school mathematics teacher and currently chair of the Department of Secondary Education at the University of Alberta. In work with both preservice and in-service teachers she and Brent Davis are exploring what mathematics teachers need to know.
Brent Davis is a former middle school mathematics teacher and currently David Robitaille Chair in Mathematics Education in the Department of Curriculum Studies at the University of British Columbia. His interests include collective mathematical intelligence and teachers’ mathematics knowledge, as framed in particular by recent developments in the cognitive and complexity sciences.
Elaine Simmt
University of Alberta, Edmonton, Alberta
Brent Davis
University of British Columbia, Vancouver, British Columbia
Hall 1 (Convention Center) capacity: 2000
Lesson Study as a Tool for Preservice Mathematics Teacher Education  
(Teacher of Teachers) Session

Lesson studies were implemented in elementary and secondary methods courses with corresponding field experiences. We will describe how we implemented lesson study and discuss the challenges and benefits.

P. Mark Taylor  
University of Tennessee, Knoxville, Tennessee  
Solitude (Marriott) capacity: 70

Promoting Teachers’ Conceptions of Variability: The Use of Fathom in a Sampling Context  
(Teacher of Teachers, 6–12) Session

By using Fathom to run simulations of a sampling experiment, we will highlight important notions of statistical reasoning in a visually powerful way. In particular, the variability in the distributions of small samples arises naturally.

Daniel Lee Michael Canada  
Eastern Washington University, Cheney, Washington  
Matthew A. Ciancetta  
California State University–Chico, Chico, California  
Room 355 B (Convention Center) capacity: 356

Dynamic Professional Development: Strategies to Guide and Assess Teachers’ Growth  
(Teacher of Teachers, Higher Education) Session

Information from multiple sources can be used to guide professional development and assess teachers’ growth in mathematics content and pedagogy. We will share a variety of materials and strategies we’ve designed and used successfully.

Jane Donnelly Gawronski  
San Diego State University, San Diego, California  
Nadine Bezuk  
San Diego State University, San Diego, California  
Steve Klass  
San Diego State University, San Diego, California; Encinitas Union School District, Encinitas, California  
Room 254 C (Convention Center) capacity: 99

Not by Chance: Using Trade Books to Help Young Children Develop the Language of Probability  
(Pre-K–2) Session

This session describes a unit to develop the language of probability based on the book *Cloudy with a Chance of Meatballs*. Lesson guides and a list of children’s trade books for developing probability concepts will be provided.

Eula Ewing Monroe  
Brigham Young University, Provo, Utah  
Room 250 A (Convention Center) capacity: 123

The Wild World of Mathematics  
(Pre-K–2) Session

Integrate math with animal-themed activities that teach attributes, operations, and probability while encouraging curiosity about wildlife. See the world of math come alive through thematic learning about such favorites as jungle animals and insects.

Susan L. Hansen  
Woodland School District 50, Gurnee, Illinois  
Room 355 C (Convention Center) capacity: 237

Possible, Impossible, or Just Luck?  
(Pre-K–5) Session

See and experience a variety of real-life probability activities and ways to record the data collected. This will be appropriate for classroom and Family Math Night.

Janice C. Reutter  
Des Moines Public Schools, Des Moines, Iowa  
Room 251 A/B (Convention Center) capacity: 234

Operation Sense with a Literature Connection  
(Pre-K–5) Session

Word-problem structures of addition, subtraction, multiplication, or division can cause students to solve problems in different ways. We will share more than twenty problems with video clips that help students connect meanings for the four operations.

Kim K. Hartweg  
West Central Council of Teachers of Mathematics, Macomb, Illinois  
Katy Kauffman  
West Central Council of Teachers of Mathematics, Hamilton, Iowa  
Hall 3 (Convention Center) capacity: 1677

From Research to Practice: Implications from Research for the Teaching of Whole-Number Operations  
(Pre-K–5) Research Session

An analysis of classroom observations and students’ interviews will begin discussion of the role of invented strategies, manipulatives, and algorithms in the teaching of operations. The data are from an NSF-funded study of classes using Math Trailblazers.

Catherine Randall Kelso  
University of Illinois at Chicago, Chicago, Illinois  
Room 255 C (Convention Center) capacity: 354
2:00 p.m.–3:00 p.m.

227
Filling the Gaps and Teaching All Students (Pre-K–5, Teacher of Teachers) Session
Research on the development of number sense and the differences in knowledge among children of various socioeconomic statuses will be presented, along with implications for teaching arithmetic.
Deborah Rosenfeld
Teachers College, Columbia University (Postgraduate Student), New York, New York; Education Development Center, Newton, Massachusetts

Ballroom E (Convention Center) capacity: 398

228
Planning in an Inquiry-Based Setting (3–5) Session
We will discuss case-study results of teachers using collaborative planning methods for math instruction. Participants reflect on planning strategies by analyzing lesson implementation and students’ work. A model for planning will be provided.
Sandra Linder
Clemson University, Clemson, South Carolina

Ballroom I (Convention Center) capacity: 398

229
The Great Salt Lake Adventure: An Integrated Math, Science, Geography, and Writing Unit (3–5) Session
This presentation will focus on how to create an integrated unit using an environmental study area. The speaker’s class’s study of brine shrimp and salinity will be used to show math and science connections in the classroom.
Linda Joanne L’Ai
Edith Bowen Laboratory School, Utah State University, Logan, Utah

Grand Ballroom G/H (Marriott) capacity: 187

230
Multiple Ways to Multiply (3–5) Session
Participants will be introduced to lattice multiplication to create and use a set of Napier’s Bones to multiply. Multiplication strategies and a multiplication game will be shown to help students learn basic times tables.
Claire Wiener
Manhasset Schools, Manhasset, New York

Room 251 C (Convention Center) capacity: 116

231
What Are the Chances? Teaching Data Analysis and Probability to Elementary School Students (3–5) Session
You will be introduced to several tasks that have been effective in teaching data analysis and probability to elementary school students. You will have the chance to try the problems and see how students in grades 3–5 solved them.
Elaine A. Tuft
Utah Valley State College, Orem, Utah

Room 255 A (Convention Center) capacity: 264

232
Don’t Be So Mean! Seeing That Variation Is Natural and Normal (6–8) Session
The public believes that the mean (average value) is an important statistic, but pays little attention to variability. This session will provide practical ways to help students see why knowing how data values are spread around the mean is vital.
James M. Rubillo
Executive Director, National Council of Teachers of Mathematics, Reston, Virginia

Ballroom B/D (Convention Center) capacity: 732

233
Talk about Math (6–8) Session
How do we get our students to engage with one another in meaningful discussions about math? If we want them to explore, discuss, debate and ultimately negotiate the meaning of mathematics concepts, what can we do to build a structure to foster this outcome?
David Andrew Louis
Nueva School, Hillsborough, California

Grand Ballroom A/B/C (Marriott) capacity: 180

234
Wild Math: Dynamic Data Analysis Using TinkerPlots™ with Authentic Wildlife Data Sets (6–8) Session
This session will use TinkerPlots to explore data sets from the Virginia Department of Game and Inland Fisheries. Lesson plans developed by middle school teachers in a professional development experience, along with the data sets, will be shared.
Marguerite Mary Mason
College of William and Mary, Williamsburg, Virginia

Room 251 F (Convention Center) capacity: 158
Professional Development, Technology, and Students’ Achievement in Mathematics: Lessons Learned from Iowa
(6–8, Teacher of Teachers) Session

This session will present an overview of the process used to create professional learning communities to support teachers’ implementation and teaching strategies in the area of mathematics and students’ longitudinal achievement data.

John Francis O’Connell
Iowa Department of Education, Des Moines, Iowa
Gary Phye
Iowa State University, Ames, Iowa
Vaughn Murphy
Area Education Agency 11, Des Moines, Iowa

Ballroom A/C (Convention Center) capacity: 504

An Algebraic “Whack on the Side of the Head”
(6–12) Session

2B or not 2B—is algebra the question? Take a humorous look at some algebraic “mental locks” we encounter at all levels. Gain perspective on algebra versus algebraic thinking, along with suggestions for increasing students’ understanding.

Larry Campbell
Missouri State University, Springfield, Missouri

Grand Ballroom I/J (Marriott) capacity: 187

Developing Academic Content Language and Engaging English Learners (and All Students) in Mathematics
(6–12) Session

Blending practical classroom experience and research-based methods, we will share successful strategies for supporting English learners (and all learners) in developing academic content language and in making sense of middle school mathematics.

Mark W. Ellis
California State University–Fullerton, Fullerton, California
Helen Barney
Yorba Middle School, Orange, California

Ballroom H/J (Convention Center) capacity: 732

Mathematics in Movies and Television Shows
(6–12, Higher Education) Session

This session looks at movies and TV shows that involve math. We will help you introduce exciting topics to your students by solving riddles and crimes and encoding messages in examples from Harry Potter, Matilda, Law & Order, and more.

Elana Epstein
Saint Joseph’s College, Patchogue, New York

Ballroom G (Convention Center) capacity: 398

Data Analysis and Probability through Lesson Study
(6–12, Teacher of Teachers) Session

Learn about improving data analysis and probability instruction through a lesson-study approach. Collaboratively planned lessons will be analyzed using technology, manipulatives, aligning assessment with instruction, and students’ work.

José Francisco Sala Garcia
Instituto de Educacion Secundaria Sa Colomina, Ibiza, Balearic Islands, Spain

Room 355 A (Convention Center) capacity: 264

Decrypting Cryptography: Mathematical Espionage for Students’ Success
(9–12) Session

Motivate your students by incorporating cryptography into a variety of mathematical concepts. Participants will be given lessons and activities that can be used throughout the mathematical curriculum.

Brock Wenciker
Kansas City Area Teachers of Mathematics, Kansas City, Kansas
Patrick John Flynn
Kansas City Area Teachers of Mathematics, Kansas City, Kansas

Alta/Snowbird/Brighton (Marriott) capacity: 105
2:00 p.m.–3:00 p.m.

241  What Is The Big Deal about Homework?  
(9–12) Session  
Why do we assign homework in math? The speaker will present types of homework he has used as formative assessments and his research and reading on homework, and he will have participants share what practices have worked for them.  
James Wysocki  
Chadwick School, Palos Verdes Peninsula, California  
Grand Ballroom C (Hilton) capacity: 388

242  Activities That Foster Statistical Thinking and Conceptual Understanding  
(9–12) Session  
This session focuses on developing conceptual understanding of concepts in statistics and data analysis. Hands-on classroom activities will be used to illustrate the connection between probability and methods for drawing conclusions from data.  
Roxy Peck  
California Polytechnic State University, San Luis Obispo, California  
Room 255 B (Convention Center) capacity: 356

243  Permutations, Combinations, and Monte Carlo Models: Does It Matter If Order Matters?  
(9–12, Higher Education) Session  
Learn to use partitions to decrease students’ confusion about when to use permutations and combinations. Create Monte Carlo models and simulate them on TI-84 graphing calculators to solve probability problems and compute areas.  
Susan McMillen  
Buffalo State College, Buffalo, New York  
Room 254 A (Convention Center) capacity: 99

244  Developing Mathematical Thinking through Writing Explanations  
(Higher Education, Teacher of Teachers) Research Session  
Writing is a powerful tool in developing students’ mathematical knowledge. This session describes data gathered from preservice teachers in the elementary content mathematics courses while engaged in the writing process to explain math concepts.  
Carol Smith  
Lehigh Carbon Community College, Schnecksville, Pennsylvania  
Ballroom F (Convention Center) capacity: 398

2:30 p.m.–3:30 p.m.

EW13  Kendall/Hunt Publishing Company  
Reaching Full Potential in Your Gifted Math Students  
Help your students assume the role of mathematicians as they develop critical- and creative thinking skills in solving real problems. The Project M3: Mentoring Mathematical Minds program for grades 2 to 6 is both challenging and enjoyable for talented math students. Take home samples.  
Room 250D (Convention Center) capacity: 100

EW14  Great Source  
Build Math Fluency with Every Day Counts Programs, Grades K–5  
Learn how to develop your students’ mathematical fluency. Daily discourse can enhance math vocabulary, build understanding of concepts over time, and develop computational fluency and mathematical proficiency. Receive a free Math Handbook.  
Room 250E (Convention Center) capacity: 100

EW15  Pearson  
Save Time, Increase Understanding, and Make Algebra Exciting!  
How can you save time, increase students’ understanding, and yet bring fun and excitement back into your mathematics classroom? It is possible! We’ll explore hands-on examples and ways to weave them into your existing teaching plans.  
Room 250F (Convention Center) capacity: 100

3:00 p.m.–4:30 p.m.

245  “I Can Show You”: Math Communication, Connections, and Representation through 3-D Foldables™ and Manipulatives  
(General Interest) Gallery Workshop  
Construct, using simple classroom materials, 3-D representational tools that are evidence-based, kinesthetic, and integrative, having built-in differentiation and inclusion.  
Dinah D. Zike  
Dinah Might Adventures, San Antonio, Texas; Dinah Zike Academy, San Antonio, Texas  
Judith S. Youngers  
Dinah Zike Academy, Comfort, Texas  
Room 255 D (Convention Center) capacity: 166
The new *Contexts for Learning Mathematics* series by Catherine Fosnot and colleagues from Mathematics in the City and the Freudenthal Institute uses carefully crafted math situations to foster a deep conceptual understanding of essential mathematical ideas, strategies, and models. Designed as supplemental or replacement units, *Contexts for Learning Mathematics* will reinforce and deepen your current math curriculum.

**Workshop-Based Unit Books**
- provide teachers with a two-week (10-day) sequence of investigations, games, and minilessons
- involve students in investigating, discussing, and constructing mathematical solutions and strategies
- encourage emergent learning and highlight the developmental landmarks in mathematical thinking
- incorporate collaborative problem-solving, individual and small-group conferences, and math congresses (whole-group shares)

**Carefully Crafted Contexts**
- create rich, imaginable contexts—realistic and fictional—for mathematics investigations
- are carefully crafted around landmark numbers and number relationships that are telling
- use meaningful storylines and metaphors to support the development of the mathematical ideas, strategies, and models
- encourage children to explore patterns, generalize, and use math to understand their world

FOR MORE INFORMATION, VISIT US ON THE WEB AT contextsforlearning.com
3:00 p.m.–4:30 p.m.

246  Creating Interactive Lesson Plans in Notebook for Preservice Teachers
(Pre-K–12, Higher Education) Gallery Workshop
Participants will learn how to create lessons using the new Notebook 9.7 software to be used with an interactive Smart Board. Bring flash drive for free lessons.
Bill Derrill Whitmire
Francis Marion University, Florence, South Carolina
Grand Ballroom D (Marriott) capacity: 180

247  Probability Goals and Activities for “Prefraction” Students
Pre-K–2 Gallery Workshop
Participants will engage in hands-on activities that they can use with their students to promote understandings of probability concepts. Addressing challenges involved in teaching probability at the grades pre-K–2 level will be discussed.
Karen Heinz
Rowan University, Glassboro, New Jersey
Room 151 A/B/C (Convention Center) capacity: 143

248  Don’t Count on It! Teaching Early Number Concepts beyond Counting
Pre-K–2 Gallery Workshop
Learn how you can give your students experience with number concepts that can facilitate readiness for the four operations. We will explore hands-on activities, concrete strategies, and literature books to enhance the concepts.
Jeanne White
Elmhurst College, Elmhurst, Illinois
Room 155 A (Convention Center) capacity: 166

249  Mathematics Activities with Immediate, Positive Results for All Learners
Pre-K–2, Teacher of Teachers) Gallery Workshop
Using popcorn, beanbags, and magnetic numbers, teachers explore methods of teaching abstract concepts, such as algebra, the number line, regrouping, fractions, and money. These strategies will guide all toward a successful life of math.
Kathryn Alice Robinson
WriteMath Enterprises, Inc, Valrico, Florida
Room 151 D/E/F (Convention Center) capacity: 143

250  Mathematics in the World: Integrating Cultural Diversity into Your Classroom
PreK–8 Gallery Workshop
Learning mathematics doesn’t have to be all numbers and formulas. Let’s take some fun math trips around the world! Various ethno-mathematics activities embrace cultural diversity, social studies, and interpersonal skills.
Yayoi Kitta
University of West Georgia, Carrollton, Georgia
Fenqjen Luo
University of West Georgia, Carrollton, Georgia
Room 255 E (Convention Center) capacity: 228

251  Fractions in Action
Pre-K–2 Gallery Workshop
Participants will use Cuisenaire rods, pattern blocks, and colored counters as models. Communication, reasoning, and mental math will be emphasized.
Karen Rhynard
Consultant (Retired Math Coordinator), Round Rock, Texas
Carole Gautier
Round Rock Independent School District, Round Rock, Texas
Deer Valley (Marriott) capacity: 176

252  Tangrams: Not Just a Seven-Piece Puzzle
(Pre-K–2) Gallery Workshop
Participants will use tangrams to explore and name properties of polygons, describe and classify angles, explore congruence and similarity, recognize and locate lines of symmetry, and measure area and name fractional parts of a region.
Celine J. Przydzial
Kutztown University, Kutztown, Pennsylvania
Grand Ballroom E (Marriott) capacity: 180

253  Get into Shapes! Geometry Sense through Problem Solving
(3–5) Gallery Workshop
How can you engage students in geometric thinking? Come participate in multiple research-based approaches to problem solving that create a deeper understanding of geometry using manipulatives, visual thinking, and effective questioning techniques.
Lynda A. Luckie
Gwinnett County Public Schools, Suwanee, Georgia
Room 151 G (Convention Center) capacity: 194
The latest thinking from math voices you trust.

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The Differentiated Math Classroom
A Guide for Teachers, K–8
Miki Murray with Jenny Jorgensen

The Differentiated Math Classroom has suggestions for every aspect of differentiation: classroom organization, knowing students, anchor activities, tiered lessons, and more.
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Introducing the Heinemann Math Process Standards Series, Grades PreK–2
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The Heinemann Math Process Standards Series helps you explore NCTM’s process standards with friendly language, reassuring advice, and understandable examples. Accompanying CD-ROMs include customizable activities, and a correlation guide matches math content to the processes.

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Susan O’Connell and Kelly O’Connor
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Introduction to Reasoning and Proof
Karren Schultz-Ferrell, Brenda Hammond, and Josepha Robles
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Kimberly Witeck and Bonnie Ennis
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Honi J. Bamberger and Christine Oberdorf
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A Guide for Teachers, Grades 5–10
Mark Driscoll with Rachel Wing DiMatteo, Johannah Nikula, and Michael Egan

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254
Drop the Pencil: Calculate Mentally!
(3–5, Teacher of Teachers) Gallery Workshop
To illustrate the benefits of mental arithmetic and estimation, participants will play games, solve problems mentally, describe their strategy, and work with a partner.

Sue Harding
Kalispell School District #5, Kalispell, Montana
Room 355 E (Convention Center) capacity: 228

255
Building a Bridge from Kindergarten to Geometry: What Misconceptions Do We Teach Our Students?
(3–8) Gallery Workshop
Participants will build shapes with shapes, discover shapes within other shapes, and construct definitions through explorations using a variety of hands-on materials.

Juanita R. Walker
Santa Ana Unified School District, Santa Ana, California
Barbara Post
California State University at Fullerton, Fullerton, California
Room 155 E (Convention Center) capacity: 228

256
Probability Games for Grades 3–5
(3–8) Gallery Workshop
Playing games is one way to develop children’s understanding of probability, fairness, and likely events. Using games as a springboard, we will make predictions, test our guesses, adjust the rules to make a fairer game, and practice vocabulary.

Janice Baker Koop
Calvin College, Grand Rapids, Michigan
Room 253 A/B (Convention Center) capacity: 135

257
Stepping into Algebra: Supporting Students’ Understanding of Proportional Reasoning
(3–8) Gallery Workshop
Explore how problems from large-scale assessments, traditional textbooks, and standards-based textbooks can be used to reveal students’ reasoning. Discuss how proportional reasoning can support the understanding of algebra.

Signe E. Kastberg
Indiana University Purdue University Indianapolis, Indianapolis, Indiana
Beatriz D’Ambrosio
Board of Directors, National Council of Teachers of Mathematics; Miami University, Oxford, Ohio
Kathleen Lynch-Davis
Appalachian State University, Boone, North Carolina
Room 150 D/E/F (Convention Center) capacity: 143

258
Integrating Conceptual Models of Fractions and Decimals
(3–8 Gallery Workshop
Participants will have hands-on opportunities in a workshop format to construct meaning and deepen understanding of relationships between fractions and decimals by integrating conceptual models for both.

Lawrence Linnen
Douglas County School District, Castle Rock, Colorado
Room 251 D/E (Convention Center) capacity: 219

259
Green Math for Earth Day and Every Day
(6–8) Gallery Workshop
Engage in hands-on activities that use demographics and data on resource use, climate change, and land use patterns to teach measurement, data analysis, problem solving, representation, and more. Receive a free activities CD-ROM.

Sara Jenkins
Desert Thunder School, Goodyear, Arizona
Room 155 F (Convention Center) capacity: 228

260
Making Cents of Data
(6–8) Gallery Workshop
Participants will actively collect and display real-world data, go beyond the creation of a graph to make connections between and among other statistical representations, and explore how questioning promotes critical thinking when problem solving.

Basia Hall
Houston Independent School District—East Region, Houston, Texas; Pearson Prentice Hall, Houston, Texas
Room 155 F (Convention Center) capacity: 228

261
So You Want to Be a Millionaire
(6–8) Gallery Workshop
Explore how probability influences our lives and everyday decisions. See results of experiments and simulations and various methods used to compute these probabilities. Connect the ideas of probability with other strands of mathematics.

Eleanor Martin Ennis
Wicomico Middle School, Salisbury, Maryland
Michele McGoogan
Bennett Middle School, Salisbury, Maryland
Charles Martin Boykin
Scientific Games, Alpharetta, Georgia
Room 355 D (Convention Center) capacity: 166
An Innovative Course in Discrete Probability and Statistics for Preservice Grades K–8 Teachers
(6–8, Higher Education, Teacher of Teachers) Gallery Workshop
Does your college meet the probability and statistics needs of your preservice elementary school teachers? Come experience hands-on activities that illustrate the main goals of our course.

Richard H. Stockbridge
University of Wisconsin–Milwaukee, Milwaukee, Wisconsin

Gary S. Luck
University of Wisconsin–Milwaukee, Milwaukee, Wisconsin

Alpine Ballroom West (Hilton) capacity: 116

What's Stat? High-Tech Data Collection and Analyses
(6–12) Gallery Workshop
Experience sensory data collection and analyses with graphing utilities, temperature, motion, and light probes for integrated mathematics and science. Participants receive lesson plans and authentic assessments aligned with NCTM Standards.

Pam L. Warrick
University of Arkansas at Little Rock, Little Rock, Arkansas

C. Neelie Dobbins
University of Arkansas at Little Rock, Little Rock, Arkansas

Marilyn K. Simon
Walden University, Del Mar, California

Room 150 G (Convention Center) capacity: 148

Certainly Data Collection and Probability Can Be Made Easier, and More Enjoyable!
(6–12) Gallery Workshop
We will use the TI-Navigator system with the Smart Board to look at probability and data analysis in a whole new light. Engage and make connections with data by using technology for fun experiments and graphs. An activity CD will be provided.

Frederick James Groves
Canton City Schools, Canton, Ohio

Room 155 C (Convention Center) capacity: 228

Visualizing Geometry Using Cabri® Junior on the TI-83 and -84
(6–12) Gallery Workshop
You no longer have to depend on computers to have your students investigate geometric ideas dynamically. We’ll explore the features of Cabri Junior that will enable you to energize your geometry classes. This will be an interactive session.

Roberta Kennedy Koss
T³ National Instructor, San Rafael, California

Room 150 A/B/C (Convention Center) capacity: 143

Developing Effective Descriptive Feedback with Classroom Assessments to Improve Students’ Achievement
(6–12) Gallery Workshop
Experience the process math coaches use with teachers to identify important math features, anticipate misconceptions, analyze students’ work samples, give descriptive feedback, and determine next steps for classroom instruction.

Laura Marie Maly
Milwaukee Public Schools, Milwaukee, Wisconsin

Henry A. Kranendonk
Milwaukee Public Schools, Milwaukee, Wisconsin

Room 355 F (Convention Center) capacity: 228

Using Quilt Blocks and Tile Patterns to Explore Traditional Geometry Concepts and Theorems
(9–12) Gallery Workshop
Use quilt blocks and tile patterns to explore traditional geometry concepts and theorems, such as the properties of quadrilaterals, theorems about parallel lines, and concepts of similar figures.

Susanne Kay Westegaard
Hopkins High School, Minnetonka, Minnesota

Room 155 D (Convention Center) capacity: 180

Interactive Calculus: It Can Be Done!
(9–12) Gallery Workshop
Look at calculus from a highly student-active perspective. A veteran (certainly not old!) calculus teacher and AP reader shares hands-on activities, calculator strategies, interactive Web sites, and toys used to enhance students’ understanding.

Marti Dorough Wayland
Baylor School, Chattanooga, Tennessee

Room 250 B/C (Convention Center) capacity: 186

Why You Should Stop Fearing Computer Algebra Systems (CAS) and Start Letting It Empower Your Students!
(9–12) Gallery Workshop
The speaker used to think CAS would allow students to stop learning. Instead, CAS is freeing up time, firing up students, and letting them fly further algebraically than ever dreamed. Take home lessons for algebra, advanced algebra, and precalculus.

Mary Wiltjer
Oak Park and River Forest High School, Oak Park, Illinois

Room 255 F (Convention Center) capacity: 228
270
Green Math: Algebraic Investigation of Environmental Issues
(9–12) Gallery Workshop
Using the Internet for environmental research and data from The WorldWatch Institute, bring real-world problems to your students in algebra through calculus. Various regression techniques will be used to fit mathematical models to the data.
Ronald Armontrout
Hotchkiss School, Lakeville, Connecticut
Room 155 B (Convention Center) capacity: 228

271
Tour de Pythagoras, Archimedes, and Euclid with The Geometer’s Sketchpad®, Powerpoint®, and a Digital Camera
(9–12, Higher Education) Gallery Workshop
We will revisit antique (but current) Greek mathematics with modern technology for state-of-the-art teaching and learning of geometry. Ideas for implementation, handouts, and CDs will be provided.
Armando M. Martinez-Cruz
California State University–Fullerton, Fullerton, California
Paul Sexton
Buena Park High School, Buena Park, California
Greg Love
Buena Park High School, Buena Park, California
Grand Ballroom F (Marriott) capacity: 220

272
Integrating Math and Science: The Statistics of a Population of Resistors
(9–12, Higher Education, Teacher of Teachers) Gallery Workshop
Participants will perform hands-on applications of mean, median, mode, standard deviation, and Q-test using a Calculator Based Laboratory and resistors to model a population of resistors ($N > 30$). Classroom ready materials will be provided.
Timothy L. Sorey
Central Washington University, Ellensburg, Washington
Room 254 B (Convention Center) capacity: 162
3:00 p.m.–4:30 p.m.

**274**

**Recipe for Parabolas: Combine Water Fountains, Definitions, Paper Folding, Problem Solving, and Technology**

(9–12, Teacher of Teachers) Gallery Workshop

Using open-source software, we explore the connections between multiple representations of the parabola in a single, cohesive unit. We fit data, fold paper, and use definitions to guide rigorous exploration while increasing curiosity and confidence.

Robert Schoen  
Florida State University, Tallahassee, Florida; Florida Department of Education, Tallahassee, Florida

*Canyon Room (Hilton) capacity: 250*

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3:30 p.m.–4:30 p.m.

**275**

**Learn→Reflect Reflection Session**

(General Interest) Session

This is a culminating session for those who attended the Learn→Reflect sessions. The session will be a facilitated discussion of four reflection questions.

Debbie Duvall  
Professional Development Services Committee, Reston, Virginia

Murrel Hoover  
Professional Development Services Committee, Reston, Virginia

Sara Munshin  
Professional Development Services Committee, Reston, Virginia

John Staley  
Professional Development Services Committee, Reston, Virginia

*Ballroom F (Convention Center) capacity: 398*

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276

**Improving Mathematics Education through Collaboration: The International Consortium for Research in Science and Mathematics Education**

(General Interest) Session

This session will describe the International Consortium for Research in Science and Mathematics Education and offer its recommendations related to collaborative development of multicultural activities for mathematics and science education.

Arthur L. White  
School Science and Mathematics Association, Columbus, Ohio

Donna F. Berlin  
Ohio State University, Columbus, Ohio

*Hall 2 (Convention Center) capacity: 1677*

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277

**Using PowerPoint® in the Mathematics Classroom**

(General Interest) Gallery Workshop

Are you using PowerPoint but need techniques to make your lessons more effective? We’ll cover how to include interactivity on your slides; how to choose the best fonts, colors, and backgrounds; how to incorporate equations and graphs; and more.

Robert J. Mathews  
Design Science, Inc., Long Beach, California

*Hall 3 (Convention Center) capacity: 1677*

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278

**I’m Going to Be a Math Teacher: Why Didn’t I Know This Before?**

(Teacher of Teachers, 6–12) Session

Participants will see what a secondary math methods teacher has discovered are deficiencies in conceptual understanding of several procedures and formulas. Most students confess that they “should have known these things a long time ago.”

Steven Todd Williams  
Lock Haven University of Pennsylvania, Lock Haven, Pennsylvania

*Room 254 C (Convention Center) capacity: 99*

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279

**F.U.N. (Families Understanding Number)**

(Pre-K–2) Session

This session will help families better understand how to increase children’s understanding of number on the basis of research. Teach parents strategies to influence their child’s mathematical development with make-it-and-take-it activities.

Pamela M. Herd  
Dickerson Park Zoo, Springfield, Missouri; Springfield Public Schools (Retired), Springfield, Missouri

*Ballroom B/D (Convention Center) capacity: 732*

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280

**Can You Truly Teach Number Sense to Young Students?**

(Pre-K–2) Session

Children enter school with an informal sense of number. As we consider what number sense is and what experiences would enhance acquiring it, how can we facilitate the continuing development of this important quality in our students?

Lisa Rogers  
Marilyn Burns Education Associates, Sausalito, California

*Room 251 C (Convention Center) capacity: 116*

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281

**Mathematical Art-o-Facts**

(Pre-K–5) Session

Imagine a creative, fun review or test. Imagine it jammed with mathematical skills and vocabulary. We’ll create minismasterpieces fusing geometry, measurement, fractions, and percents! Plans for each lesson will be provided.

Catherine L. Kuhns  
Broward School Board, Coral Springs, Florida

*Ballroom H/J (Convention Center) capacity: 732*
282

Mental Mathematics Strategies That Are Certain to Work
(Pre-K–5) Session
This session will describe certain strategies that will ensure success when teaching mental mathematics. The activities will relate to all four operations.

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

Room 251 F (Convention Center) capacity: 158

283

Differentiation: More Than Changing Numbers
(Pre-K–5) Session
Changing the numbers in math problems is one small way teachers differentiate math instruction. What else can we do? Come explore multiple strategies you can use to meet the needs of the wide variety of math thinkers and learners in your classroom.

Liz Stamson
Math Solutions Professional Development, Sausalito, California

Room 355 A (Convention Center) capacity: 264

284

Assessment and Special-Education Students: Using Assessment to Meet the Needs of Special-Education Students
(Pre-K–5) Session
In this hands-on session, we examine work from special-education students using a Standards-based curriculum. Understanding the mathematics that these students know is essential to challenging and supporting them as they learn rigorous mathematics.

Joan L. Bieler
University of Illinois at Chicago, Chicago, Illinois

Grand Ballroom A/B/C (Marriott) capacity: 180

285

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 be used to develop strong number sense and efficient mental strategies.

Brian James Tickle
Consultant, Taree, New South Wales, Australia

Grand Ballroom I/J (Marriott) capacity: 187

286

Assuring Equal Access to Quality Mathematics Instruction for All Young Children
(Pre-K–5) Session
This session will provide strategies for improving children’s ability to solve math problems and focus on NCTM’s Equity Principle, Standards, and NAEYC pedagogy to affect teachers’ ability to provide quality math instruction to all children.

Lora Ann Bailey
Auburn University, Auburn, Alabama

Topaz (Hilton) capacity: 80

287

Math Camp: Meeting Students’ Needs in Number and Operations through Brain-Based Learning Opportunities
(3–5, Teacher of Teachers) Session
Hear how a school district used “brain-based learning” to design a summer school for rising fourth graders lacking in number sense development. View samples of students’ work and activities. Walk away with sample lesson plans and a bibliography.

Shirley Ferguson
Lebanon School District, Lebanon, New Hampshire

Room 355 C (Convention Center) capacity: 237
288

An Online Workshop Explores Tools for Building Crucial Elementary Math Concepts
(3–8 Session)

Technology can help students develop such concepts as multiples, fractions, and area by generating data and examining patterns. Learn about online professional development and implementation strategies exploring technology and math.

Annie Fetter
The Math Forum @ Drexel, Philadelphia, Pennsylvania

Grand Ballroom A (Hilton) capacity: 171

289

Fun with Percents Using Multiples
(3–8 Session)

Frustrated with percents? Here is a solution: a ready-to-teach, classroom-tested, easy-to-implement unit that enables students to solve percent problems using multiples and to calculate percents mentally.

Susan Mercer
Santa Ana Unified School District, Santa Ana, California

Grand Ballroom B (Hilton) capacity: 171

290

Drawing Diagrams to Solve Word Problems: What Do Students’ Diagrams Tell Us?
(3–8, Teacher of Teachers) Session

We often assume students have the necessary skills to generate diagrams, yet they may not. By using the Graphic Representational Analysis Process, teachers can determine what skills students have and focus their instruction.

Amy Scheuermann
Bowling Green State University, Bowling Green, Ohio

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

Room 250 A (Convention Center) capacity: 123

291

Algebra across the Grades: How Do We Prepare Students to Be Successful in Algebra?
(3–8, Teacher of Teachers) Session

To develop algebraic reasoning, algebra instruction should be integrated across the grades instead of isolated in middle school. We describe best practices in designing and delivering early algebra instruction as well as instruction in middle school.

Leanne Robyn Ketterlin Geller
University of Oregon, Eugene, Oregon

David Chard
University of Oregon, Eugene, Oregon

Scott K. Baker
Pacific Institutes for Research, Eugene, Oregon

Kathleen Jungjohann
University of Oregon, Eugene, Oregon

Solitude (Marriott) capacity: 70

292

Performance Groups: A Method for Engaging and Empowering All Learners
(3–12 Session)

Examine a method for providing students with opportunities to solve challenging problems using a culturally responsive teaching strategy that promotes students’ engagement, self-confidence, academic achievement, and appreciation of mathematics.

Jonathan A. Wray
Howard County Public Schools, Ellicott City, Maryland

Ballroom A/C (Convention Center) capacity: 504

293

It’s All in How You Slice It: Examining 3-D Relationships
(3–12 Session)

Do your students memorize formulas without understanding them? Come examine strategies for classifying and naming 3-D solids. Relationships between areas of figures and volumes of solids will be examined with hands-on activities to develop formulas.

Janet Andreasen
University of Central Florida, Orlando, Florida

Ballroom G (Convention Center) capacity: 398

294

The Power of Descriptive Feedback: Improving Students’ Achievement in Probability and Statistics
(6–8) Session

Experience the power of what feedback can do to boost students’ confidence and achievement in any math area. Teachers will receive training using students’ work samples.

Shunda Lynn Allen
Milwaukee Public Schools, Milwaukee, Wisconsin

Kelli Carson
Carver Academy, Milwaukee, Wisconsin

Alta/Snowbird/Brighton (Marriott) capacity: 105

295

Supporting Mathematical Communication with Mathematics Teaching in the Middle School (MTMS)
(6–8, Teacher of Teachers) Session

MTMS offers ways to engage grades 5–9 in mathematical communication. A panel of teachers will share ways they have used the journal to facilitate communication and increase learning.

Mathematics Teaching in the Middle School Editorial Panel
National Council of Teachers of Mathematics, Reston, Virginia

Room 255 B (Convention Center) capacity: 356

April 9–12, 2008 • Salt Lake City, Utah
DHook, Line, and Generalization: The Art of Designing Mathematics Lessons That Optimize Understanding

(6–12, Teacher of Teachers) Session

Moving beyond “launch, explore, summarize,” we will examine the characteristics of a lesson design model that engages students, creates a conceptually based context for developing understanding, and leads students to generalize about their learning.

Sonia Woodbury
City Academy, Salt Lake City, Utah

Grand Ballroom C (Hilton) capacity: 388

A Look at the New NAEP Mathematics Assessment for Grade 12 in 2009

(9–12) Session

A new grade 12 mathematics framework for the National Assessment of Educational Progress will be implemented in 2009. We will discuss the framework, issues related to design, implementation, the scoring of the new assessment, and Web resources.

Gloria S. Dion
Educational Testing Service, Princeton, New Jersey

Ballroom I (Convention Center) capacity: 398

What Do Mathematicians Really Do?
Introducing High School Students to the Work of Mathematicians

(9–12) Session

We will examine lessons in which students become familiar with the methods and processes that mathematicians use. We will also look at how students can engage in some topics and areas of mathematics that mathematicians currently explore.

Adam Nafziger
Miami University, Oxford, Ohio

Jeffrey J. Wanko
Miami University, Oxford, Ohio

Room 251 A/B (Convention Center) capacity: 234

Unexpected Occurrences of the Number e in Probability Discussions

(9–12, Higher Education) Session

Students rarely have a solid grasp of the number $e$, other than perhaps knowing the phrase “It is the base of the natural logarithm.” We will discuss how the number $e$ arises naturally in some elementary probability discussions.

Harris Shultz
California State University–Fullerton, Fullerton, California

Grand Ballroom G/H (Marriott) capacity: 187

Interactive Sliders in Excel: How-to, Why, and Examples

(9–12, Higher Education, Teacher of Teachers) Session

Sliders in Excel allow for powerful dynamic investigations. Experience this power through an interactive investigation of quadratic functions and other examples. Handout contains detailed directions to make sliders.

John E. Donovan
Plymouth State University, Plymouth, New Hampshire

Room 255 C (Convention Center) capacity: 354

Examining Crucial Features in Field Experiences That Encourage Reflective Development in Secondary Mathematics Preservice Teachers

(9–12, Higher Education, Teacher of Teachers) Research Session

The presentation will highlight four crucial features of field experiences that foster deeper and more interactive forms of reflection. A framework for preservice programs based on NCTM Process Standards will also be shared.

Timothy Scott McKeny
Ohio University, Athens, Ohio

Room 355 B (Convention Center) capacity: 356

Exploring Probabilities by Simulating Card Games Using Fathom

(9–12, Teacher of Teachers) Session

Come join us while we explore random-number data sets to simulate playing blackjack and poker using Fathom. We will discuss how simulations help students understand and apply basic concepts of probability. Detailed handouts will be provided.

Suzanne Rushton Harper
Miami University, Oxford, Ohio

Shannon Driskell
University of Dayton, Dayton, Ohio

Jennifer Nickell
Lakota Local Schools, Liberty Township, Ohio

Ballroom E (Convention Center) capacity: 398
3:30 p.m.–4:30 p.m.

303

Tempting Tables
(9–12, Teacher of Teachers) Session
One can trust tables of numbers to provide a cornucopia of delicious opportunities for problem solving and posing. We’ll play with tables of numbers, looking for promising patterns and discovering ways to analyze those patterns.

Donald Barry
Phillips Academy, Andover, Massachusetts

J. Bryan Sullivan
President, American Regions Math League, Sterling, Massachusetts

Room 254 A (Convention Center) capacity: 99

304

Reducing Mathematics Anxiety in Preservice Elementary School Teachers
(Higher Education, Teacher of Teachers) Research Session
The speaker will discuss math anxiety and report on results of a study examining factors that reduce math anxiety of preservice elementary school teachers enrolled in required math content courses. An audience discussion will follow.

DesLey V. Plaisance
Baton Rouge Area Council of Teachers of Mathematics, Baton Rouge, Louisiana

Room 255 A (Convention Center) capacity: 264

3:30 p.m.–5:00 p.m.

305

What’s Next? Next Steps for All of Us in Mathematics Teaching and Learning
(General Interest) Session
Lifetime Achievement Awards Presentation
What are the next steps we should consider with regard to curricular essentials for all students as we balance the “competitiveness issue” with the absolute need for all children to have access to a quality mathematics program?

Francis (Skip) Fennell
President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland

Hall 1 (Convention Center) capacity: 2000

4:00 p.m.–5:00 p.m.

EW16

RM Education

Bring Math Alive! Engage and Motivate Your Students
Bring Math alive using RM Math Framework Edition. Containing 2,000 high-quality state standards aligned math activities, powerful teaching and planning tools, RM Math will transform classroom instruction and engage and motivate students by allowing them to “touch the math.”

Room 250D (Convention Center) capacity: 100

EW17

ICT4U Education, LLC

ICT4U Spreadsheets: A Unique Program Developing Students’ Spreadsheet Skills
The easy-to-use students’ workbook and CD-ROM will be demonstrated, showing how spreadsheet skills are explicitly taught in a self-paced, independent, motivated mathematical learning environment. Take home some free copies.

Room 250E (Convention Center) capacity: 100

EW18

Pearson

Getting to Know CMP2
Learn about the nation’s leading NSF-funded middle school math program—CMP2! Come see an overview of the program and highlights of the time-saving resources.

Room 250F (Convention Center) capacity: 100
SRA Real Math, a core program, provides field-tested applications to help you teach standards-based concepts. Stimulate critical thinking with the latest technology and engaging games. Boost students’ performance with true-to-life math scenarios.

SRA Number Worlds® is a complete math intervention program for struggling students in Pre-K–8. Instruction follows a natural learning pattern with hands-on activities. Give students confidence and the skills to excel in math.

SRA Essentials for Algebra offers structured Direct Instruction lessons with more practice than traditional programs. Help under-performing students develop into independent problem-solvers ready for an Algebra I program.

Visit SRA’s booth at NCTM in Salt Lake City to learn about our exciting and flexible math solutions. Try activities and enter to win our daily drawings (one every hour!) and our grand prize drawing on Saturday!

Call us at 1-888-SRA-4543 or visit us at SRAonline.com/NCTM18
306
New Teacher Strand Kickoff Session
(General Interest) Session

Hear about what NCTM has to offer for new and preservice teachers, the new teacher strand of the conference. Meet new people and win some prizes.

James M. Rubillo
Executive Director, National Council of Teachers of Mathematics, Reston, Virginia

Ballroom B/D (Convention Center) capacity: 732

307
Developing and Supporting Coaches: Professional Development to Cultivate School-Based Mathematics Leaders
(General Interest) Session

Why is coaching an emerging professional development strategy? What are characteristics of exemplary coaching initiatives and evidence that coaching leads to improved instruction and increased student achievement? Join us to explore coaching.

Nan Dempsey
Upstate Mathematics and Science Regional Center, Duncan, South Carolina

Terri Dew
Anderson-Oconee-Pickens-Greenville Regional Math and Science Center, Greenville, South Carolina

Ballroom G (Convention Center) capacity: 398

308
The Focal Points and Curriculum Coherence: What’s Needed? What’s Going On?
(General Interest) Session

This session will review what’s happened nationally and at the state level with Curriculum Focal Points: A Quest for Coherence since its release more than a year ago.

Francis (Skip) Fennell
President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland

Barbara Reys
University of Missouri—Columbia, Columbia, Missouri

R. James Milgram
Stanford University, Stanford, California

Julie K. Dixon
University of Central Florida, Orland, Florida

Gladis Kersaint
Florida Council of Teachers of Mathematics, Tampa, Florida

Grand Ballroom I/J (Marriott) capacity: 187

309
Proving the Impossible
(General Interest) Session

Students’ work on an impossibility proof will be used to investigate three features of helping students prove mathematical claims: task design, the creation of social and intellectual environment, and the development of specialized language.

Deborah Loewenberg Ball is dean of the School of Education and William H. Payne Collegiate Professor at the University of Michigan. Her research focuses on mathematics instruction and on interventions designed to improve its quality and effectiveness. Ball is also codirector of the Center for Proficiency in Teaching Mathematics, a research-and-development center aimed at strengthening professional education of mathematics teachers.

Hyman Bass is the Roger Lyndon Collegiate Professor of Mathematics and Mathematics Education at the University of Michigan. His mathematical research covers broad areas of algebra, with connections to geometry, topology, and number theory. Bass was chair of the Mathematical Sciences Education Board, and president of the International Commission on Mathematics Instruction. During the past decade he has been collaborating with Deborah Ball and her research groups at the University of Michigan on aspects of mathematical knowledge for the teaching of mathematics at the elementary school level.

Deborah Loewenberg Ball
University of Michigan, Ann Arbor, Michigan

Hyman Bass
University of Michigan, Ann Arbor, Michigan

Hall 1 (Convention Center) capacity: 2000

Focus of the Year
New Teacher strand
EW Exhibitor Workshop

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 with fire codes, it will be necessary to ask persons sitting on the floor or standing to leave the room.
310
Build, Draw, Write Your Way to Math Success!
(General Interest) Invited
Benjamin Banneker Association presentation
“Build-Draw-Write” is an easy way for teachers and students to remember concrete-representational-abstract stages of learning. Combine this winning technique with visual images and varied tasks.

Renee Hill
Benjamin Banneker Association, Riverside, Virginia

Room 251 C (Convention Center) capacity: 116

311
Coaches, Do You Ever Work with Reluctant Teachers?
(Teacher of Teachers, Pre-K–5) Session
Hear methods used to engage all teachers and create a collaborative learning community. Try activities from unique in-service programs in which teachers implement lessons with students right away and join in data-driven discussions to enhance math instruction.

Elizabeth Gehron
Seminole County Public Schools, Sanford, Florida

Room 355 B (Convention Center) capacity: 356

312
Early Number Strategies for Classroom Use
(Pre-K–2) Session
Have you ever wondered why some students struggle to learn math even in the early grades? A variety of research-based, classroom-tested strategies will be shared with a focus on teachers’ questioning and analysis of students’ responses.

Linda Jewell
Jefferson County Public Schools (retired), Louisville, Kentucky

Ballroom H/J (Convention Center) capacity: 732

313
Algebraic Thinking in Grades K–2
(Pre-K–2) Session
Algebraic thinking can be part of everyday math for young learners. Ideas presented will include creating geometric designs with manipulatives, discussions about true/false equations, and exploring balance beams and homemade function machines.

Elaine Mechler
Hutto Independent School District, Hutto, Texas

Janet Palermo
Round Rock Independent School District, Round Rock, Texas

Grand Ballroom A/B/C (Marriott) capacity: 195

314
Big Ideas for Little People: Important Things to Know about Numbers after Counting
(Pre-K–2) Session
This session will address four foundational big ideas about numbers that will help children be successful in mathematics. Participants will receive handouts and ideas for lessons or centers that foster understandings about these number relationships.

Carollee Norris
British Columbia Association of Mathematics Teachers (BCAMT), Fort Saint John, British Columbia

Grand Ballroom C (Hilton) capacity: 388

315
What Every Grades Pre-K–2 Teacher Should Know
(Pre-K–2) Session
Are you a teacher of prekindergarten through grade 2 getting ready to teach or just finishing up one of your first two years? Have some questions? Have some ideas to share? This session is for you! Open to teachers in their first two years and those seeking certification.

Neil Pateman
University of Hawaii, Honolulu, Hawaii

Sandy Dawson
University of Hawaii, Honolulu, Hawaii

Joseph Zilliox
University of Hawaii, Honolulu, Hawaii

Room 255 A (Convention Center) capacity: 264

316
Inventing New Math Intervention Strategies
(Pre-K–2, Teacher of Teachers) Session
Explore new ways to help struggling math students! Operations, measurement, and probability will be highlighted using manipulatives, games, and intervention strategies for students who struggle with basic skills. Activity samples will be offered.

Kathryn S. Johnson
White Settlement Independent School District, Fort Worth, Texas

Hall 3 (Convention Center) capacity: 1677

317
Transforming Math Education with Music and Technology
(Pre-K–5) Session
The research-based Math + Music program combines non-language-based computer games with specialized piano training to teach K–5 math, enhance problem-solving skills, and dramatically raise math scores. Handouts and demonstration software provided.

Linda Lang-Sleeper
Our Lady of the Lake University, San Antonio, Texas

Bella Soler
MIND Institute, Costa Mesa, California

Room 254 C (Convention Center) capacity: 99
Show Me Your Thinking: Number Sense, Basic Facts, and Mental Computation  
(Pre-K–5) Session  
Discussion will include specific examples of how various representations can be used to enhance students’ thinking and help them develop better number sense. The open number lines, tree diagrams, arrays, and other representations will be used.

Edward Rathmell  
University of Northern Iowa, Cedar Falls, Iowa  
Solitude (Marriott) capacity: 70

How Does Classroom Communication Measure Up? Getting Kids to Ask the Important Questions  
(Pre-K–5) Session  
Good questions are crucial to building mathematical understanding. Should the teacher be the only one asking them? Learn how the Measure Up program promotes young students’ questioning skills, and hear about the impact on classroom discussions.

Hannah Slovin  
Curriculum Research and Development Group, University of Hawaii, Honolulu, Hawaii  
Linda Venenciano  
Curriculum Research and Development Group, University of Hawaii, Honolulu, Hawaii  
Maria Da Silva  
University of Hawaii, Honolulu, Hawaii  
Room 251 F (Convention Center) capacity: 158

Making Sense of Number Sense for Students with Disabilities  
(3–5) Session  
Still stumbling over concepts your students should have by now? We will investigate different strategies and reinforcing activities for students with disabilities. You will receive many ideas and tools that you can use right away in your classroom.

Becky Unker  
Granite School District, Salt Lake City, Utah  
Topaz (Hilton) capacity: 80

Shedding Light on Uncertainties in Understanding Whole-Number Operations  
(3–5, Teacher of Teachers) Session  
This reflective session will have participants look at preservice teachers’ notions of whole-number operations and explore uncertainties in thought and representation related to the multiplication and division of whole numbers.

Farshid Safi  
University of Central Florida, Orlando, Florida  
George Roy  
University of Central Florida, Orlando, Florida  
Alta/Snowbird/Brighton (Marriott) capacity: 105

Using Balloons to Expand Students’ Understanding of Mathematics  
(3–8) Session  
Participants will gather data about balloons. These data include examining aspects of the balloon’s elasticity as well as examining distance traveled by the balloon. Graphs will be used to determine relationships.

Jeremy J. Winters  
Middle Tennessee State University, Murfreesboro, Tennessee  
Ballroom B/D (Convention Center) capacity: 732
324 Nuts-and-Bolts Math: Activities Using Gridboards  
(3–8) Session  
Versatile gridboards can be used for a wide range of ages and abilities for decimals, percents, fractions, graphing, area, perimeter, games, and more! Participants will receive a fifty-page activity folder.  
Patrick Thomas Olson Mader  
Waterville-Elysian-Morristown Public Schools, Morristown, Minnesota  
Room 250 A (Convention Center) capacity: 123  

325 Once You Get the Answer, Then Mathematics Begins  
(3–8, Teacher of Teachers) Session  
We will give the characteristics of a good problem, solve a problem and get the answer in many ways, and then see how mathematics begins, using generalization and connecting with other mathematics at higher grade levels.  
Jerry P. Becker  
Southern Illinois University, Carbondale, Illinois  
Room 355 C (Convention Center) capacity: 237  

326 Resizing Rectangles to Represent Rational Numbers  
(3–8, Teacher of Teachers) Session  
We will explore how to extend the use of open array models from whole numbers to fractions. In particular, the ability to combine and resize open arrays will be used to make sense of multiplying and dividing fractions.  
Stephen Blair  
Eastern Michigan University, Ypsilanti, Michigan  
Ballroom E (Convention Center) capacity: 398  

327 Pizza, Pancakes, and Fast Food: Great Contexts to Engage Kids  
(6–8) Session  
We’ll look at a range of cool problems that arise from the context of comfort food and that provide a great platform for engaging and motivating students as well as reinforcing important skills and concepts.  
Steven J. Leinwand  
Ohio Council of Teachers of Mathematics; California Mathematics Council; Washington, D.C.  
Hall 2 (Convention Center) capacity: 1677  

328 Creating Effective Interactive Classroom Experiences  
(6–8) Session  
This session will offer ideas on creating and using effective interactive materials and methods so students can better experience the dynamics of mathematics, emphasizing action and change in teaching number sense, algebra, geometry, and probability.  
Evan M. Maletsky  
Montclair State University, Upper Montclair, New Jersey  
Room 251 A/B (Convention Center) capacity: 234  

329 Dr. Ditz on Call–Please Fix My Math: A Fun Way to Examine Errors  
(6–8) Session  
Students take great delight in finding errors when the teacher makes them. Come see the mistakes I deliberately make in class to get my students to look critically at their own work. You’ll leave this session with samples of work to “fix.”  
Dorothy Draper  
Albuquerque Academy, Albuquerque, New Mexico  
Room 355 A (Convention Center) capacity: 264  

330 Learning to Develop and Use Bilingual, Student-Centered, Problem-Centered Tasks and Lessons  
(6–8, Higher Education, Teacher of Teachers) Session  
During a university math methods course, preservice teachers developed and taught tasks and lessons to middle grades English as a Second Language students. Examples will be shared of what the teachers did and found out about teaching and learning.  
Jeffrey Hovermill Shamatha  
Northern Arizona University, Flagstaff, Arizona  
Grand Ballroom A (Hilton) capacity: 171  

331 Being Certain about Methods for Teaching ELLs: Learning from Action Research Projects  
(6–8, Teacher of Teachers) Research Session  
TODOS: Mathematics for ALL presentation  
Qualitative research results will be presented on successful classroom practices for Hispanic English language learners (ELLs), collected in action research projects in collaboration with Hispanic teachers in the Texas Rio Grande Valley.  
Joyce Faye Fischer  
Texas State University, San Marcos, Texas; TODOS: Mathematics for ALL, San Marcos, Texas  
Ballroom A/C (Convention Center) capacity: 732
Let's Get beyond “Covering It” and Go for Depth  
(6–12) Session  
We will explore activities that help students make connections among mathematical topics, emphasizing deep understanding. Ideas presented will connect concepts across the curriculum—including algebra and geometry—in a fast-paced format.  
Daniel J. Brahier  
Bowling Green State University, Bowling Green, Ohio  
Room 254 A (Convention Center) capacity: 99

Historical Topics in Mathematics: Patterns on Pascal’s Triangle  
(6–12, Higher Education) Session  
To showcase Pascal’s Triangle and Pyramid, the NCTM publication celebrating 100 Years of Mathematics Teacher, several patterns will be illustrated from arithmetic, set theory, algebra, geometry, and more.  
Jim Fulmer  
University of Arkansas at Little Rock, Little Rock, Arkansas  
Suzanne Mitchell  
Arkansas State University, Jonesboro, Arkansas  
Grand Ballroom B (Hilton) capacity: 171

What Can We Learn from Students’ Responses on the AP Calculus Exams?  
(9–12) Session  
This session will focus on the free-response problems from the 2007 AP Calculus exams, including strengths and weaknesses of students’ responses and a discussion of possible ways to improve students’ mathematical communication.  
Craig L. Wright  
Educational Testing Service, Princeton, New Jersey  
Fred Kluempen  
Educational Testing Service, Princeton, New Jersey  
Room 255 B (Convention Center) capacity: 356

Do the Wave: Trigonometry Comes Alive with Sketchpad®  
(9–12, Higher Education) Session  
Trig makes sense and is more fun when students make sinusoids actually wave, combine the waves, and explore real-world applications. See several activities, examine how they improve students’ understanding, and receive copies to use with your class.  
Scott Steketee  
Key Curriculum Press, Oakland, California  
Ballroom F (Convention Center) capacity: 398

Why Variances Add, and Why It Matters  
(9–12, Higher Education) Session  
Students often find the theorem about variances of sums or differences of independent random variables confusing. We’ll look at effective explanations and explore applications to probability, the central limit theorem, inference, and AP questions.  
David Bock  
Cornell University, Ithaca, New York  
Grand Ballroom G/H (Marriott) capacity: 187

Secondary School Mathematics Teachers’ Ways of Thinking about Exponential Functions: A Modeling Approach  
(9–12, Higher Education) Research Session  
A research study conducted on teachers’ ways of thinking about exponential behavior from a modeling perspective will be presented. Data gathered from interviews and teaching experiments will be included, and exponential tasks will be provided.  
April D. Strom  
Scottsdale Community College, Scottsdale, Arizona  
Ballroom I (Convention Center) capacity: 398

Master Innovations  

Mastering Measurement Skills and Other Math Concepts (Fractions, Scale Drawing, etc.) Easily!  
Learn exciting and innovative methods to teach measurement skills, fractions, map skills, scale drawing, perimeter, area, and more. Hands-on activities provide success, ease, and enjoyment. Handouts and materials will be provided.  
Room 250D (Convention Center) capacity: 100

Real-World Problem Solving with Graphic Novels  
With this new resource, Glencoe/McGraw-Hill provides teachers and students a new, engaging, and unique way to present problem solving to middle school students.  
Room 250E (Convention Center) capacity: 100

Constructing Concepts, Building Vocabulary  
Confused or constrained by literacy initiatives for the math classroom? Wondering how to maintain math content rigor and meet standards? Find out what best-practice vocabulary acquisition looks like, using our instructional tool Concept Constructions.  
Room 250F (Convention Center) capacity: 100
Effective Mathematics Teaching Strategies and Activities for English Language Learner (ELL) Students  
(To teach teachers) Gallery Workshop  
What are known effective teaching strategies for ELL students? This session will offer research-based strategies to teach ELLs effectively, in particular Hispanic/Latino students. Participants will be actively involved in specific best practices.  
Noemi R. Lopez  
Harris County Department of Education, Houston, Texas  
Don Stephen Balka  
Board of Directors, National Council of Teachers of Mathematics  
Saint Mary’s College, Notre Dame, Indiana  
Grand Ballroom F (Marriott) capacity: 221

Developing Number Sense and Algebraic Thinking through Subbases Using Kaktovik Numerals  
(To teach teachers, 3–12) Gallery Workshop  
This session will explore a Native American counting system (base twenty, subbase five), which invites students to experiment with numbers and motivates them to develop math curiosity, number sense, and algebraic thinking.  
William Clark Bartley  
Hunter High School, West Valley City, Utah  
Claudette Engblom-Bradley  
University of Alaska Anchorage, Anchorage, Alaska  
Alpine Ballroom West (Hilton) capacity: 116

Students’ Questions as Tools for Learning to Teach  
(To teach teachers, 6–12) Gallery Workshop  
Being responsive to students’ contributions is a crucial skill in teaching. Come think with us about the mathematical considerations involved in responding to students’ questions. We will use examples to share strategies for developing this skill.  
Laurie Overman Cavey  
James Madison University, Harrisonburg, Virginia  
William Ted Mahavier  
Lamar University, Beaumont, Texas  
Room 251 D/E (Convention Center) capacity: 219

We’ve Formed a Professional Learning Community (PLC): Now What?  
(To teach teachers, Higher Education) Gallery Workshop  
Often the difficult PLC work decides what to do when members meet, not what they do in the classroom. We will look at how Oregon Mathematics Leadership Institute teachers use cases to further their PLC’s learning and influence their collaboration.  
Nicole Rene Rigelman  
George Fox University, Newberg, Oregon  
Grand Ballroom D (Marriott) capacity: 181

Oh, the Games Children Play! (and What We Can Learn from Them)  
(Pre-K–2) Gallery Workshop  
Participants will engage in primary games to “find” the math, review the progression of a game and its variations, learn to write observation rubrics for games, and leave with several games to use in their classrooms on Monday.  
Linda S. Boland  
Pearson Scott Foresman, Glenview, Illinois  
Room 151 G (Convention Center) capacity: 194

Scaffolding and Tiering: Providing Access to the Big Ideas of Mathematics  
(Pre-K–2) Gallery Workshop  
Many readiness levels with respect to the big ideas of math exist in all classes. Participants will examine lessons to find the important concepts and learn how to use scaffolding and tiering to provide appropriately challenging tasks.  
Lori Williams  
Manitowoc Public School District, Manitowoc, Wisconsin  
Room 155 F (Convention Center) capacity: 228

Learning for Understanding the 5, 10, and 20 Structured Thinking in Context  
(Pre-K–2, To teach teachers) Gallery Workshop  
Research-based, real-life activities invite participants to make sense of and solve problems cooperatively on different levels. Video clips provide windows for students’ work on analysis. Materials for the activities and handouts will be provided.  
Judit Kerekes  
City University of New York–College of Staten Island, Staten Island, New York  
Grand Ballroom E (Marriott) capacity: 180
True and powerful diagnosis of math skills online!

DOMA–Diagnostic Online Math Assessment® facilitates differentiated instruction of Basic Math Skills and Pre-Algebra by connecting:

- research-based best practices developed by educators and teacher educators at U.C. Berkeley
- intelligent technology that adapts in real time for each student
- state standards and today’s educational requirements

DOMA generates individual student profiles, summary reports, and state standard reports. Scores and levels of improvement data is aggregated for class, school, and district.

Demo DOMA at Booth #1025
345
Transforming Classrooms into Communities of Mathematicians for All Students: Learning Math Together
(Pre-K–5) Gallery Workshop
Learn to use visual models to explore interesting problems in your grades K–5 classrooms. Engage all students in crafting solutions, justifications, and proofs of their own making, just like mathematicians do! Handouts will be available.
Barbara Lynn Blanke
California Polytechnic State University, San Luis Obispo, California
Room 355 E (Convention Center) capacity: 228

346
By George! President Washington Is Teaching Mathematics!
(Pre-K–5, Teacher of Teachers) Gallery Workshop
He was a surveyor, soldier, farmer, and the nation’s first president. Now he is at the head of the class! Explore a year’s worth of hands-on lessons based on the NCTM Standards and research gathered at the 2007 George Washington Teachers’ Institute.
Nancy Ann Silva
Indian Brook School, Plymouth, Massachusetts
Room 255 D (Convention Center) capacity: 166

347
A Place to Start: The Weekly Problem-Solving Activity
(3–5) Gallery Workshop
This session will provide elementary school teachers who wish to change to a problem-solving environment a place to start. Strategies, hands-on activities, and a handout of assorted problems to consider using in the classroom will be highlighted.
Johnath L. Weber
Northern State University, Aberdeen, South Dakota
Alpine Ballroom East (Hilton) capacity: 116

348
Dots, Bags, and Tags: Inexpensive Materials for Teaching Operations
(3–5) Gallery Workshop
Engage your students without breaking your wallet: use sticky dots, Post-It notes, and lunch bags! These simple materials will facilitate learning about multiplication, division, and fractions. Let students show what they know and have fun doing it.
Theresa Ann Meade
MathScience Innovation Center, Richmond, Virginia
Room 155 C (Convention Center) capacity: 228

349
Children’s Literature: Making Math Sizzle
(3–5, Teacher of Teachers) Gallery Workshop
Literature can offer the spark necessary to engage children in math actively. Experience the math-literature connection by participating in hands-on, motivating, simple activities that make real-world connections. A bibliography will be provided.
Sharon Huber
Chesapeake Public Schools, Chesapeake, Virginia
Carolyn Belson
Chesapeake Public Schools, Chesapeake, Virginia
Room 253 A/B (Convention Center) capacity: 135

350
Promoting Children’s Mathematical Thinking through Strategic Use of Number Games and Follow-Up Questions
(3–5, Teacher of Teachers) Session
Participants will play easily made math games, designed for small groups, that encourage number sense and basic skill practice. After each game, the speaker will demonstrate related questions that encourage children’s mathematical thinking.
Jeanne Albert
David Yellin Teachers’ College, Jerusalem, Israel
Room 355 D (Convention Center) capacity: 166

351
Investigations with a Trapezoid
(3–8) Gallery Workshop
We will explore a set of problems posed using a regular trapezoid. Participants will explore geometric and numeric patterns and relationships, and we will make connections with geometry and algebra strands.
Anne Reynolds
Kent State University, Kent, Ohio
Joan Eileen Lillard
Norman Public Schools, Norman, Oklahoma
Sandra Davis Trowell
Valdosta State University, Valdosta, Georgia
Room 155 A (Convention Center) capacity: 166

352
It’s Our Job to Show Them Why We Need to Invert and Multiply
(3–8) Gallery Workshop
Participants will discover how to divide fractions and mixed numbers using manipulatives. The “invert and multiply” rule will emerge from this process.
Darrell Dillon Manderscheid
Consultant (Retired), Fountain Valley, California
Room 155 D (Convention Center) capacity: 180
353
Making Sense of Fraction Representations: A Measurement Model
(3–8, Teacher of Teachers) Gallery Workshop
We will explore a measurement model for interpreting multiple representations of fractions. Participants will receive rich mathematical problems and strategies for modifying their existing programs to exploit the power of the measurement model.
Meghan M. Shaughnessy
University of California, Berkeley, Berkeley, California
Julie C. McNamara
University of California, Berkeley, Berkeley, California
Room 150 A/B/C (Convention Center) capacity: 143

354
Probably Sierpinski: A Fractal Twist on an Old Game
(6–8) Gallery Workshop
Sierpinski and probability are not limited to the Chaos Game. See how an old game of skill and chance can be jazzed up with fractals to teach probability and proportional reasoning to middle school students.
Andrew Derer
MathScience Innovation Center, Richmond, Virginia
Room 155 B (Convention Center) capacity: 228

355
Using Applets and Other NCTM Resources in the Classroom
(6–8) Gallery Workshop
How far can you see to the horizon from the top of Mount Everest? Can length be used to predict a car's fuel efficiency? What speed corresponds to maximum fuel economy? These questions and others will be answered using online resources from NCTM.
Patrick Vennebush
National Council of Teachers of Mathematics, Reston, Virginia
Room 155 E (Convention Center) capacity: 228

356
Hula Hoops n’ Games: Connecting Uncertainty with Algebraic Thinking
(6–8) Gallery Workshop
This exciting workshop consists of high-energy group activities used to motivate underachievers. Contextually based games and a modified hula-hoop activity, developed by the Algebra Project, will be used to find the line of best fit.
Cheryl Adeyemi
Virginia State University, Petersburg, Virginia
Shelley Jones
Central Connecticut State University, New Britain, Connecticut
Gerald Burton
Virginia State University, Petersburg, Virginia
Room 254 B (Convention Center) capacity: 162

357
“Right on Target” in Middle Grades Mathematics
(6–8) Gallery Workshop
In this session we will explore concepts from (geometric) probability and algebra. Technology (TI-73) will also be a tool as we investigate a problem situation involving random numbers, compasses, proportional reasoning, and right triangles.
Ruth M. Casey
Board of Directors, National Council of Teachers of Mathematics; PIMSER, University of Kentucky, Frankfort, Kentucky
Margaret Bambrick
Volusia County Schools, DeLand, Florida
Room 255 E (Convention Center) capacity: 228

358
Looking for Math in All the Right Places! Making Connections
(6–8, Teacher of Teachers) Gallery Workshop
Come explore the mathematics of bridges, balloons, and basketball along with many other areas! We will examine patterns, functions, and data collection as means of making mathematical connections an exciting adventure for students and teachers.
Trena L. Wilkerson
Baylor University, Waco, Texas
Rachelle D'Lynn Meyer
Baylor University, Waco, Texas
Room 150 D/E/F (Convention Center) capacity: 143

359
Teaching Essentials: Ratio and Proportions
(6–12) Gallery Workshop
Ratio and proportionality are essential components of the middle grades curriculum. Learn techniques to facilitate skill in, and understanding of, these core concepts. Open to teachers in their first two years and those seeking certification.
Barbara Dougherty
University of Mississippi, University, Mississippi
Room 255 F (Convention Center) capacity: 228
8:30 a.m.–10:00 a.m.

360
Hands-On Methods of Solving Quadratic Equations by Completing the Square
(6–12, Teacher of Teachers) Gallery Workshop
This workshop will describe and demonstrate a set of hands-on activities that help students build connections between algebraic procedures and formulas leading to the solutions of quadratic equations and their geometric meanings.

Natalya Vinogradova
Plymouth State University, Plymouth, New Hampshire
Room 151 D/E/F (Convention Center) capacity: 143

361
I Hate Word Problems: Literacy Strategies for Urban Youth
(9–12) Gallery Workshop
Learn how to use fiction and nonfiction texts to make mathematical connections and increase mathematical literacy with a variety of motivational tools. Experience hands-on activities that can be used immediately in your classroom.

Eileen Joy Dietrich
Automotive High School, Brooklyn, New York
Joyce Narvaez
Automotive High School, Brooklyn, New York
Canyon Room (Hilton) capacity: 250

362
Help! I Have a Classroom Set of Graphing Calculators…
(9–12) Gallery Workshop
…but my students cannot take them home. What can I do? Join us for some concept-oriented classroom activities with effective connected homework.

Mary Ann Matras
East Stroudsburg University, East Stroudsburg, Pennsylvania
Deer Valley (Marriott) capacity: 176

363
(MAPS)^2: Modeling AP Statistics with Munchy Activities, Probability, and Simulations That Enhance Students’ Certainty!
(9–12) Gallery Workshop
Watch students become certain about AP Stats with these lively probability and simulation activities. From Fathom and TI-Navigators to M&M’s and Teddy Grahams, discover exciting classroom connections that are ready for use the next day.

Viva Marie Hathaway
Norfolk Public Schools, Norfolk, Virginia
Room 150 G (Convention Center) capacity: 148

364
Developing Proof throughout High School Mathematics
(9–12) Gallery Workshop
Using strategies from a new NSF-funded curriculum, the CME Project, we will show techniques to help students develop and write formal proofs in algebra and geometry, with special attention on constructing a complete logical chain of reasoning.

Kevin P. Waterman
Education Development Center, Inc., Newton, Massachusetts
Jean Benson
Education Development Center, Inc., Newton, Massachusetts
Al Cuoco
Education Development Center, Inc., Newton, Massachusetts
Room 250 B/C (Convention Center) capacity: 186

365
From 0 to 180: Rethinking the Cosine Law with Data
(9–12, Higher Education) Gallery Workshop
Participants will engage in a hands-on investigation using technology to explore the relationships among the sides of triangles. This visual approach uses multiple representations to enhance the understanding of the cosine law for all students.

Mary Beth Murrell
Great Prairie Area Education Agency, Burlington, Iowa
Room 355 F (Convention Center) capacity: 228

366
Pizzas, Pyramids, Cubes, and Cones: Hands-On Design Tasks Requiring Calculus
(9–12, Teacher of Teachers) Gallery Workshop
Bring your TI-83 or better to this workshop! We will design and create actual artifacts that require calculus techniques for their solution. Tested lesson plans taken from a university calculus course for teachers will be handed out.

Patricia Baggett
New Mexico State University, Las Cruces, New Mexico
Andrzej Ehrenfeucht
University of Colorado at Boulder, Boulder, Colorado
Room 151 A/B/C (Convention Center) capacity: 143

367
Experiments with Matlab
(General Interest) Session
Preview a new book that uses Matlab to teach mathematics and computing at high school and early college level, will supplement traditional courses, and is available at no cost on the Web and in book form.

Cleve Moler
The MathWorks, Inc, Natick, Massachusetts
Grand Ballroom A (Hilton) capacity: 171
Integrating NASA’s Online Resources into the Mathematics Classroom  
(General Interest) Session  
NASA has easily accessible Internet resources for educators. Learn where to find free products, such as lesson plans and video clips, that have practical mathematical applications. Also find information about opportunities for teachers and students.

Denise Miller  
NASA Educational Technology Services, Huntsville, Alabama  
Room 250 A (Convention Center) capacity: 123

NCTM’s Curriculum Focal Points; Next Steps  
(General Interest) Session  
Attendees will get information about two new NCTM publications that can be used by groups or individuals for professional development related to the design and implementation of a focused mathematics curriculum in grades 3–5, as exemplified in NCTM’s Curriculum Focal Points.

Jane Schielack  
Texas A&M University, College Station, Texas  
Sybilla Beckman  
University of Georgia, Athens, Georgia  
Bonnie Ennis  
Wicomico County Board of Education, Salisbury, Maryland  
John SanGiovanni  
Howard County Public Schools, Ellicott City, Maryland  
Room 355 C (Convention Center) capacity: 237

Exploring Elementary School Classroom Practices in Italy, the Ukraine, Australia, and the United States  
(Teacher of Teachers, 3–5) Session  
This presentation compares and contrasts exemplary classroom practices that focus on problem solving, computational verification, and measurement. Video data, descriptions, and handouts will be provided.

Christine Louise Ebert  
University of Delaware, Newark, Delaware  
Room 355 B (Convention Center) capacity: 356

Musical Math Plus Manipulatives  
(Pre-K–2) Session  
Come learn some fun songs and manipulative activities to help your grades K–1 students learn concepts such as patterning, sorting, more, less, equal, coin recognition, three-dimensional shapes, skip counting, and addition.

Heidi Butkus  
Bonita Unified School District, La Verne, California  
Ballroom E (Convention Center) capacity: 398
Projects and Learning Centers to Differentiate the Curriculum in Math

(Pre-K–2) Session
We all have “gifted” students that need more challenge. Using student-produced minibooks, games, art projects, and learning centers, kids can “show what they know” and teachers can assess and motivate at once.

Pattie Lee Moss
Sunrise Elementary School, Sandy, Utah

Grand Ballroom I/J (Marriott) capacity: 187

Problem-Solving Actors
(Pre-K–2) Session
A variety of problems will be presented in which young children will dramatize or simulate a problem situation. Problems will be presented to help children develop their understanding of growing patterns, variables, equality, and functions.

Sue Brown
University of Houston—Clear Lake, Houston, Texas

Solitude (Marriott) capacity: 70

“Now I Wonder...”—Young Children Solving Real Problems by Collecting and Analyzing Data

(Pre-K–2, Teachers of Teachers) Session
As young children collect and analyze data to find the answers to questions of interest to them they are often left with a sense of “I wonder...” Participants will reflect on how this happens as children pursue real problem solving experiences.

Rita Janes
Rita Janes Educational Solutions, St. John’s, Newfoundland and Labrador

Room 255 C (Convention Center) capacity: 354

Assessing Teachers’ Knowledge of Students’ Mathematical Thinking Processes

(Pre-K–2, Teacher of Teachers) Research Session
This session will highlight results of a written assessment administered to grades K–3 teachers in a 2007 professional development workshop that emphasized the importance of using children’s thinking to make instructional decisions.

Laura Brinker Kent
University of Arkansas, Fayetteville, Arkansas

Room 254 C (Convention Center) capacity: 99
378 Using Error Patterns to Make Instructional Decisions
(3–5) Session
Participants will engage in a simulated activity in which they will examine error patterns exhibited by many elementary school mathematics students and will then use this diagnostic information to assist them in making sound instructional decisions.

Sueanne E. McKinney
Old Dominion University, Norfolk, Virginia

Ballroom I (Convention Center) capacity: 398

379 Critiquing Data in Democratic Classrooms
(3–5) Session
Being a critical reader of data is an integral part of being fully literate in today’s information age. The presenters will critique news media reports and examine examples of students’ work that show a skeptical disposition.

David Whitin
Wayne State University, Detroit, Michigan

Phyllis Whitin
Wayne State University, Detroit, Michigan

Grand Ballroom B (Hilton) capacity: 171

380 Getting a Good Reaction from Fractions
(3–5) Session
Participants will learn different methods for teaching the concept of fractions and how to use literature to teach fractions. This session will give teachers ideas to teach fractions to kinesthetic and tactile learners.

Ruth Ann M. Kinker
South Hill Elementary School, South Hill, Virginia

Betty Edwards
South Hill Elementary School, South Hill, Virginia

Grand Ballroom G/H (Marriott) capacity: 187

381 What Every Grades 3–5 Teacher Should Know
(3–5) Session
Are you a grades 3–5 teacher getting ready to teach or just finishing up one of your first two years? Have some questions? Have some ideas to share? This session is for you! Open to teachers in their first two years and those seeking certification.

Joseph Zilliox
University of Hawaii, Honolulu, Hawaii

Neil Pateman
University of Hawaii, Honolulu, Hawaii

Sandy Dawson
University of Hawaii, Honolulu, Hawaii

Room 355 A (Convention Center) capacity: 264

382 Using Number Sentences to Introduce the Idea of a Variable
(3–8) Session
Using students’ growing knowledge of arithmetical operations in the elementary school, how can teachers build up ideas of variable numerical quantities and build a bridge to the pivotal idea of a variable?

Max Stephens
University of Melbourne, Melbourne, Victoria, Australia

Room 251 A/B (Convention Center) capacity: 234

383 Differentiating Instruction in Math: Enough Theory! How Do You Really Do It?
(3–8) Session
You will meet and work with manageable strategies for differentiating instruction in math that still preserve the integrity of the class as a community of learners.

Marian Small
University of New Brunswick, Fredericton, New Brunswick

Ballroom H/J (Convention Center) capacity: 732

384 The Giant Step: From 10th to Nth
(3–8) Session
Many students skip along happily, generating several iterations of a pattern. Asked the nth iteration, they are stopped short. The giant step from the “next” to the “nth” is made of lots of little steps. They can do it. We can help!

Mary Behr Altieri
Putnam/Northern Westchester Bureau of Cooperative Education Services, Yorktown Heights, New York

Room 255 B (Convention Center) capacity: 356

385 Conceptual Teaching of Fractions, Decimals, and Percents Will Take Care of Those State Tests
(3–8, Teacher of Teachers) Session
Let’s think about teaching concepts, not rote memorization and gimmicks. Fractions, decimals, and percents can be taught conceptually using manipulatives and real-world examples. Let’s give our students a fighting chance to do well on state tests.

Andrew Martin White
Eastern Illinois University, Charleston, Illinois

Room 255 A (Convention Center) capacity: 264
Introducing Singapore Math, the Standards Edition.

Now approved for adoption by the California State Board of Education.

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Get more info and read exciting success stories at www.singaporemath.com or call (503) 557-8100.
9:30 a.m.–10:30 a.m.

386
**Patty-Paper Constructions**  
(3–8, Teacher of Teachers) Session  
Patty-paper constructions help students see the reasoning behind, and how to write instructions for, the constructions. The presentation will deal with the basic geometry constructions.  
**Beth Wentworth**  
Chadron State College, Chadron, Nebraska  
*Room 251 C (Convention Center) capacity: 116*

387
**Container Madness: Activities That Develop Students’ Understanding of Volume and Surface Area**  
(6–8) Session  
Explore how a variety of containers including cans, balls, and boxes can be used to help your students understand geometric concepts and make sense of the formulas for volume and surface area of cylinders, cones, spheres, prisms, and pyramids.  
**Suzanne H. Chapin**  
Boston University, Boston, Massachusetts  
*Ballroom A/C (Convention Center) capacity: 732*

388
**Building Confidence in Algebraic Operations: Traveling from Fractions to Rational Expressions on the Number Line**  
(6–8) Session  
Many students have difficulty transferring their knowledge of arithmetic to related content in algebra. Performance tasks designed to help students connect their knowledge of fractions and rational expressions will be shared.  
**Joy W. Darley**  
Georgia Southern University, Statesboro, Georgia  
*Ballroom F (Convention Center) capacity: 398*

389
**Navigating to Teach English Language Learners**  
(6–12) Session  
**TODOS: Mathematics for ALL presentation**  
See how the TI-Navigator wireless network is being used in a bilingual class to learn math in a fun and engaging way while promoting English language skills as well as an understanding of number concepts and algebra.  
**Lisa Suarez**  
Cleveland Municipal Schools, Cleveland, Ohio; **TODOS: Mathematics for ALL**  
*Cleveland, Ohio*  
*Ballroom B/D (Convention Center) capacity: 732*

390
**Transform, Iterate, and Create! Iterate a Tiger? Why Not? Megan Did!**  
(9–12) Session  
Sketchpad gives students chances to preview major mathematical concepts. We will look at big ideas hidden in the Transform menu, take a bug walk, and design with iterations. Projects that foster the emergence of students’ creativity will be shared.  
**Virginia Highstone**  
York Community High School, Elmhurst, Illinois  
*Alta/Snowbird/Brighton (Marriott) capacity: 105*

391
**Situational Math for High School Teachers**  
(9–12) Session  
Situational math deals with questions that arise in mathematics classes. The questions are first discussed in light of the classroom situation and then dealt with in a deeper, more foundational way.  
**Paul J. Sally**  
University of Chicago, Chicago, Illinois  
*Ballroom G (Convention Center) capacity: 398*

392
**Investing and Borrowing Money: Recursive Models for the Real World**  
(9–12) Session  
Graphing calculators allow us to explore two contexts relevant to everyone: investing and borrowing money. We will look at numerical, algebraic, and graphical representations of these and show how the calculator can help with important decisions.  
**Bob Horton**  
Clemson University, Clemson, South Carolina  
**Vicki Phillips**  
School District of Oconee County, Walhalla, South Carolina  
**John Kenelly**  
Clemson University, Clemson, South Carolina  
*Grand Ballroom A/B/C (Marriott) capacity: 180*

392.1
**Achieve’s ADP Assessment Partnership: Spring 2008 End-of-Course Algebra 2 Exam**  
(9–12) Session  
An end-of-course Algebra 2 exam will be administered in 13 states in the spring of 2008. Information on the development of the test, its format and design, and plans for the scoring and dissemination of test results will be shared.  
**Tracy Halka**  
Achieve, Inc, Washington, D.C.  
*Room 254 A (Convention Center) capacity: 99*
Introducing the **NEW** 3rd Edition!

Any teacher will tell you that confidence in the classroom makes all the difference.

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Meaning through Motion: Improving Calculus Understanding through Interactive Computer Animations
(9–12, Higher Education) Session
Explore interactive computer animations (Sketchpad 4) that greatly improve calculus understanding and literally bring it to life as the study of motion and change. Topics include limits, derivatives, integrals, related rates, volumes, and much more.

Audrey Weeks
Calculus In Motion, Burbank, California; Campbell Hall School (retired), Burbank, California

Grand Ballroom C (Hilton) capacity: 388

Jump-Start: Five-Minute, Period-Opening Activities for All Math Classes
(9–12, Teacher of Teachers) Session
Eight types of activities to get classes off to a prompt, purposeful start will be scrutinized. Ready-to-use activities include quizzes, foreign math texts, historical quotes, recreational math, amazing facts, exploration, and homework reflection.

Robert Kenneth Gerver
North Shore High School, Glen Head, New York
Richard Sgroi
Bedford Central School District, Bedford, New York

Room 251 F (Convention Center) capacity: 158

Interested in a Doctorate in Mathematics Education? An Acute Shortage and Job Opportunities Abound
(Higher Education) Session
We will discuss the shortage and recruitment efforts, offer suggestions for identifying institutions with doctoral programs, and discuss results from a National Conference on Doctoral Programs in Mathematics Education.

Robert Reys
University of Missouri–Columbia, Columbia, Missouri
Dawn Teuscher
University of Missouri–Columbia, Columbia, Missouri
Nevels Nevels
University of Missouri–Columbia, Columbia, Missouri
Bob Glasgow
Southwest Baptist University, Bolivar, Missouri

Topaz (Hilton) capacity: 80

A Mathematician Reads the Newspaper
(Higher Education, Teacher of Teachers) Session
The speaker will investigate mathematical angles of news stories and offer novel perspectives, questions, and ideas. He will offer a revealing, albeit oblique slant on the traditional who, what, where, when, why, and how of the journalist’s craft.
John Allen Paulos is a monthly columnist for ABCNews.com and a professor of mathematics at Temple University. His writings include Innumeracy and the recently released A Mathematician Plays the Stock Market. He has written scholarly papers on probability, logic, and the philosophy of science. He has been cited by cultural, business, and political commentators, and served for two years on the editorial board of the Philadelphia Daily News, where he tried to straddle the disparate realms of Pythagoras and Pulitzer.

John Allen Paulos
Temple University, Philadelphia, Pennsylvania

Hall 1 (Convention Center) capacity: 2000

Kendall/Hunt Publishing Company

Newly Released–Math Trailblazers, 3rd Edition
See the newest edition of Math Trailblazers, K–5! Backed by more than 20 years of research, this NSF-funded curriculum boasts strong problem solving while integrating science and language arts. Take home samples.

The McGraw-Hill Companies/Glencoe

RTI: Ready to Inspire
We will discuss Response to Intervention and the best teaching practices to ensure the success of all students.

The Futures Channel

“Math—Who Needs It?” Answers from the Real World
Learn how to access the world’s biggest library of math-on-the-job videos, with specific connections to your curriculum, from the team that brought you Futures with Jaime Escalante, Good Morning Miss Toliver, and The Eddie Files.
Discovering the Mathematics in the Games of Other Cultures

(General Interest) Gallery Workshop

Children in various cultures learn mathematics through the games that they play. Participants will play some of those games, discover the mathematics in them, and learn about the people who play these games. Resources will be provided.

Chadd McGlone
University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

India Blair Evans
University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Room 255 F (Convention Center) capacity: 228

National Board Certification: Your Next Professional Development Project

(General Interest) Gallery Workshop

Great teachers convey passion for their work, creatively captivating students. If this is you, consider National Board certification. Incentives, grants, and mentors are available. You deserve this validation of your professional expertise.

Karen Kahn Corlyn
Milwaukee Public Schools, Milwaukee, Wisconsin; University of Wisconsin–Milwaukee, Milwaukee, Wisconsin

Nancy Jo Grochowski
Milwaukee Public Schools, Milwaukee, Wisconsin

Canyon Room (Hilton) capacity: 250

High Expectations + Excellent Mathematics Instruction = Equity for All Students

(Teacher of Teachers) Gallery Workshop

The Equity Principle demands high expectations for mathematics learning supported by excellent mathematical instruction. This workshop offers strategies that teachers can use for children who need accomodations to achieve success.

Mary Jo Hustoles
Wright Group/McGraw-Hill, Mankato, Minnesota

Deer Valley (Marriott) capacity: 176

Family Math Night: Bringing Mathematics Learning Home

(Teacher of Teachers) Gallery Workshop

Family Math Nights are after-school events that bring together preserve teachers, families, and schools to explore mathematics in a hands-on, minds-on fashion. These events can be presented at any grade level and in any community.

Elaine Young
Texas A&M University–Corpus Christi, Corpus Christi, Texas

Room 253 A/B (Convention Center) capacity: 135
10:30 a.m.–12:00 noon

404
Math-Literature Explorations: From Picture Books to Problem Solving
(Pre-K–2) Gallery Workshop
This workshop will use children’s literature as a conceptual or contextual springboard for problem solving in primary classrooms. A handout with the explorations, materials, and an extensive bibliography will be provided.

Ellen C. Grace
Consultant, Albuquerque, New Mexico

Room 355 F (Convention Center) capacity: 228

405
Monkeying Around with Math
(Pre-K–5) Gallery Workshop
Come learn to plan a successful, safari-themed Math Night focused on algebra and problem solving. Monkey around at hands-on stations. Leave with plans and activities used to design a family event that encourages excitement about math.

Jeannie Gee
Des Moines Public Schools, Des Moines, Iowa

Grand Ballroom F (Marriott) capacity: 220

406
Teaching Essentials: Number and Numeration
(Pre-K–5) Gallery Workshop
Learn and share ideas of how to make your classroom work in ways that motivate students, improve classroom management, and teach math. Open to teachers in their first two years and those seeking certification.

Sandy Dawson
University of Hawaii, Honolulu, Hawaii
Joseph Zilliox
University of Hawaii, Honolulu, Hawaii
Neil Pateman
University of Hawaii, Honolulu, Hawaii

Room 155 E (Convention Center) capacity: 228

407
Beyond Word Problems: How to Make Problem Solving Great in Your Classroom!
(Pre-K–5, Teacher of Teachers) Gallery Workshop
Do you or your students detest problem solving? Learn more about how to teach problem solving and make it work through vertical student–peer coach teams. We offer ideas for questions, strategies, tools, and data that support results.

Kathy Spruiell
Gwin Oaks Elementary School, Lawrenceville, Georgia

Room 250 B/C (Convention Center) capacity: 186

408
The Tools of Math, Hands-On with the Bag Ladies
(PreK–8, Teacher of Teachers) Gallery Workshop
Fill a toolbox full of new math projects to apply the Standards, hands-on for all math learners. From sticky-note measuring to times-table tags, students will “build” the Standards in a make-n’-take math activity geared to their level.

Karen Simmons
The Bag Ladies, Inc., Stuart, Florida; Palm Beach County School District, Stuart, Florida
Cindy Guinn
The Bag Ladies, Inc., Stuart, Florida; Palm Beach County School District, Stuart, Florida

Room 150 D/E/F (Convention Center) capacity: 143

409
Fraction Attraction: Bits and Pieces, Improper and Mixed
(3–5) Gallery Workshop
Walk away with a variety of fraction games to incorporate into your centers, assessment, or daily objectives. Activities can be used as supplements to assess students’ fraction needs, differentiated for grade levels and related to probability.

Linda K. Morrin
Council Rock School District, Newtown, Pennsylvania
Mary Petetti Doherty
Council Rock School District, Newtown, Pennsylvania

Alpine Ballroom West (Hilton) capacity: 116

410
Geofix Activities: Investigating Geometry and Algebra
(3–5) Gallery Workshop
Using Geofix Shapes for geometry and algebra makes learning exciting. Explore concepts in two and three dimensions. Activities related to Principles and Standards for School Mathematics expectations will be addressed. Materials will be provided.

Don Stephen Balka
Board of Directors, National Council of Teachers of Mathematics; Saint Mary’s College, Notre Dame, Indiana

Room 155 D (Convention Center) capacity: 180
Developing Probability and Data Analysis Concepts with Technology

(3–5) Gallery Workshop

Commonly available software and Web applets can be used to explore basic probability concepts, develop principles of data analysis, and strengthen related number skills. The presenter will share technology-based problems and games. Laptops welcome.

Claire Mead
The Math Forum @ Drexel, Philadelphia, Pennsylvania

Room 255 E (Convention Center) capacity: 228

Helping English Learners (EL): It’s More Than the Words!

(3–8) Gallery Workshop

Strategies such as using visual tools and multiple representations greatly increase EL students’ access to higher-level mathematics and language acquisition. Join in, and reflect on, a fractions lesson and see a related lesson-planning map.

Debra Coggins
Debra Coggins and Associates, Lafayette, California; TODOS: Mathematics for ALL, Lafayette, California

Grace Davila Coates
University of California at Berkeley, Berkeley, California; Equals, Berkeley, California; TODOS: Mathematics for ALL, Berkeley, California

Room 150 G (Convention Center) capacity: 148

Can Using Representations Improve Critical Thinking and Algebraic Reasoning? Certainly!

(3–8) Gallery Workshop

Learn how the Singapore method of problem solving increases algebraic understanding. Discover how Venn diagram puzzles require critical thinking while teaching students to use variables and write equations.

Leanne Luttrell
Gwinnett County Schools, Sugar Hill, Georgia

Room 151 D/E/F (Convention Center) capacity: 143

Hip, Hip, Array! Understanding Multiplication, the Distributive Property, and Algebraic Reasoning Using the Array Model

(3–8) Gallery Workshop

The array model facilitates algebraic reasoning. Participants will explore the distributive property in numeric, geometric, and algebraic contexts. Investigating the distributive property will make connections with place value and polynomials.

John F. McAdam
Marist College, Poughkeepsie, New York

Leah Schultz
Litchfield High School, Litchfield, Connecticut

Lauren Anne Flood
Marist College, Poughkeepsie, New York

Grand Ballroom D (Marriott) capacity: 180

Double Dare You: Probability Games and More

(3–8) Gallery Workshop

Come prepared to play math games with unique double dice, the newest manipulative to hit the math world. Games cover probability, operations, graphing, fractions, place value, and more. We double dare you to add some fun to your math program.

Karen Mussack
Los Angeles Unified School District, Los Angeles, California

Room 155 F (Convention Center) capacity: 228

What’s the Probability That Pigs Can Fly?
Determining Outcomes and Assigning Probabilities in Real Environments

(3–12) Gallery Workshop

Rather than known outcomes and equally likely probabilities, in this workshop we take a more realistic approach to probability with a problem in which the outcomes must be determined and the probabilities assigned, by the participants.

J. Michael Shaughnessy
Portland State University, Portland, Oregon

Fred Rectanus
Teachers Development Group, Portland, Oregon

Room 251 D/E (Convention Center) capacity: 219

Board Game Design: Uncertain Outcomes

(3–12) Gallery Workshop

Students use a variety of mathematics when they design board games. Participants will design a board game with materials for teaching a unit. Discussion includes chance versus skill in game play, and cooperative versus competitive games.

Edith M. Kort
Genesee Valley Bureau of Cooperative Education Services, Mount Morris, New York

Room 155 A (Convention Center) capacity: 166
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418 How Much Is Enough?
(6–8) Gallery Workshop

How many trials are sufficient to draw conclusions? When can we say that an event is certain, likely, unlikely, or impossible? Participants will be actively involved in gathering data by hand and comparing those to data generated by technology.

Rose Strahan
Delta State University, Cleveland, Mississippi

Room 255 D (Convention Center) capacity: 166

419 A Dicey Situation
(6–8) Gallery Workshop

Participants will work through a variety of unusual dice activities that will effectively build students’ understanding of concepts of chance.

Ralph D. Connelly
Brock University, Saint Catherines, Ontario

Room 355 E (Convention Center) capacity: 228

420 Probabilities for a Princess
(6–12) Gallery Workshop

Use the story of a truel (duel among three suitors) to engage learners in probabilities, recursion, and various mathematical representations. Use a Monte Carlo simulation to test conclusions and create graphs to compare experimental and theoretical outcomes.

Mark Schlawin
Princeton Charter School, Princeton, New Jersey

Room 155 C (Convention Center) capacity: 228

421 Illuminating the Mathematics of Lampshade Design
(6–12) Gallery Workshop

Come experience a project involving the mathematics for constructing lampshades with the minimum amount of waste, where the radii and height are fixed. Visualization, spatial reasoning, and geometric modeling are emphasized.

Michael Edward Matthews
University of Nebraska at Omaha, Omaha, Nebraska

Room 151 G (Convention Center) capacity: 194

422 Making Connections with Social Studies through Game Theory
(9–12) Gallery Workshop

The mathematics for which John Nash won the Nobel Prize engages and motivates students. Hands-on activities develop fundamental concepts; applications to military strategy, bargaining, and environmental problems; and the famous game “prisoner’s dilemma.”

Timothy V. Craine
Central Connecticut State University, New Britain, Connecticut

Grand Ballroom E (Marriott) capacity: 180

423 The Quintessential Statistics Workshop
(9–12) Gallery Workshop

Five topics covered in statistics will be covered with entertaining and enlightening activities: linear regression, discrete probability distribution, one-sample test of a mean, chi-square test, and binomial distribution. Handouts will be provided.

Kenn Pendleton
General Educational Development Testing Service, Washington, D.C.

Room 150 A/B/C (Convention Center) capacity: 143

424 Algebra, Data Analysis, Functions, and Technology
(9–12) Gallery Workshop

In carefully sequenced, technology-enhanced algebra activities that will help students’ understanding of concepts, procedures, processes, and skills, we’ll use graphing calculators and probes to develop functions at a fundamentally deeper level.

Jerald Murdock
Key Curriculum Press Algebra Author, Emeryville, California

Room 254 B (Convention Center) capacity: 162

425 Inspired Quadratics: Conceptual Investigations of Parabolas Using TI-Nspire™
(9–12) Gallery Workshop

Come see how TI-Nspire can help students take powerful connections among multiple representations of parabolas to develop and to enrich their understanding. We’ll even solve quadratic equations with complex roots graphically!

Marc Garneau
British Columbia Association of Mathematics Teachers, Vancouver, British Columbia

Room 355 D (Convention Center) capacity: 166
426
Have Mathematics Skills Changed over a Generation? What We Know from National Assessment
(General Interest) Session
National Assessment (NAEP) has been collecting data on 9-, 13-, and 17-year-olds since the 1970s. Changes in performance over time will be discussed, showing what skills have improved and how NAEP documents the effectiveness of the Standards.
Peter Kloosterman
Indiana University Bloomington, Bloomington, Indiana
Zachary Rutledge
Indiana University Bloomington, Bloomington, Indiana

427
Exploring Connections among Psychological Views, Curriculum, and Gender
(General Interest) Session
Mathematical abilities may be considered as largely unresponsive to effort and education (the “entity view”) or as traits that may be developed (the “incrementalist view”). Educational systems and curricula may contribute to these views.
Cathy Kessel
President, Association for Women in Mathematics, Fairfax, Virginia

428
Creating Lasting Improvements in Classroom Teaching
(General Interest) Session
Despite the many reforms of past and present, average mathematics classrooms provide today’s students with learning opportunities similar to those of their predecessors. How can we get onto a different track that ensures lasting improvements over time?
James Hiebert is the Robert J. Barkley Professor of Education at the University of Delaware, where he teaches in programs of teacher preparation, professional development, and doctoral studies. He has edited books on students’ mathematics learning and co-authored Making Sense: Teaching and Learning Mathematics with Understanding and The Teaching Gap: Best Ideas from the World’s Teachers for Improving Education in the Classroom. He served on the National Research Council committee that produced Adding It Up and Helping Children Learn Mathematics, and he is a principal investigator on the NSF-funded Mid-Atlantic Center for Teaching and Learning Mathematics.
James Hiebert
University of Delaware, Newark, Delaware

429
Iris M. Carl Equity Address
(General Interest) Session
The annual Iris M. Carl Equity Address is being established to underscore the crucial need for collective action in advancing understanding of equality and equity in education.
Carol E. Malloy
University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

430
National Board Certification: What It Is, What It’s Like, and What It Means
(General Interest) Session
Learn about this prestigious program that recognizes accomplished teachers. Hear firsthand testimony from a recently certified National Board mathematics teacher about this rigorous but rewarding process.
Lisa Marie Hall
Jacob L. Adams Elementary School, Richmond, Virginia

431
Problem-Based Instructional Tasks, Helping Close the Achievement Gap
(Teacher of Teachers) Session
Participants will explore and discuss research-based instructional strategies and take an in-depth look at how to incorporate problem-based tasks, teaching for understanding, and differentiated instruction into traditional mathematics classrooms.
Kelly Ann Schloss
Great Prairie Area Education Agency, Ottumwa, Iowa
Shelley Bramschreiber
Great Prairie Area Education Agency, Ottumwa, Iowa

432
Helping Preservice Teachers Develop a “Profound Understanding of Fundamental Mathematics”
(Teacher of Teachers, 3–8) Session
Based on the research of Liping Ma, this presentation will discuss ways to develop a deep understanding of fundamental mathematics in preservice teachers, with a special emphasis on division of fractions.
Sally M. Lima
Lock Haven University, Lock Haven, Pennsylvania
Using Interactive Whiteboard Technology for Instruction and Assessment in Early Childhood Mathematics

(Pre-K–2) Session

The speaker will demonstrate ways in which interactive whiteboard technology can be used for instruction and assessment. Prior knowledge of the technology is not needed. Ideas for grants and other funding resources will be shared.

Carly Noelle Borchelt
Red Oak Elementary School, Stockbridge, Georgia

Alta/Snowbird/Brighton (Marriott) capacity: 105

The Answer Is __. What Is the Question?

(Pre-K–2) Session

This session will explore a context that supports and stimulates the growth of mathematical knowledge. Students’ work will be presented that was developed in response to “The answer is __. What is the question?”

Donna Jenner
Delta School District, Delta, British Columbia; University of British Columbia, Vancouver, British Columbia

Susan Gordon
Delta School District, Delta, British Columbia

Grand Ballroom A (Hilton) capacity: 171

Games to Go: Increasing Students’ Achievement through Family Involvement

(Pre-K–2) Session

Participants will see examples of games that can be easily differentiated and are portable enough to sign out and send home.

Cindy Weinrich
Consultant, Everyday Mathematics, Ambler, Pennsylvania

Terrie L. Newbold
Consultant, Everyday Mathematics, Hackettstown, New Jersey

Room 255 B (Convention Center) capacity: 356

Comprehensive Assessment in the Primary Grades: Screening Grades K–2 Students for Focused, Purposeful Instruction and Intervention

(Pre-K–2) Session

This session will offer an example of a Primary Math Screen Assessment that has been successfully administered in grades K–2 to establish instructional focus and purposeful interventions. Learn the implementation process and stages involved.

Christine Kelly
Clover Park School District, Lakewood, Washington

James Pfeiffer
Clover Park School District, Lakewood, Washington

Room 355 B (Convention Center) capacity: 356

Math Recovery: A Robust Assessment Framework for Pinpointing Stages in Children’s Mathematical Learning

(Pre-K–2, Higher Education, Teacher of Teachers) Session

Math Recovery is a new, distinctive approach to teachers’ professional development that promotes an understanding of children’s mathematical thinking. Assessment frameworks for individual intervention, whole class, and special education.

T. Jemison
U.S. Math Recovery Council, Nashville, Tennessee

Ballroom B/D (Convention Center) capacity: 732

Million Mania: Use Big Numbers to Awe Your Students and Help Them Understand All Numbers

(Pre-K–5) Session

Big numbers motivate children and can be used to teach many concepts. The author of How Much Is a Million? and G Is for Googol will share student-created work that will put a smile on your face and a million new ideas in your head.

David M. Schwartz
Macmillan McGraw-Hill Math, Oakland, California

Hall 3 (Convention Center) capacity: 1677

Help Children Make Generalizations and Identify Relationships to Discover Addition, Subtraction, and Multiplication Fact Strategies

(Pre-K–5) Session

This session will demonstrate activities to teach strategies to learn addition, subtraction, and multiplication facts with meaning. An emphasis will be on language to promote thinking and help children focus on the mathematics involved.

Vicki A. Newman
Los Alamitos Unified School District, Los Alamitos, California

Room 251 F (Convention Center) capacity: 158
11:00 a.m.–12:00 noon

440 Problem Solving with Tangrams
(3–5) Session
Join us to create and use tangrams in a variety of mathematical areas, such as geometry, fractions, and storytelling! Handouts will be provided.
Barbara Boschmans
Plymouth State University, Plymouth, New Hampshire
Brian Beaudrie
Plymouth State University, Plymouth, New Hampshire

Ballroom H/J (Convention Center) capacity: 732

441 “They Don’t Know What We Think They Know”
(3–5, Teacher of Teachers) Session
This session will address levels of students’ geometric understanding as well as common misconceptions. Participants will examine students’ work and how it relates to research. Handouts of the geometry lessons and assessments will be provided.
Kathy Vielhaber
KV Math Consulting, Saint Louis, Missouri

Ballroom A/C (Convention Center) capacity: 732

442 It Takes a Village: Teachers’ Effectiveness, Lesson Enhancement, and Ongoing Assessment
(3–5, Teacher of Teachers) Session
TODOS: Mathematics for ALL presentation
Learn to enhance instructional capabilities, develop effective lessons, and improve assessment practices to engage learners meaningfully in math instruction that bridges the gap between school and one’s cultural community.
Jim Barta
TODOS: Mathematics for ALL, Logan, Utah
Jennifer Harding-Dekam
TODOS: Mathematics for ALL, Greeley, Colorado

Grand Ballroom I/J (Marriott) capacity: 187

443 Supporting Basic Fact Instruction with the First in Math Online™ Program
(3–5, Teacher of Teachers) Research Session
What happens when a child is struggling to master the basic facts? This session describes observations and interviews of third-grade students who were not progressing in learning their basic facts while engaged with First in Math software.
Lynn Columba
Lehigh University, Bethlehem, Pennsylvania

Room 255 C (Convention Center) capacity: 354

444 Word Play: Vocabulary Games and Activities to Enhance Academic Success
(3–8, Teacher of Teachers) Session
Showcased practices relate to how the brain learns. Meaningful activities and games are useful for students to learn essential mathematics vocabulary, deepen their understanding, and elaborate on meanings by making new and varied connections.
Mary Cavanagh
San Diego County Office of Education, San Diego, California

Room 254 A (Convention Center) capacity: 99

445 W’RAPping Students’ Minds around Problem Solving
(6–8) Session
Worthwhile mathematics tasks are accessible yet challenging, help students make connections among multiple topics, and promote communication. Learn how to use W’RAP problems to engage middle school students’ problem-solving abilities.
Linda Venenciano
Curriculum Research and Development Group, University of Hawaii, Honolulu, Hawaii
Hannah Slovin
Curriculum Research and Development Group, University of Hawaii, Honolulu, Hawaii

Grand Ballroom C (Hilton) capacity: 388

446 This Is Math! Why Do We Have to Read?
(6–8) Session
Participants will learn how literature can be used to provide meaningful mathematics learning. We will show how books, such as Alice in Wonderland and Where the Sidewalk Ends, can be used to reinforce ratio and proportion.
Jean Grant
Bradley University, Peoria, Illinois

Room 355 A (Convention Center) capacity: 264

447 Student-Produced Video Games: Applying Math in a Medium Meaningful to Tweens and Teens
(6–8) Session
Transform kids from video-game consumers to builders of their own online toys! Coach students to apply math and logic through Microworlds EX projects: Etch-a-Sketch (inequalities), 8-Ball (probability), Frogger (coordinates, angles), and more.
Camille McCue
Alexander Dawson School at Rainbow Mountain, Las Vegas, Nevada

Room 355 C (Convention Center) capacity: 237
11:00 a.m.–12:00 noon

448
Math and Meteorology in Middle School Teaching
(6–12) Session
Hurricanes are a rich context for connecting math, science and geography. Tasks involving patterns, graphing, and rates of change with students’ solution methods (i.e., visual/analytic thinking) and cooperative learning strategies are shared.
Maria Lorelei Fernandez
Florida International University, Miami, Florida

Ballroom G (Convention Center) capacity: 398

449
Single-Sex Mathematics Classrooms; Lessons Learned to Guide All Mathematics Education
(6–12) Session
We will examine the journeys of two schools offering single-sex mathematics classes. Participants will discuss pros and cons of mathematics education in single-sex settings. Lessons addressing learning styles of both sexes will be provided.
Pamela Ann Halpern
Salem State College, Salem, Massachusetts

Grand Ballroom A/B/C (Marriott) capacity: 180

450
Increase the Odds That Your Students Will Be Excited about Probability and Data Analysis!
(6–12) Session
Home to a large variety of resources, the Math Forum lets you easily find activities and problems to engage your students in exploring probability and data analysis. Learn to use technology and creative problems to make the material come alive!
Steve Risberg
The Math Forum @ Drexel, Philadelphia, Pennsylvania

Room 250 A (Convention Center) capacity: 123

451
National Board Certification in Mathematics: Beginning the Journey
(6–12) Session
What is National Board certification in mathematics? How can this certification improve your teaching? How can reflective practice affect students’ learning? Personal experiences on achieving National Board certification will be shared.
S. Leigh Nataro
Moravian Academy, Bethlehem, Pennsylvania

Grand Ballroom G/H (Marriott) capacity: 187

452
The Mathematical Lens: Seeing the World through a Pair of Mathematical Glasses
(6–12, Teacher of Teachers) Session
The Mathematical Lens is a popular resource for readers of Mathematics Teacher. Each column contains beautiful photos with related math questions. We will discuss how to develop these questions and the benefits for students.
Ron Lancaster
University of Toronto, Toronto, Ontario

Room 251 A/B (Convention Center) capacity: 234

453
Explore, Teach, and Assess Learning in Secondary School Algebra
(9–12) Session
We will investigate a method of instruction in Algebra 1 and 2 that begins with students’ exploration, transitions to direct instruction, and ends with informal and formal assessment of students’ learning. E-handouts will be provided.
Paul Kennedy
Colorado State University, Fort Collins, Colorado

Ballroom E (Convention Center) capacity: 398

454
Trig, Algebra, Geometry, Data, Probability Come Alive with Enriched, Exciting Outdoor Math
(9–12) Session
Come experience the breath of fresh air that outdoor, cooperative-group mathematics problem posing and solving can infuse into your curriculum. Writing, estimating, hands-on measurement, calculating, and assessment are involved.
David Carl Johnson
Eastern Michigan University, Ypsilanti, Michigan

Ballroom I (Convention Center) capacity: 398

455
What Every Grades 9–12 Teacher Should Know
(9–12) Session
Are you a grades 9-12 teacher getting ready to teach or just finishing up one of your first two years? Have some questions? Have some ideas to share? This session is for you! Open to teachers in their first two years and those seeking certification.
Johnny W. Lott
Past President, National Council of Teachers of Mathematics; University of Mississippi, University, Mississippi
Rick Billstein
University of Montana, Missoula, Montana

Room 255 A (Convention Center) capacity: 264
Did the Babylonians Know the Secant Method in 1-D?

(Higher Education) Session

Many believe that the secant method arose out of using a finite-difference approximation of the derivative in Newton’s method. The speaker will present a historical development of the secant method in 1-D beginning with examples from the 18th century B.C.

Joanna Papakonstantinou
Rice University, Houston, Texas

Topaz (Hilton) capacity: 80

Integrated Mathematics and High-Stakes, Standardized Testing: They Do Go Together!
The emphasis on standardized testing is becoming a model for many schools around the nation. Learn how SIMMS Integrated Mathematics for high school students will meet your needs and make mathematics accessible to all. Take home samples.

Room 250D (Convention Center) capacity: 100

Building Better Problem Solvers
It takes more than teaching a list of strategies. Let’s explore the options for grades K–5 with Math Connects and IMPACT Mathematics from Macmillan/McGraw-Hill.

Room 250E (Convention Center) capacity: 100

Rhymes ‘n’ Times
Conquer Times Tables in Only 3 Weeks—Guaranteed!
Research-based, multisensory program addresses all four learning styles for all students—regular and special education. Sister products: Fishin’ for Addition, Subtraction in Action, Divide ‘n’ Slide. See the video at www.rhymesntimes.com.

Room 250F (Convention Center) capacity: 100

Mathematizing African American History
(General Interest) Session

Benjamin Banneker Association presentation
The presenter will demonstrate ways to involve the cognitive and affective strategies in teaching mathematics to African American students.

Kwame Scott
Benjamin Banneker Association, Chicago, Illinois

Topaz (Hilton) capacity: 80
460 High-Stakes Testing Has Particularly Adverse Effects on Low-Income Students of Color (General Interest) Research Session
No Child Left Behind supporters claim testing benefits low-income students of color. Instead, testing replaces strategies that narrowed achievement gaps, leads to limited curricular and instructional focus in math, and increases dropout rates.
Carol Caref
Illinois Institute of Technology, Chicago, Illinois

Ballroom I (Convention Center) capacity: 398

462 The Rekenrek, an Arithmetic Rack for the Early Childhood Classroom (Pre-K–2) Session
The Dutch arithmetic rack, with two rows of ten beads, supports addition and subtraction strategies. This workshop will offer an overview of the tool, ideas for using it, videos of classroom use, and related resources and research.
Nina Liu
NYC Public School 234, New York, New York; Mathematics in the City, City College of New York, New York, New York
Maarten Dolk
Freudenthal Institute, Utrecht, Netherlands

Alta/Snowbird/Brighton (Marriott) capacity: 105

463 Helping Teachers See and Build On Young Children’s Natural Intuition for Problem Solving (Pre-K–2, Higher Education, Teacher of Teachers) Session
The presenters will share highlights from a recently published review of research about young children’s natural intuitions for problem solving in mathematics and discuss its implications for classroom teachers in preschool and kindergarten.
Mary B. McMullen
Indiana University Bloomington, Bloomington, Indiana
Myoungwhon Jung
Northern Illinois University, DeKalb, Illinois

Ballroom A/C (Convention Center) capacity: 732

464 “How Did You Get That Answer?” How to Analyze Children’s Mathematical Thinking (Pre-K–5) Session
Learn how to analyze grades K–3 students’ mathematical thinking and problem-solving strategies, and develop instruction to meet their needs. Gain an understanding of how professional development can help teachers continue to build these skills.
Barbrina Ertle
Teachers College, Columbia University, New York, New York

Ballroom H/J (Convention Center) capacity: 732

465 Early Mathematical Thinking (EMT): An Early Diagnostic-and-Intervention Program (Pre-K–5, Teacher of Teachers) Session
This session will focus on the research and development of EMT, a collection of formative assessment tools designed to identify students’ thinking about, and understanding of, important numeracy concepts developed in prekindergarten–grade 4.
Leslie Minton
Maine Mathematics and Science Alliance, Augusta, Maine

Room 255 A (Convention Center) capacity: 264

466 If You Give a Moose a Map (3–5) Session
Take a mathematical journey with Maddie Moose down the Appalachian Trail. This is a culminating unit, adaptable to any grade, that incorporates computation skills, fractions, geometry, measurement, probability, and graphing.
Lisa Carlson
Saint Charles School, Kettering, Ohio

Grand Ballroom A/B/C (Marriott) capacity: 180

467 Uncertainty and Chance Activities with Award Winning Children’s Literature (3–5) Session
Caldecott, Newberry, and Coretta Scott King Award books will be highlighted. Activities that can be used to develop concepts related to uncertainty, chance, and data collection and analysis will be demonstrated. Handouts will be available.
Jacqueline McDonald
Edmonds School District, Lynnwood, Washington

Room 251 A/B (Convention Center) capacity: 234

468 Thinking Algebraically with Hundreds Boards and Arrow Paths (3–5) Session
A hundreds board is an ideal, inexpensive device for developing algebraic thinking. Experience activities that help students recognize patterns, make generalizations, do number operations mentally, and begin to use variables informally.
Wade Hampton Sherard
Furman University, Greenville, South Carolina

Room 251 F (Convention Center) capacity: 158
Are you interested in teaching MATH in California? Come visit with us in the exhibit hall!

The Kern High School District is headquartered in Bakersfield, California: a city of more than 400,000 residents located within easy driving distance of Yosemite and Sequoia National Parks, Hollywood, Southern California’s famous beaches, Disneyland, Six Flags Magic Mountain, San Diego, Las Vegas and San Francisco. Bakersfield’s warm, semi-arid mild climate produces an average of 273 days of sunshine per year. With California’s most affordable housing, great weather and close proximity to the state’s most famous landmarks and recreation areas, Bakersfield is an ideal community to begin your new future.

We Offer...

● Moving Allowances  ● Signing Bonuses
● Highly Qualified Bonus
I Remember That!
(3–8) Session
You’ll be amazed at what your students can remember! Discover brain-compatible methods for learning and remembering mathematical concepts through songs, graphic organizers, and daily, interactive bulletin-board programs.

Bettye Wilson
Lone Star Learning, Lubbock, Texas

Room 254 C (Convention Center) capacity: 99

The Write Math!
(3–8) Session
Students are writing to learn, writing to understand, and writing to reflect. Connections will be made to power standards in instruction. Students’ sample responses will be shared, and participants will receive numerous writing ideas and activities.

Kathleen Rieke
Metropolitan School District of Washington Township, Indianapolis, Indiana
Kelly Moore
Metropolitan School District of Washington Township, Indianapolis, Indiana

Grand Ballroom A (Hilton) capacity: 171

Math Ain’t Kitty Litter: Thinking outside the Box with Nonlinear Problem Solving
(3–8, Teacher of Teachers) Session
Using writing methods, specifically graphic organizers, can help middle grades students solve extended-response problems in geometry, statistics, probability, and algebra. This method allows students to think like mathematicians.

Alan Zollman
Northern Illinois University, DeKalb, Illinois

Ballroom B/D (Convention Center) capacity: 732

Math’s Magical Numbers
(3–12, Teacher of Teachers) Session
We will examine the properties of the magical numbers 0 and 1, two of the most historically important and yet misunderstood concepts in mathematics. They are so essential that both teachers and students must be aware of their significance.

Nancy Jean Budner
Central Washington University, Ellensburg, Washington

Room 355 C (Convention Center) capacity: 237

Using Mystery Numbers and Math Icons to Promote Math Concept Development
(6–8) Session
Learn engaging math warmups, and discuss the use of graphic representations to promote a deeper understanding of math concepts and applications. Explore differentiated strategies, and consider inquiry as it applies to mathematical endeavors.

Melanie Natasha Montgomery
Joshua Hills Schools, Palmdale, California; J. Taylor Education, Palmdale, California

Ballroom E (Convention Center) capacity: 398

Interactive Whiteboard Technology in Middle-Grades Discrete Mathematics
(6–8) Session
Participants will be introduced to simple interactive whiteboard features for teaching discrete mathematics in grades 6–8. Examples will include Venn diagrams, trees, probability, and vertex-edge graphs. Online tools and resources will be shared.

Nathan Allan Borchelt
Clayton State University, Morrow, Georgia

Grand Ballroom G/H (Marriott) capacity: 187

Historical Topics from Number Theory
(6–8) Session
From Pythagoras to Tao, in a trip through time, we will explore some highlights in the development of the field of number theory. Learn ways to incorporate history into your middle grades mathematics lessons!

Marian C. Fox
Kennesaw State University, Kennesaw, Georgia

Room 255 B (Convention Center) capacity: 356

What Every Grades 6–8 Teacher Should Know
(6–8) Session
Are you a grades 6–8 teacher getting ready to teach or just finishing up one of your first two years? Have some questions? Have some ideas to share? This session is for you! Open to teachers in their first two years and those seeking certification.

Rick Billstein
University of Montana, Missoula, Montana
Johnny W. Lott
Past President, National Council of Teachers of Mathematics; University of Mississippi, University, Mississippi

Room 355 A (Convention Center) capacity: 264
### Calculators and Mathematics Achievement: What the 1996 NAEP Eighth-Grade Mathematics Exam Scores Tell Us
(6–8, Teacher of Teachers) Research Session
A study of the NAEP results will assess the relationship between students’ calculator use and math achievement, performance on calculator-allowed or -restricted items, and recognizing when calculator use is appropriate or inappropriate.

*Ken Wareham*
Lewis-Clark State College, Lewiston, Idaho

*Room 251 C (Convention Center) capacity: 116*

### Overcoming the Language Barrier in Mathematics
(6–12) Session
**TODOS: Mathematics for ALL presentation**
English language learners (ELL) have the challenge of learning mathematics while learning English. This session will present teacher-tested activities for helping ELL students overcome the language barrier in mathematics.

*Matthew S. Winsor*
University of Texas at El Paso, El Paso, Texas; TODOS: Mathematics for ALL, El Paso, Texas

*Hall 2 (Convention Center) capacity: 1677*

### Comic Strips: Using Models in an Algebra-Readiness Course
(6–12) Session
Through a hands-on activity, participants will explore the impact of number sense in an algebra-readiness course. We will discuss how using model-based lessons through text and software activities can strengthen students’ understanding of number.

*Amy Jones*
Carnegie Learning, Inc., Baltimore, Maryland

*Solitude (Marriott) capacity: 70*

### Paradoxes of Induction: Exploring Probabilistic Reasoning
(6–12, Higher Education) Session
How does observing an orange pumpkin make more probable the hypothesis that all ravens are black? This session explores using philosophical paradoxes about induction as fun, enriching tools for teaching probabilistic reasoning.

*Carlos Rodriguez*
Center for Talented Youth, Johns Hopkins University, Baltimore, Maryland

*Room 250 A (Convention Center) capacity: 123*

### Bringing Chaos into the Classroom
(9–12) Session
The mathematics behind chaos is both beautiful and, surprisingly, not difficult to place in the grades 9–12 classroom. This session will explore some mathematics of chaotic dynamics and how to use it to bolster standard curriculum.

*Joshu Fisher*
Center for Talented Youth, Johns Hopkins University, Baltimore, Maryland

*Grand Ballroom B (Hilton) capacity: 171*

### Three-Dimensional Geometry
(9–12, Higher Education) Session
Three-dimensional geometry is more than the traditional notions of volume and surface area. Come engage in activities that motivate students, reinforce two-dimensional concepts, and bolster students’ confidence in abstract concepts.

*Susan Marie Sexton*
University of Georgia, Athens, Georgia

*Ballroom F (Convention Center) capacity: 398*

### Handheld Technology in Mathematics Teaching and Learning
(9–12, Higher Education) Session
Calculators are not the only useful handheld devices in the mathematics classroom. This presentation will give ideas for effective integration of such devices as GPS, iPods, and Pocket PCs into mathematics teaching and learning.

*Lila F. Roberts*
Georgia College and State University, Milledgeville, Georgia

*Ballroom G (Convention Center) capacity: 398*

### Order among Uncertainty: An Introduction to Chaos Theory
(9–12, Higher Education) Session
This session will introduce the algebraic and geometric concepts of chaos theory. Iteration of the logistic function will be used to explore the butterfly effect. Bring your own graphing calculator to do some hands-on experimentation.

*Richard Tony*
Shady Side Academy, Pittsburgh, Pennsylvania

*Grand Ballroom I/J (Marriott) capacity: 187*
**485**

**Four Years from First-Year Algebra to Calculus Is Not Enough**

*(9–12, Higher Education) Session*

Many of our best students take algebra in grade 8 and calculus in grade 12. Because of their success, we expect other students to go from algebra to calculus in four years. The speaker will argue that we cannot do so with a rich, standards-based curriculum.

Zalman Usiskin  
University of Chicago, Chicago, Illinois

*Hall 3 (Convention Center) capacity: 1677*

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**486**

**Calculus Teaching from a Japanese Perspective**

*(9–12, Higher Education, Teacher of Teachers) Session*

Recently, my twelfth-grade calculus class spent more than 60 minutes discussing a problem. The speaker will demonstrate what can be called problem-solving-centered instruction, one of the typical styles of instruction used in Japanese schools.

Kazuko Ito West  
Keio Academy of New York, Purchase, New York

*Room 254 A (Convention Center) capacity: 99*

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**487**

**Using Data Collection to Integrate Mathematics, Social Studies, and Language Arts Early Childhood Methods Courses**

*(Higher Education, Teacher of Teachers) Session*

The purpose of this ongoing study is to evaluate the use of data collection to promote the integration of early childhood methods courses. We will analyze artifacts, math lessons, reflections, assessments, and original literature pieces.

Kathy Horak Smith  
Texas Christian University Institute of Mathematics, Science, and Technology Education, Fort Worth, Texas

*Room 255 C (Convention Center) capacity: 354*

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**EW29**

**Annenberg Media**

**Playing with Math: Figurate Numbers and the Square Root of Two**

Take a break and have fun with two fascinating concepts from the new multimedia teacher’s resource: Mathematics Illuminated. You will explore figurate numbers and the irrationality of the square root of two and its consequences.

*Room 250E (Convention Center) capacity: 100*

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**EW30**

**Innovative Learning Concepts, Inc.**

**TouchMath: A Multisensory Approach to Math**

If you’re looking for a math program guaranteed to work with every child, don’t miss the TouchMath workshop. You’ll see exactly why TouchMath’s multisensory approach is unparalleled in its reach and how it keeps children listening, laughing, and learning.

*Room 250F (Convention Center) capacity: 100*

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**488**

**Islamic Art through the Eyes of M. C. Escher**

*(General Interest) Gallery Workshop*

Discover how Escher was inspired by tessellating patterns from Spain and the Islamic world. Participants will learn how to construct underlying triangular and square grids, identify patterns, and create Escher-like designs.

Carol D. Desoe  
Scarsdale High School, Scarsdale, New York

*Room 155 C (Convention Center) capacity: 228*

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**489**

**Infinite Possibilities: Building a Culture of Inquiry with Teachers through Integrated Science and Mathematics Activities**

*(Teacher of Teachers, Pre-K–5) Gallery Workshop*

Participants experience ways to build a culture of inquiry and professional learning community in methods classrooms. If you think that math and science consist of “doing” as well as “knowing,” this session is for you.

Nick Stupiansky  
Edinboro University of Pennsylvania, Edinboro, Pennsylvania

*Grand Ballroom E (Marriott) capacity: 180*
Integrating Off- and On-Computer Experiences to Move Children from Sensory-Concrete to Integrated-Concrete Thinking

(Pre-K–2) Gallery Workshop
Participants will examine a technology-enhanced curriculum’s integration of classroom activities to support young children’s mathematical thinking. It uses everyday activities and mathematical objects to bridge informal and school mathematics.

Eleanor A. Pobre
Minnesota Council of Teachers of Mathematics; Southwest Minnesota State University, Marshall, Minnesota

Alpine Ballroom West (Hilton) capacity: 116

Abacus: Not Just a Counting Toy! It’s an Amazing Manipulative for All Children

(Pre-K–2) Gallery Workshop
A 100-bead abacus and a Japanese soroban have been two of the most excellent educational tools in Japan to sharpen children’s number sense. Participants will receive a free soroban.

Tomoe Fujimoto
Tomoe MI Academy, Shinjuku-ku, Tokyo, Japan

Hiroo Kodama
Tomoe MI Academy, Shinjuku-ku, Tokyo, Japan

Grand Ballroom F (Marriott) capacity: 220

Graphing and Beyond

(Pre-K–5) Gallery Workshop
Title I and classroom teachers collaborate to create meaningful opportunities to analyze data. Join us for an interactive experience using graphs and probability. Walk away with effective strategies that go beyond the basic graphing activities.

Tammy Jo Williams
Metropolitan School District of Washington Township, Indianapolis, Indiana

Kim Anne Matsuoka
Metropolitan School District of Washington Township, Indianapolis, Indiana

Janice Marler
Metropolitan School District of Washington Township, Indianapolis, Indiana

Room 150 A/B/C (Convention Center) capacity: 143

Chances Are ... You’ll Love a Literature Connection!

(Pre-K–5) Gallery Workshop
You’ll flip your lid over intriguing probability activities that integrate literature while making connections with other strands. You’ll laugh, enjoy energizing hands-on activities, and take home an array of lessons that can be used immediately.

Jennifer B. Keeler
Rincon Elementary School, Rincon, Georgia

Brooke H. Flood
Fellsmere Elementary School, Fellsmere, Florida

Room 151 G (Convention Center) capacity: 194

Are Your Students Numerically Fluent?

(Pre-K–5) Gallery Workshop
Numerical fluency is vital to students’ success in math. What is numerical fluency? What role does it play in developing mathematical thinking? Participate in activities that develop a conceptual understanding of number and computational accuracy.

Tracey M. Ramirez
Lackland Independent School District, San Antonio, Texas

Room 251 D/E (Convention Center) capacity: 219

One Small Step in Science, One Giant Leap in Math

(Pre-K–5) Gallery Workshop
Math and science often go hand in hand. Motivate your young mathematicians with high-interest science inquiries. Explore measurement, operations, graphing, and estimation through hands-on solar system activities. Free materials you can take with you.

Laura L. Moninski
Glencoe School District 35, Glencoe, Illinois

Room 355 E (Convention Center) capacity: 228

‘Round and ’Round We Go: Developing Conceptual Understanding about Circles with Young Children

(Pre-K–5) Gallery Workshop
When asked, “What is a circle?” students often respond, “It is round.” This session will focus on using kinesthetic activities that have been field tested in diverse classrooms to develop the formal definition of a circle with very young children.

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

Patricia Rhodes Nicosia
Rio Grande College of Sul Ross State University, Del Rio, Texas

Room 150 D/E/F (Convention Center) capacity: 143
1:00 p.m.–2:30 p.m.

497
Math Works! Games, Puzzles, and Diversions to Reinforce Mathematical Reasoning
(Pre-K–5) Gallery Workshop
Stimulate your students’ thinking with these exciting approaches to learning mathematics. This session will give teachers hands-on puzzles and games to use in their classrooms. These experiences will develop reasoning and build concepts in number, geometry, and probability.

John Hinton
Hofstra University, Hempstead, New York
Lisa Marie Hall
Jacob L. Adams Elementary School, Richmond, Virginia

Room 151 D/E/F (Convention Center) capacity: 143

498
Shape Up Your Geometric Knowledge: Sorting Out the Uncertainty of It All
(Pre-K–5) Gallery Workshop
Let’s explore your geometric knowledge. Using hands-on activities based on the van Hiele levels, you will be actively engaged with two- and three-dimensional shapes. Use this session to help eliminate any geometric confusion!

Sally Kingsley
Howard County Public Schools, Ellicott City, Maryland
Heather Dyer
Howard County Public Schools, Ellicott City, Maryland

Room 355 D (Convention Center) capacity: 166

499
Teaching Essentials: Multiplication and Division
(3–5) Gallery Workshop
An essential part of the grades 3–5 experience is building understanding and skill with multiplication and division. Learn ways to teach and facilitate learning. Open to teachers in their first two years and those seeking certification.

Cheryl Lubinski
Illinois State University (Emerita), Ellisville, Illinois
Albert Otto
Retired, Ballwin, Missouri

Room 255 F (Convention Center) capacity: 228

500
Extending Math through Art
(3–5, Teacher of Teachers) Gallery Workshop
Connect art with the NCTM Standards for grades 2–5. A variety of art materials and techniques will be explored in this session to extend and develop math understanding. Leave this session equipped to integrate math and art in your classroom.

Mary Sue Warrington
Harcourt Publishers, East Wenatchee, Washington

Deer Valley (Marriott) capacity: 176

501
Engaging Intervention Activities + Effective Instructional Strategies = Students’ Success
(3–5, Teacher of Teachers) Gallery Workshop
Let’s “work smarter” to improve numeric competence. These strategies promote greater participation and sense-making. A ready-to-use handout includes engaging activities to improve students’ performance and enhance mathematical reasoning.

Leigh Childs
California Mathematics Council, San Diego, California

Room 253 A/B (Convention Center) capacity: 135

502
Elections, Coalitions, and Sharing: Experiences from the Classroom
(3–8) Gallery Workshop
Elections, coalitions, and sharing provide context to work with probability, fractions, and multiple variables while integrating technology. Hands-on, data-driven lessons with special spreadsheets, used with fifth graders, will be conducted.

John D. Baker
Indiana University of Pennsylvania, Indiana, Pennsylvania

Grand Ballroom D (Marriott)
capacity: 180

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April 9–12, 2008 • Salt Lake City, Utah 127
**503**

**A Different Angle on Understanding Angle Measurements**  
*(3–8) Gallery Workshop*

Graphing calculators and rotation are used to understand angle measurements. Participants will use a drawing application on the TI-73 calculator to support the development of the concept of angle. Work from grade 5 students will be shared.

Claire Okazaki  
Curriculum Research and Development Group, University of Hawaii, Honolulu, Hawaii

Fay Zenigami  
Curriculum Research and Development Group, University of Hawaii, Honolulu, Hawaii

Judith Olson  
Curriculum Research and Development Group, University of Hawaii at Manoa, Honolulu, Hawaii

**Alpine Ballroom East (Hilton) capacity: 116**

**504**

**Hands-On Activities to Enhance the Teaching of Fractions**  
*(3–8) Gallery Workshop*

This workshop is a potpourri of techniques to enhance operations with fractions. Fraction circles and fraction islands will be discussed; paper folding and pictures, used to name and identify fractions; games and other activities, explored.

Alicia Jefferson  
Jackson State University, Jackson, Mississippi

Edna Loretta Holbrook  
Jackson State University, Jackson, Mississippi

Mattie Saunders Jones  
Jackson State University, Jackson, Mississippi

Pamala Heard  
Jackson State University, Jackson, Mississippi

**Room 254 B (Convention Center) capacity: 162**

**505**

**Making Sense of Fractional Relationships**  
*(6–8) Gallery Workshop*

Explore the relationships among fractions, decimals, and percents. Participants will be engaged in hands-on learning that can be immediately implemented in the classroom. Mathematical communication and reasoning will be emphasized.

Janet Palermo  
Round Rock Independent School District, Round Rock, Texas

Karen Rynard  
Consultant (Retired Math Coordinator), Round Rock, Texas

**Room 155 A (Convention Center) capacity: 166**

**506**

**Establishing Classroom Norms for Justification and Proof Early: Use Games**  
*(6–12) Gallery Workshop*

Come learn how to play the games and experience how this teacher moved the focus of the games from how to why and the students’ justification from oral to written. Strategies used in prealgebra, algebra, and geometry will be applied.

Jeanne Shimizu  
Pennsylvania State University, University Park, Pennsylvania

**Room 155 B (Convention Center) capacity: 228**

**507**

**Ethnomathematics in Your Classroom: Practical Suggestions**  
*(6–12, Teacher of Teachers) Gallery Workshop*

Ethnomathematical examples may seem difficult to translate into classroom use. We offer practical suggestions for using ethnomathematical examples in classroom situations. Examples come from the Americas, Africa, and more.

Lawrence Hoyt Shirley  
Towson University, Towson, Maryland

Fredrick Silverman  
University of Northern Colorado, Greeley, Colorado

Claudette Engblom-Bradley  
University of Alaska Anchorage, Anchorage, Alaska

**Room 155 E (Convention Center) capacity: 228**

**508**

**Kaleidoscope, $2.00; Getting Students Engaged in Learning, Priceless!**  
*(6–12, Teacher of Teachers) Gallery Workshop*

Come explore issues of symmetry and reflection related to kaleidoscopes. The mirror placement inside the kaleidoscope will be examined to determine which is ideal. The session will culminate with participants making their own kaleidoscope.

Jodelle S. W. Magner  
Buffalo State College, Buffalo, New York

**Room 255 E (Convention Center) capacity: 228**

**509**

**Nontypical Investigations in Geometry for 2008**  
*(6–12, Teacher of Teachers) Gallery Workshop*

Can you tile the plane with pentominoes? What is Polya’s problem? What are all the Archimedean tilings? What is Pick’s formula? If any of these are new to you, come join us as we explore some not-so-typical, cool investigations in geometry.

Michael Serra  
Key Curriculum Press, San Francisco, California

**Room 155 E (Convention Center) capacity: 228**
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510
Teaching Transformations through Technology and Hands-On Activities
(9–12) Gallery Workshop
Are you ready to slide, glide, reflect, and rotate? If so, then this workshop is calling your name. Be prepared to participate in an intense, energetic, hands-on workshop on geometric transformations that incorporates the use of technology.

Ann Polson
Little Rock Central High School, Little Rock, Arkansas
Karyn Brown
Little Rock Central High School, Little Rock, Arkansas

Room 155 D (Convention Center) capacity: 180

511
All around Circumference
(9–12) Gallery Workshop
Connect trigonometry and geometry by exploring the Archimedean method of polygons to calculate pi to any desired degree of accuracy. Combine this approach with graphing-calculator technology to develop the formula for the circumference of a circle.

Christie Perry
Morehead State University, Morehead, Kentucky
Vivian Cyrus
Morehead State University, Morehead, Kentucky

Room 155 F (Convention Center) capacity: 228

512
A Pirate’s Quest: Codes and Symbols
(9–12) Gallery Workshop
Come with me on a mathematical voyage to understand codes and symbols. The bounty of hands-on activities will culminate in a treasure hunt. All workshop participants will receive a treasure chest of interdisciplinary activities.

Chris Rumsey Mackmin
Braden River High School, Bradenton, Florida

Room 250 B/C (Convention Center) capacity: 186

513
The Amazing Tennis Ball Activity
(9–12) Gallery Workshop
A wet tennis ball is rolled across grid easel paper that is flat to show a straight line, then slanted to show a parabola. Participants will generate linear- and quadratic-equation calculations by hand and using technology. Calculus concepts are also included.

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

Room 255 D (Convention Center) capacity: 166

514
Lead in the Body: Using Recursion to Explore Compartment Models
(9–12, Higher Education) Gallery Workshop
Using recursion, we can explore how ingested lead moves through compartments of the body: the blood, bones, and other tissues. These methods are appropriate for precalculus and calculus students. Other compartment model labs will be shared.

Maria Hernandez
North Carolina School of Science and Mathematics, Durham, North Carolina

Room 151 A/B/C (Convention Center) capacity: 143

515
Fun Activities in Probability and Data Analysis
(9–12, Teacher of Teachers) Gallery Workshop
Participants will engage in numerous fun, hands-on activities that will promote the concepts of probability and data analysis. Prizes will be awarded. Graphing calculators and manipulatives will be used to enhance the explorations.

Linda Wisneski
Morris Hills School Regional District, Rockaway, New Jersey
Bonnie Montgomery
Morris Knolls High School, Rockaway, New Jersey

Room 150 G (Convention Center) capacity: 148

516
Math to the Mex(ico): Mathematics, Equity, and eXplorations
(9–12, Teacher of Teachers) Gallery Workshop
Participants will engage in bilingual mathematics lessons developed by Latino teachers around Mexican themes used to reach all students, especially Latinos and their families. Handouts and CD will be provided.

Maria S. Fernandez
Buena Park High School, Buena Park, California
Isaura DeLeon
Buena Park High School, Buena Park, California
Fernando Rodriguez
Buena Park High School, Buena Park, California

Room 355 F (Convention Center) capacity: 228
517
Discussion of the National Math Panel Results
(General Interest) Session
In this session members of the National Math Panel will go into more detail regarding the research behind the Final Report.
Russell Gersten
Instructional Research Group, Long Beach, California
Douglas H. Clements
University at Buffalo, State University of New York, Buffalo, New York
Hall 1 (Convention Center) capacity: 2000

518
NCTM Business Meeting
(General Interest) Session
This session will provide a summary of the past year’s significant accomplishments and an overview of current and future strategic directions of NCTM.
James M. Rubillo
Executive Director, National Council of Teachers of Mathematics, Reston, Virginia
Room 250 A (Convention Center) capacity: 123

519
How Far Will Your Students Go?
(General Interest) Session
What will you do to help every student reach her or his potential? How do we know what our students need and where they’re headed? What do you need in your toolkit to become the greatest teacher you can become on the road to getting them there?
Cathy L. Seeley
Past President, National Council of Teachers of Mathematics; Charles A. Dana Center, University of Texas at Austin, Austin, Texas
Room 355 C (Convention Center) capacity: 237

520
Collaborative Coaching in Mathematics:
Enhancing Teaching Practice
(General Interest) Research Session
Engage with research about the impact of coaching on teaching practice; observe a content-based, collaborative coaching session in mathematics; and leave with tools and strategies to support content-based, collaborative coaching.
Kathy Ann Dunne
Learning Innovations at WestEd, Woburn, Massachusetts
Melissa Kagle
Learning Innovations at WestEd, Woburn, Massachusetts
Ballroom G (Convention Center) capacity: 398

521
Improving the Mathematical Preparation of Teachers with a Modern Geometry Course
(Teacher of Teachers) Session
This session examines aspects of a modern geometry course created to fill a void in many teacher preparation programs. The course focuses on similarity, transformation groups, axiomatic systems, and constructions.
Eric Pandiscio
University of Maine, Orono, Maine
Room 254 C (Convention Center) capacity: 99

522
Ten Frames and Double-Ten Frames
(Pre-K–2) Session
Teach children addition and subtraction strategies and flexibility with numbers using these frames. Help them decompose numbers to solve problems. Learn questions to ask children that will assist them with their thinking and reasoning.
Catherine Simms Stephenson
Culpeper County Public Schools, Culpeper, Virginia
Solitude (Marriott) capacity: 70

523
The Abacus as a Foundation for Mental Mathematics
(Pre-K–2) Session
Without a calculator, or even an abacus, trained students are able to perform computations in their mind using a virtual abacus. Learn how the abacus works, teaching tips, and inexpensive ways to translate abacus skills into mental-math skills.
Clare Banks
Dixie State College, Saint George, Utah
Jeng-Jong Tsay
University of Texas Pan American, Edinburg, Texas
Jie Liu
Dixie State College, Saint George, Utah
Topaz (Hilton) capacity: 80

524
Developing Probability Concepts through Activities
(Pre-K–5) Session
Explore concepts of probability appropriate for elementary grades. We will engage in a variety of activities that help students develop understanding of the concepts. The NCTM Process Standards come to life in classrooms using such activities.
Stephen P. Smith
Northern Michigan University, Marquette, Michigan
Grand Ballroom G/H (Marriott) capacity: 187
2:00 p.m.–3:00 p.m.

525
Teaching Mathematics in Mexico, Chile, and New Zealand: Comparisons with U.S. Classrooms
(Pre-K–5) Session
This session will present the speakers’ observations of mathematics instruction in international settings. Comparisons will be drawn between traditional U.S. practices and standards-based classrooms as well as with literacy teaching.

Brad Wilcox
Brigham Young University, Provo, Utah

Timothy G. Morrison
Brigham Young University, Provo, Utah

Room 251 C (Convention Center) capacity: 116

526
Guided Math: Where Numeracy and Literacy Instruction Meet
(Pre-K–5) Session
How can a teacher meet the needs of diverse students? Learn to differentiate instruction using a framework based on the guided reading approach used in literacy instruction. This presentation will describe how to implement this approach in your classroom.

Laney Sammons
Samuel E. Hubbard Elementary School, Forsyth, Georgia

Hall 2 (Convention Center) capacity: 1677

527
Response to Intervention (RTI) Practice for Teaching Number Concepts and Operations in Inclusive Primary Grades
(Pre-K–5, Teacher of Teachers) Session
RTI practice will be presented for teaching number concepts and operations in inclusive primary grades. RTI components include intervention tiers, strategies, and assessments (benchmark screening and progress monitoring).

Alida Anderson
Widener University, Chester, Pennsylvania

Kimberly Rimby
Rodel Charitable Foundation of Arizona, Phoenix, Arizona

Room 355 B (Convention Center) capacity: 356

528
Neriage: An Essential Piece of a Problem-Based Lesson
(Pre-K–8) Session
Teaching mathematics through problem solving means much more than simply solving problems in a variety of ways. Let’s investigate how Japanese textbooks use problems to teach a variety of important math ideas.

Akihiko Takahashi
DePaul University, Chicago, Illinois

Grand Ballroom I/J (Marriott) capacity: 187

529
Mathematics, the Thinking Sport: Problem Solving and Reasoning
(3–5) Session
Create an exciting learning environment by involving all students in meaningful mathematics. Engage students in starters for number sense and logical thinking, and independent task time for differentiation and problem solving.

Marcy Cook
Consultant, Newport Beach, California

Hall 3 (Convention Center) capacity: 1677

530
Understanding the Importance of Place Value
(3–5) Session
Discover how a solid number-sense foundation begins with place value. Using manipulatives and computational strategies including branching, the area model for multiplication, and short division will help your students think quickly on their feet!

Sandra Chen
Staff Development for Educators, Peterborough, New Hampshire

Room 254 A (Convention Center) capacity: 99

531
Computing Fractions Fluently: Why Knowing the Rules Isn’t the Key
(3–8) Session
Knowing rules for fraction operations does not imply an understanding of the problem and its solution. Come explore the meanings of the four operations with fractions and learn strategies to help students develop fluency with these procedures.

Jennifer M. Tobias
University of Central Florida, Orlando, Florida

Ballroom I (Convention Center) capacity: 398
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532
Make Fractions Meaningful with Games
(3–8) Session
Apply research-based best practices with a variety of games that deepen your students’ conceptual understanding of fractions while developing their math vocabulary and mathematical reasoning. And have fun!
Dolores Emery
Math for All Learners, Corvallis, Oregon
Room 355 A (Convention Center) capacity: 264

533
Problem Solving as Formative Assessment: Making Instructional Decisions in Middle School Mathematics Classrooms
(6–8) Session
This session focuses on the important role of the teacher in making problem solving a valuable part of learning for middle school students, including selecting mathematical tasks, using questioning strategies, and aligning assessment with instruction.
Karen Marrongelle
Portland State University, Portland, Oregon
Sarah Enoch
Portland State University, Portland, Oregon
Ballroom H/J (Convention Center) capacity: 732

534
A Cooperative Math Classroom: Mixing History with Math
(6–8) Session
This session will be about increasing collaboration in your classroom. The idea behind this session is to bring history and mathematics together to make the lessons more relevant for the students.
Daniel Lawrence Fisher
Berkeley Preparatory School, Tampa, Florida
Grand Ballroom A/B/C (Marriott) capacity: 180

535
What Do You See? Learning to Write about Geometric Ideas!
(6–8) Session
You can see it; can you describe it? Geometry is a rich context for helping students become fluent, proficient mathematical writers! We will share three types of writing tasks used across grade levels and a simple, but effective writing rubric.
Ann Louise Mullen
Syracuse City School District, Syracuse, New York
Carol Coles
Syracuse City School District, Syracuse, New York
Marjorie Spear
Syracuse City School District, Syracuse, New York
Room 251 F (Convention Center) capacity: 158

536
Helping Coaches Support Quality Teaching in Daily Practice Using a Research Observation Protocol
(6–8, Teacher of Teachers) Research Session
This session focuses on an observation tool that mathematics coaches can use to help teachers improve their teaching. Participants will use part of the observation tool we used in our NSF-funded project to analyze vignettes from videotaped lessons.
Connie Laughlin
Marquette University, Milwaukee, Wisconsin
John Moyer
Marquette University, Milwaukee, Wisconsin
Jinfa Cai
University of Delaware, Newark, Delaware
Ballroom F (Convention Center) capacity: 398

537
Hitting the Bull’s-Eye: Connecting Geometry and Probability
(6–12) Session
What if the bull’s-eye is a fractal? An interactive dart board will pave the way to varied connections among probability concepts and such geometric topics as area, zebra stripes, Sierpinski’s triangle, and an adaptation of Buffon’s needle problem.
Beth Cory
Sam Houston State University, Huntsville, Texas
Ballroom A/C (Convention Center) capacity: 732

538
Classroom Management, Motivation, and Math
(6–12) Session
Learn and share ideas of how to make your classroom work in ways that motivate students, improve classroom management, and teach math. Open to teachers in their first two years and those seeking certification.
James Middleton
Arizona State University, Tempe, Arizona
Room 255 C (Convention Center) capacity: 354

539
On the Shoulders of Technology Your Students Can See Farther
(6–12) Session
Let the power of technology bring mathematical insights to your students. The visual capabilities of computers, digital images, and software make your classroom come alive for 21st-century kids. This margin is too narrow to contain all the details.
Frank Sobierajski
North Rose–Wolcott Central School District, Wolcott, New York
Alta/Snowbird/Brighton (Marriott) capacity: 105
2:00 p.m.–3:00 p.m.

540
Visualizing Domain, Range, and Other Topics in Algebra 2 with GeoGebra
(6–12) Session
Explore topics in Algebra 2 with GeoGebra, free dynamic mathematics software. Visually stroll through the library of functions, and investigate transformations, range, domain, inverses, logs, conics, and more. Free online materials will be available.

James Duke Chinn
Broward County Public Schools, Fort Lauderdale, Florida

Grand Ballroom B (Hilton) capacity: 171

541
Algebra and the Achievement Gap
(6–12) Session
Benjamin Banneker Association presentation
This session will address how algebra, formerly known as the “gatekeeper” for further mathematics study, has now become an eighth-grade requirement. Strategies for preparing African American students for success in algebra will be presented.

Lesa Covington Clarkson
Benjamin Banneker Association, Woodbury, Minnesota

Grand Ballroom C (Hilton) capacity: 388

542
Induction and Abduction: Reasoning about Uncertainty
(6–12, Higher Education) Session
People often wrongly assume that the only type of probabilistic reasoning is enumerative induction—generalizing from a sample to the whole. This session will explore different types of nondeductive reasoning and ways to interpret probability.

Stuart Murray Gluck
Center for Talented Youth, Johns Hopkins University, Baltimore, Maryland

Carlos Rodriguez
Center for Talented Youth, Johns Hopkins University, Baltimore, Maryland

Grand Ballroom A (Hilton) capacity: 171
Adventures in Space Science Mathematics  
(9–12) Session  

Sten Odenwald  
NASA, Greenbelt, Maryland; Catholic University, Washington, D.C.

Chris Giersch  
NASA–Langley Research Center, Hampton, Virginia

Ballroom B/D (Convention Center) capacity: 732

NCTM’s High School Curriculum Project: Where Are We? Where Are We Going?  
(9–12) Session  
This session will give participants an opportunity to offer their feedback on the public draft of NCTM’s “Focus on High School Mathematics” document, as well as priorities for NCTM’s continuing focus on high school mathematics.

W. Gary Martin  
Auburn University, Auburn, Alabama

Susan M. Forster  
Bismarck High School, Bismarck, North Dakota

Eric Robinson  
Ithaca College, Ithaca, New York

Vincent Snipes  
Winston-Salem State University, Winston-Salem, North Carolina

Ballroom E (Convention Center) capacity: 398

Probability, Patterns, and Algebraic Reasoning  
(9–12) Session  
Learn how analyzing nonroutine probability problems can help students strengthen their algebraic reasoning, develop their ability to identify patterns, and make and explore conjectures. Students’ work and reasoning will be discussed.

Rebecca K. Walker  
Grand Valley State University, Allendale, Michigan

Room 251 A/B (Convention Center) capacity: 234

Don’t Wait for Calculus to Understand the Least Squares Line: Use Algebra  
(9–12, Higher Education, Teacher of Teachers) Session  
With spaghetti and basic algebra, students can derive the formula for the least squares line of a data set. Technology will be used to generalize guess-and-check processes and to help participants see deeper patterns in those processes.

Maurice Burke  
Montana State University—Bozeman, Bozeman, Montana

Theodore Robert Hodgson  
Northern Kentucky University, Highland Heights, Kentucky

Room 255 B (Convention Center) capacity: 356

Students’ Attitudes, Conceptions, and Achievement in Introductory Undergraduate College Statistics  
(Higher Education) Research Session  
This study measured students’ attitudes and conceptions, including misconceptions, in introductory statistics and determined the relationship between those attitudes and conceptions, as well as the relationship with achievement.

Brian Evans  
Pace University, New York, New York

Room 255 A (Convention Center) capacity: 264

Why Singapore Math Works!  
Marshall Cavendish Int’l (Singapore) Pte Ltd

Participants will be introduced to the salient features of Singapore Math. They will get hands-on practice in the bar-modeling and concrete-pictorial abstract approach that are key features of Singapore Math.

Room 250D (Convention Center) capacity: 100

iSucceed MATH™—Math Intervention Using Multiple Instructional Modalities, Grades 4–7  
Focused intervention individualizes instruction, bringing students up to grade level. Experience interactive tutorials, group instruction, concept-building activities, hands-on practice and assessments that promote a successful transition to the mainstream classroom. Receive a free Math Handbook.

Room 250E (Convention Center) capacity: 100

Paths to Problem Solving  
ETA/Cuisenaire

Learn about this comprehensive tool kit to support students’ problem-solving skills. Students will practice multiple problem-solving strategies and build comprehensive and mathematical vocabularies. See how every student can find success in problem solving.

Room 250F (Convention Center) capacity: 100
Picture a Method That Works: Singapore’s Model-Drawing Approach in Math!
(General Interest) Gallery Workshop
Solving word problems is a challenge for many of our students! Join author Char Forsten to learn how Singapore’s highly effective model-drawing approach can help your students become strategic problem solvers.
Char Forsten
Staff Development for Educators, Peterborough, New Hampshire
Room 255 D (Convention Center) capacity: 166

Developmental Mathematics
(Teacher of Teachers, Pre-K–5) Gallery Workshop
Activities that develop children’s mathematical thinking, facilitate understanding, and accelerate competencies will be discussed. Targeted activities will specifically address early mathematical learning difficulties.
Cecilia Kutas
Ontario Institute for Studies in Education, University of Toronto, Toronto, Ontario
Grand Ballroom D (Marriott) capacity: 181

My Favorite Grades K–2 Games: Great Strategies for Building Concepts and Skills
(Pre-K–2) Gallery Workshop
Explore how students can build concepts dealing with logical thinking to solve geometric and measurement problems, the meaning of the equal sign, probability in rolling one die, place value of ones and tens, and sums to ten with two addends.
Ann Carlyle
Givertz Graduate School of Education, University of California, Santa Barbara, Santa Barbara, California
Grand Ballroom E (Marriott) capacity: 180

What Can We Learn by Observation That We Can’t Learn with Paper and Pencil?
(Pre-K–2) Gallery Workshop
We will analyze data from a project in which we interviewed 300 first and second graders to answer the question “Can we use a Math Trailblazers assessment to identify struggling students as early as first grade and plan for early intervention?”
Janet Parsons
University of Delaware, Newark, Delaware
Room 155 B (Convention Center) capacity: 228

Colorful Crunchy O’s: Cereal Packed with Data Analysis, Statistics, and Probability, All in One Box
(Pre-K–5) Gallery Workshop
Cereal, the manipulative of choice, will be used to analyze data, apply basic concepts of probability, and create meaningful representations in graphic display. Participation is required, but no snacking allowed. That could skew the results.
Jeanine Haistings
William Jewell College, Liberty, Missouri
Susan Gay
University of Kansas, Lawrence, Kansas
Room 255 E (Convention Center) capacity: 228

Teachers’ Content Knowledge and Growth in Students’ Learning: Making the Connection
(Pre-K–5, Teacher of Teachers) Gallery Workshop
The workshop provides an overview of a grades K–5 mathematics academy and how an analysis of students’ growth in mathematics understanding has helped teachers deepen their content knowledge. Materials and activities will be shared.
Terry Goodman
University of Central Missouri, Warrensburg, Missouri
Doug Clarke
Australian Catholic University, Melbourne, Victoria, Australia
Larry Campbell
Missouri State University, Springfield, Missouri
Alpine Ballroom East (Hilton) capacity: 116

Does Our Assessment Match the Instruction? Using Hands-On Games and Open-Ended Questions or Tasks
(Pre-K–5, Teacher of Teachers) Gallery Workshop
Participants will discuss effective alternative assessment strategies and gain experience with classroom-tested learning games and tasks. Students’ actual works and sample rubrics will be discussed.
Insook Chung
Saint Mary’s College, Notre Dame, Indiana
Room 151 G (Convention Center) capacity: 194
555
Learning Social Studies Concepts While Sharpening Math Skills
(3–5) Gallery Workshop
Participants will use basic economic principles to learn about graphical displays of data. Comparisons will be made among bar graphs, line graphs, circle graphs, and histograms. Rubric scoring ideas will be included.

Kathleen Hill
Bissell School, Whitefish, Montana
Room 150 G (Convention Center) capacity: 148

556
Hands-On Experience with Numerous Activities for the Elementary School Mathematics Curriculum
(3–5) Gallery Workshop
Participants will work together with activities for elementary school. Discussion will focus on adapting activities to various grade levels and making activities classroom ready. A booklet of forty-five activities and ideas for others will be provided.

Francis Thomas Hannick
Minnesota State University, Mankato, Minnesota
Room 151 D/E/F (Convention Center) capacity: 143

557
It’s Not Just about X and Y!
(3–5) Gallery Workshop
Join us on the journey that takes students from concrete to abstract algebraic reasoning. Use a variety of manipulatives to engage students and facilitate instruction and discourse. Students’ work will be used as a springboard for discussion.

Shana Runge
North Carolina TEAM 2, Cleveland County Schools, Shelby, North Carolina
Kim Aiello
North Carolina TEAM 2, Catawba County Schools, Newton, North Carolina
Karen McCain
North Carolina TEAM 2, Randolph County Schools, Asheboro, North Carolina
Room 155 D (Convention Center) capacity: 180

558
Developing Number Sense Using Games from Afar
(3–5) Gallery Workshop
Teachers will be involved playing a variety of math games, several from cultures around the world, suitable for students in grades 3–5. They will receive a packet of games for developing number sense and operation sense.

Nancy L. Smith
Emporia State University, Emporia, Kansas
Toni Harrell
Kansas Talking Books, Emporia, Kansas
Room 254 B (Convention Center) capacity: 162

559
Those Bloomin’ Cubes: Folding, Measuring, Estimating, Representing, and Predicting in Bloom’s Taxonomy!
(3–5) Gallery Workshop
Participants will use paper-cutting and paper-folding activities to discover concepts of perimeter, area, and volume. Working cooperatively, they will manipulate, estimate, calculate, and predict. Curriculum Focal Points for grade 5 geometry will be emphasized.

James J. Clayton
Saint Peter’s College, Jersey City, New Jersey
Room 355 F (Convention Center) capacity: 228

560
Creative, Rhythmical Expressions for Mathematical Intentions
(3–8) Gallery Workshop
Rich mathematical content is inherent in rhythms and embedded in drumming. Experience the connections of drums, musical notes, rhythms, and composing with such math concepts as ratios, fractions, patterns, and transformations.

Amy Lin
Halton District School Board, Burlington, Ontario
Room 250 B/C (Convention Center) capacity: 186

561
Building Probabilistic Understanding through Simulation
(3–8, Teacher of Teachers) Gallery Workshop
Engage in a variety of simulations designed to develop an understanding of probability. Discuss how simulation helps develop probabilistic reasoning and provides connections with other areas of mathematics as well as with the real world.

Mary Lou Metz
Indiana University of Pennsylvania, Indiana, Pennsylvania
Room 150 D/E/F (Convention Center) capacity: 143
$3 million grant by the U.S. Department of Labor has made these scholarships available for educators like you to get your advanced degree. You’ll also be glad to know that Western Governors University is the ONLY entirely online institution to receive NCATE accreditation—the premier accrediting body for teacher preparation.

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Mathematics and science teachers living in rural communities can get scholarships of up to $7500.

3:00 p.m.–4:30 p.m.

Investigating Quadrilaterals on a Four-by-Four Array
(6–8) Gallery Workshop
We will explore a problem that involves drawing all possible quadrilaterals on a four-by-four array of dots. The participants will explore geometric and numeric patterns and relationships. We will make connections with geometry and algebra strands.

Kerri Richardson
University of North Carolina at Greensboro, Greensboro, North Carolina

Anne Reynolds
Kent State University, Kent, Ohio

Katie Stein
University of North Carolina at Greensboro, Greensboro, North Carolina

Room 155 C (Convention Center) capacity: 228

Creating Graphs on the TI-73 Graphing Calculator
(6–8) Gallery Workshop
In this workshop the participants will learn how to use the TI-73 to create graphs for different types of data. Participants will learn how to create the graphs and then discuss questions that can be posed to students about the graphs.

James Robert Rahn
LL Teach, Inc., Bridgewater, New Jersey

Room 253 A/B (Convention Center) capacity: 135

Fraction Fundamentals: Actions Implied by Word Problems Can Guide Students’ Understanding of Operations on Fractions
(6–8) Gallery Workshop
Participants will explore concepts of fraction multiplication and division through multiple representations and word problems, examine the actions the words imply, and analyze how actions provide a rationale for the fraction-division algorithm.

Melfried Olson
Curriculum Research and Development Group, University of Hawaii at Manoa, Honolulu, Hawaii

Mary Pat Sjostrom
Chaminade University of Honolulu, Honolulu, Hawaii

Room 355 D (Convention Center) capacity: 166
565
A² = Active Algebra Activities
(6–12) Gallery Workshop
For students to understand and learn algebra, they should be actively involved. Come prepared to have fun through games and activities that engage students and use graphing calculators, and leave with active algebra activities.

Sherry Bailey
McDougal Littell, Columbia, South Carolina
Canyon Room (Hilton) capacity: 250

566
A Probability Primer for Practically Anyone, Featuring a Paper, Scissors, Rock Bonus
(6–12) Gallery Workshop
Are you feeling lucky? Come prepared to engage in several hands-on experiments that demonstrate the basic concepts of probability and chance. The classic game of “paper, scissors, rock” will provide an intriguing summary to your new knowledge.

Mary J. DeYoung
Hope College, Holland, Michigan
Room 151 A/B/C (Convention Center) capacity: 143

567
A New Look at the Pythagorean Theorem Using TI-Nspire™
(6–12) Gallery Workshop
Using TI-Nspire, participants will explore the Pythagorean theorem from a number of different perspectives. An understanding of what it means and why it is true will be strengthened, and the theorem will be generalized for shapes other than squares.

Wallece Brewer
Northeast Arkansas Rural Institute for Mathematics and Science Education, Jonesborough, Arkansas
Room 255 F (Convention Center) capacity: 228

568
Statistical Inference: Is It Real, or Is It Due to Chance?
(6–12) Gallery Workshop
In statistical inference, the primary goal is to infer statistics about a population using data from a sample. Participants will use the TI-Navigator with TI-84 Plus calculators to gather and analyze data generated during session activities.

Julie Lynn Christianson
Mesa County Valley School District 51, Grand Junction, Colorado
Room 155 A (Convention Center) capacity: 166

569
Teaching Essentials: Functions
(6–12) Gallery Workshop
Functions are a core element of the secondary curriculum. Develop deeper understanding of functions and techniques to facilitate skill and understanding with your students. Open to teachers in their first two years and those seeking certification.

Patricia S. Wilson
University of Georgia, Athens, Georgia
Room 155 E (Convention Center) capacity: 228

570
In the Spirit of Lyn Taylor: Gender and Culturally Based Activities to Promote Equity
(6–12, Teacher of Teachers) Gallery Workshop
Lyn Taylor showed how mathematics is embedded in life. We will pay tribute to Lyn with three hands-on activities drawn from her work on math and gender and math in American Indian culture. A biographical and instructional booklet will be included.

Charlene Morrow
SummerMath, Mount Holyoke College, South Hadley, Massachusetts
Room 150 A/B/C (Convention Center) capacity: 143

571
Body Learning: Kinesthetic Activities from Prealgebra to Precalculus
(9–12) Gallery Workshop
Students can learn mathematics concepts rigorously using only their bodies. Be ready for function aerobics, angle stretches, a human x-y grid, a unit-circle drill, and team performances using the motion detector. Wear comfortable clothing!

Masha Albrecht
Berkeley High School, Berkeley, California
Deer Valley (Marriott) capacity: 176

572
Using the Graphing Calculator to Connect Recursive Sequences and Composition of Functions
(9–12) Gallery Workshop
Multiple representations of recursive sequences are examined through iterative techniques. Various learning styles are addressed to promote algebraic thinking through modeling of real-world situations using composition of functions.

Thomas F. Beatini
Glen Rock High School, Glen Rock, New Jersey
Room 155 F (Convention Center) capacity: 228
3:00 p.m.–4:30 p.m.

573
Pythagoras! Cut It Out!
(9–12) Gallery Workshop
This workshop will model three interactive proofs (Bhaskara’s, tile, and similar triangles) of the Pythagorean theorem through paper-cutting activities. These activities will emphasize a visual and conceptual understanding of the Pythagorean theorem.

Halcyon Jean Foster
San Jose State University, San Jose, California
James Hahn
University of Wisconsin–Eau Claire, Eau Claire, Wisconsin

Room 251 D/E (Convention Center) capacity: 219

574
An Active Calculus Classroom with Formative Assessment: Simple Strategies for Improving Students’ Learning
(9–12, Higher Education) Gallery Workshop
Experience a few simple activities that will focus on “learning calculus” not simply “doing calculus.” Jigsaws, concept maps, and boardwork models are active learning strategies to engage students. Join the speaker, and she will share these with you!

Shelly Ray Parsons
Aims Community College, Greeley, Colorado

Grand Ballroom F (Marriott) capacity: 220

575
Using Computer Algebra Systems (CAS) to Promote Mathematical Habits in High School
(9–12, Teacher of Teachers) Gallery Workshop
CAS can be used to build computational models of mathematical objects. We will use examples from a new NSF curriculum, the CME Project, to illustrate applications of this model building, including monthly payments on a loan.

Sarah Elizabeth Sword
Education Development Center, Inc., Newton, Massachusetts
Doreen Kilday
Education Development Center, Inc, Newton, Massachusetts

Alpine Ballroom West (Hilton) capacity: 116

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Helene J. Sherman, Lloyd L. Richardson, and George J. Yard
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Order these and other resources after NCTM at www.allynbaconmerrill.com

Prices and availability are subject to change without notice. Please reference NCTM08 when placing an order.
**3:00 p.m.–4:30 p.m.**

**576**
**Constant Assessment + MultiLevel Questioning = Individualization + Success for All**  
(9–12, Teacher of Teachers) Gallery Workshop

Scaffolding during a lesson and the use of different levels of questioning allow a teacher to interact with each student at an individual level. Learn techniques to assess each student constantly and provide questioning that meets their needs.

*Allan Bellman*
University of California at Davis, Davis, California

*Katie Allard*
Canyon Crest Academy, San Diego, California

*Room 355 E (Convention Center) capacity: 228*

**577**
**Diversity: A Resource for Learning**  
(General Interest) Session

*Benjamin Banneker Association presentation*

In the United States, diverse learners, defined by race, ethnicity, culture, language, and socioeconomic status, do poorly in mathematics in disproportionate numbers. The speaker will share practical strategies of how to make culturally relevant mathematics instruction a reality.

*Pamela Seda*
Benjamin Banneker Association, Ellenwood, Georgia

*Ballroom F (Convention Center) capacity: 398*

**578**
**Origami 101: Everything You Wanted to Know about Paper Folding, and More!**  
(General Interest) Session

*David K. Masunaga*
Iolani School, Honolulu, Hawaii

*Room 355 B (Convention Center) capacity: 356*

**579**
**Developing and Supporting Grades K–8 Mathematics Lead Teachers**  
(Teacher of Teachers) Session

This session will present a professional development model for grades K–8 mathematics lead teachers that unites arts and sciences, engineering, and education faculty and school curriculum personnel in course development and instruction.

*Francine Winston Johnson*
Johns Hopkins University, Baltimore, Maryland

*Room 255 C (Convention Center) capacity: 354*

**3:30 p.m.–4:30 p.m.**

**580**
**Leading with Passion: Don’t Ever Compromise**  
(Teacher of Teachers) Session

Accepting leadership roles in mathematics often brings with it more “stuff” than initially anticipated. In this session, we will examine the qualities of effective leaders and brainstorm strategies for helping those that we lead.

*Bill Barnes*
Baltimore County Public School System, Baltimore, Maryland

*Room 255 B (Convention Center) capacity: 356*

**581**
**Number Games That Lead to Students’ Success**  
(Pre-K–2) Session

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

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

*Grand Ballroom U/J (Marriott) capacity: 187*

**582**
**Incorporating Culturally Relevant Pedagogy into Grades K–2 Mathematics**  
(Pre-K–2, Teacher of Teachers) Session

This session will explain major features of culturally relevant pedagogy, its alignment with NCTM’s *Curriculum Focal Points*, and how it can be incorporated into grades K–2 mathematics instruction.

*Patricia Marshall*
North Carolina State University, Raleigh, North Carolina

*Jessica T. DeCuir-Gunby*
North Carolina State University, Raleigh, North Carolina

*Marrielle Myers*
North Carolina State University, Raleigh, North Carolina

*Room 250 A (Convention Center) capacity: 123*

**583**
**Number Sense: A Concrete Way to Teach It**  
(Pre-K–2, Teacher of Teachers) Session

Young learners must have a sense of number. Counting is not the initial way to accomplish this understanding. Gaining a sense of number with “sight” numbers will facilitate adding and subtracting without finger counting.

*C. Sue Phelps*
Phelps and Associates, Rocky Face, Georgia

*Ballroom B/D (Convention Center) capacity: 732*
584
Teachers Engaged in Research: What Are We Learning about Grades Pre-K–2 Classroom Inquiry?
(Pre-K–2, Teacher of Teachers) Session
As Pre-K–2 classrooms become more student focused, teachers inquire into students’ thinking and classroom practice. This session demonstrates how careful analysis of classroom evidence can guide instruction and improve students’ learning.
Marvin E. Smith
Kennesaw State University, Kennesaw, Georgia
Stephanie Z. Smith
Georgia State University, Atlanta, Georgia
Grand Ballroom A/B/C (Marriott) capacity: 180

585
“I Have, Who Has?” Activities: A Quick Way to Review and Practice Mental Math
(Pre-K–5) Session
I Have, Who Has? activities are an excellent way to review, practice, and use mental math. Several activities will be shared, and the group will create a new activity. General principles of creating and using these activities will be shared.
Sarah E. Patrick
Troy University—Dothan Campus, Dothan, Alabama
Room 251 F (Convention Center) capacity: 158

586
Pre-K–6: Classroom Management, Motivation, and Math
(Pre-K–5) Session
Learn and share ideas of how to make your classroom work in ways that motivate students, improve classroom management, and teach math. Open to teachers in their first two years and those seeking certification.
Jennifer M. Bay-Williams
University of Louisville, Louisville, Kentucky
Karen Karp
University of Louisville, Louisville, Kentucky
Room 255 A (Convention Center) capacity: 264

587
Easing the Transition to Algebra: Developing Algebraic Thinking through Explorations in Number and Measurement
(Pre-K–8) Session
Algebraic thinking and fundamental concepts of algebra (variables, equations, functions) will be explored. How algebraic thinking can facilitate learning of number and measurement concepts and vice versa will be illustrated with students’ work.
Carole Ellen Greenes
Arizona State University Polytechnic Campus, Mesa, Arizona
Hall 3 (Convention Center) capacity: 1677

588
Becoming Certain about Measurement
(3–5) Session
Experience ways to use ten minutes or less effectively to integrate vocabulary and conceptual development into measurement and probability activities through the use of warm-ups and minilessons. Receive student-ready resources.
Lois Gordon Moseley
NUMBERS Mathematics Professional Development, Houston, Texas
Ballroom H/J (Convention Center) capacity: 732

589
Focus on Fractions
(3–5) Session
Participants will engage in hands-on activities that focus on helping children develop a conceptual understanding of fractions. A variety of models will be used to explore ordering and equivalence.
Melinda Jenkins
Henrico County Schools, Richmond, Virginia
Room 355 C (Convention Center) capacity: 237

590
Teaching Mathematical Concepts through Problem Solving
(3–5, Teacher of Teachers) Session
This session describes components of teaching math concepts through problem solving. Examples of problem selection and students’ work samples will be shared. Assessment, planning, and some evidence of effectiveness will be examined.
Deirdre C. Greer
Columbus State University, Columbus, Georgia
Room 355 A (Convention Center) capacity: 264
Lessons from Immigrant Children: Teaching English and Teaching Math
(3–8) Session
Teaching Latino children to love and understand math involves teaching two languages—English and that of mathematics. The presenter will share strategies that will overcome the language barriers as students study mathematics.
Rosemary Klein
Bailey Middle School, Cornelius, North Carolina

Room 251 A/B (Convention Center) capacity: 234

The Instructional Architect: Providing a Blueprint for Teachers to Integrate Online Mathematics Resources with Instruction
(3–8) Session
Participants will discuss best practices for successfully implementing free online resources from the National Science Digital Library using the Instructional Architect as well as strategies to streamline their mathematics instruction.
Julie Herron
University of Alabama, Tuscaloosa, Alabama
Deonne Johnson
Utah State University, Logan, Utah

Alta/Snowbird/Brighton (Marriott) capacity: 105

Teaching Multiplication Algorithms across Some Cultures
(3–8, Teacher of Teachers) Session
Several multiplication algorithms exist from different cultures around the world. This presentation features multiplication algorithms from different cultures—Hindu, Egyptian, Russian, Japanese, and Chinese.
Cheng-Yao Lin
Southern Illinois University, Carbondale, Illinois

Grand Ballroom A (Hilton) capacity: 171

Adding Zingers to Grades 4–8
(3–8, Teacher of Teachers) Session
These Math Olympiad problems grab and hold students’ interest, making students want to do more math. Important concepts engage students and help them think mathematically, preparing them for high school. You will receive 60 problems.
Richard Kalman
Mathematical Olympiads for Elementary and Middle Schools, Bellmore, New York

Ballroom A/C (Convention Center) capacity: 732

Using Activities and Applications to Introduce Probability in Middle Grades Mathematics
(6–8) Session
This session will present many activities and applications that can be used to present probability concepts in the middle grades. Not only will probability be introduced, but activities involving geometric probability will also be demonstrated.
Rick Billstein
University of Montana, Missoula, Montana

Ballroom G (Convention Center) capacity: 398

Jumping through Loops: Expanding Concepts from Grade to Grade
(6–8) Session
Do you want your students to be familiar with a lesson before you present it? Engaging, interesting lessons will be demonstrated in which concepts become more challenging each year as the same basic activities are presented. Handouts will be provided.
Ann TeBockhorst Williams
L. A. Ainger Middle School, Rotonda West, Florida
Carolyn Costello
L. A. Ainger Middle School, Rotonda West, Florida

Grand Ballroom B (Hilton) capacity: 171

TODOS–Texas Instruments California Task Force Update
(6–12) Session
TODOS: Mathematics for ALL presentation
The goal is to inform the participants regarding the work and progress of the Task Force.
P. Michael Lutz
TODOS: Mathematics for ALL, Bakersfield, California; California State University, Bakersfield, California

Topaz (Hilton) capacity: 80

Why Discrete Mathematics Is So Vital for Middle School Mathematics
(6–12, Teacher of Teachers) Session
Problem-solving success is a benchmark for knowing mathematics. A collection of rich problems from discrete mathematics that promote, connect, and apply number, algebra, and geometry topics will be examined for content and pedagogical impact.
Margaret J. Kenney
Boston College Mathematics Institute, Chestnut Hill, Massachusetts

Hall 2 (Convention Center) capacity: 1677
599
(9–12) Session
Spanning biology, physics, chemistry, and driver’s education, this unit covers percent, mass, weighted average, best-fit line, inequalities, exponential functions, extrapolation, relative probability, box plots, motion, force, and impulse.

Bente B. Winston
Sussex School, Missoula, Montana

Matt Zunker
Sussex School, Missoula, Montana

Ballroom I (Convention Center) capacity: 398

600
Understanding Pearson’s Correlation Coefficient
(9–12) Session
We will explore an intuitive measure of association. By examining properties of this nonstandard measure, participants will develop Pearson’s correlation coefficient and will better understand how statistical measures are invented.

Gary D. Kader
Appalachian State University, Boone, North Carolina

Christine A. Franklin
University of Georgia, Athens, Georgia

Grand Ballroom C (Hilton) capacity: 388

601
Torricelli’s Law and Leaking Water: A Data-Collection Activity for Algebra, Precalculus, Statistics, and Calculus
(9–12) Session
An activity in which students can easily collect water-leakage data and model water flow using various functions will be described. Regression analysis and diagnostics, mathematical models, differential equations, and water clocks will be discussed.

Stephen J. Miller
Potomac School, McLean, Virginia

Grand Ballroom G/H (Marriott) capacity: 187
602
Using Origami to Explain Mathematics Ideas in Geometry and Algebra
(9–12) Session
Participants will fold two origami models that can be used to explain different concepts in algebra and geometry. These ideas will cover coordinate geometry, intersecting perpendicular planes, and the area and volume of similar shapes.
Oran Pyle
Summerville High School, Tuolomne, California
Room 254 A (Convention Center) capacity: 99

603
Opening the Black Box: LinReg Explained
(9–12, Higher Education) Session
We all too often use technology tools without understanding the algorithm behind the software. Come and learn how LinReg (linear regression) works, and be able to explain it in terms that an algebra student can appreciate.
John Hanna
Teachers Teaching with Technology (T³), Dallas, Texas
Ballroom E (Convention Center) capacity: 398

604
Technology-Enhanced Mathematics Instruction: Effects of Visualization on Learning Trigonometry
(9–12, Higher Education, Teacher of Teachers) Research Session
Hear details of a research study that found a positive effect for technology use on students’ learning of trigonometry. Whole-class, technology-intensive instruction emphasizing visualization produced superior results over traditional instruction.
Jeffrey John Steckroth
Old Dominion University, Norfolk, Virginia
Room 254 C (Convention Center) capacity: 99

605
Factors Affecting Proof in the Classroom
(9–12, Teacher of Teachers) Research Session
Proof in the mathematics classrooms has become infrequent, as this research shows. A study of seventy-eight teachers has revealed significant factors that affect and predict if and how teachers will use proof.
Usha Kotelawala
Graduate School of Education, Fordham University, New York, New York
Room 251 C (Convention Center) capacity: 116

606
Computer Technology and Cognitive Science Make Community College Developmental Mathematics Courses Make Sense
(Higher Education) Session
Integrating software with an inquiry-based text changes a community college remedial course from memorization to critical thinking, problem solving, communication, and collaboration, resulting in an understanding of mathematical concepts and real-world applications.
Lucie Refsland
New River Community and Technical College, Lewisburg, West Virginia
Solitude (Marriott) capacity: 70

607
Students Using Mathematics for Decision Making: When It Makes Sense to Them!
(General Interest) Session
Students must make sense of mathematics as a crucial component in their readiness to use it in decision making. Instructional examples from this session support our students in making connections and extensions about the mathematics they learn.
Henry S. Kepner, Jr.
President-Elect, National Council of Teachers of Mathematics; University of Wisconsin–Milwaukee, Milwaukee, Wisconsin
Hall 1 (Convention Center) capacity: 2000

608
Getting to Know CME: The Brand-New, NSF-Funded High School Math Program
CME—a problem-based, student-centered program—is organized around an Algebra 1-geometry-Algebra 2-precalculus sequence. This session provides an overview of the program and demonstrates some of the field-tested approach.
Room 250D (Convention Center) capacity: 100

609
Technology to Guide Instruction: Prentice Hall Mathematics Approach
Come see the engaging teaching and assessment tools that are part of Prentice Hall Mathematics. This session focuses on how to integrate technology into classroom instruction to help plan, teach, and assess more effectively.
Room 250E (Convention Center) capacity: 100
4:00 p.m.–5:00 p.m.

EW36
Holt, Rinehart and Winston

Game Time with Holt!
Come play hand-on, fun filled games that meet key objectives within your curricula. Learn how to modify these games for diverse learners. Attendees will receive game templates and additional resources for easy implementation.

Room 250F (Convention Center) capacity: 100

4:45 p.m.–5:30 p.m.

608
New Teacher Celebration Session!
(General Interest) Session □NT□
Celebrate being a new teacher (or soon to be one) with others entering this exciting profession. We’ve got great things planned and great prizes. You’ll be sad you missed it. Open to teachers in their first two years and those seeking certification.

Francis (Skip) Fennell
President, National Council of Teachers of Mathematics; McDaniel College, Westminster, Maryland

Ballroom B/D (Convention Center) capacity: 732
On to Monterrey, Mexico (General Interest) Session
ICME-11 is an opportunity to interact with mathematics educators from across the world. This session will be an overview and introduction to ICME-11.

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

Patrick Scott
New Mexico Public Education Department, Santa Fe, New Mexico

Cindy Chapman
Navajo Elementary School (Retired), Albuquerque, New Mexico

Room 254 A (Convention Center) capacity: 99

A Medley of Ideas for Promoting Mathematical Proficiency (Teacher of Teachers) Session
This interactive session will address how the five strands of mathematical proficiency can be interwoven with literature-based problem solving. Attendees will receive a bibliography and graphic organizers to share with their preservice teachers.

Karen Karp
University of Louisville, Louisville, Kentucky

Elizabeth Todd Brown
University of Louisville, Louisville, Kentucky

Room 251 C (Convention Center) capacity: 116

Judging Curricular Effectiveness: Looking Deeply at Students’ Understanding and Achievement (Pre-K–2) Session
This session will look in depth at understanding and achievement in grades 1–2 for a standards-based curriculum (Investigations) and a traditional, procedural curriculum. Videotaped problem solving shows results not seen in standardized test scores.

Stephanie Z. Smith
Georgia State University, Atlanta, Georgia

Marvin E. Smith
Kennesaw State University, Kennesaw, Georgia

Ballroom H/J (Convention Center) capacity: 732

Score a Place-Value Home Run with the Bases Loaded! (Pre-K–2) Session
We will learn to use the base-four and base-five number systems with children to help them explore crucial components they need to make sense of our base-ten number system. Detailed lesson plans and resources will be available.

Julie Boss
Brookline Public Schools, Brookline, Massachusetts

Tara Washburn
Brookline Public Schools, Brookline, Massachusetts

Room 255 B (Convention Center) capacity: 356

Assessment for, and of, Understanding: Operative Rather than Figurative (Pre-K–5) Session
Ideas will be explored of assessments that target engaging students in operative thinking, analyzing deep structures of mathematics, and solving and representing problems in novel instead of familiar contexts.

Zhijun Wu
University of Maine at Presque Isle, Presque Isle, Maine

Room 250 A (Convention Center) capacity: 123

Focus of the Year
EW Exhibitor Workshop

Make time to explore the Exhibit Hall for the latest in educational resources.
614  
Creating a Math Workshop: Problem Solving as the Focal Point for Differentiating Primary School Mathematics Instruction  
(3–5) Session  
Learn how a math workshop, focused on problem solving, allows for differentiation. Explore strategies to build and sustain components of this format, especially independent tasks and “strategy share,” and plan ways to develop it in your classroom.  
Sarah Wallus Hancock  
Maplewood Richmond Heights Elementary School, Richmond Heights, Missouri  

Ballroom B/D (Convention Center) capacity: 732

615  
Differentiating the Problem-Solving Process for Struggling Students  
(3–8, Teacher of Teachers) Session  
Do your students struggle with problem-solving activities? This session will share strategies using manipulatives, visual representations, storybooks, and creative extensions to help all students succeed with problem-solving activities.  
Jane M. Wilburne  
Pennsylvania State University Harrisburg, Middletown, Pennsylvania  

Hall 1 (Convention Center) capacity: 2000

616  
Enliven Your Mathematics Class with Resources from ON-Math!  
(3–12) Session  
Members of NCTM’s ON-Math! Editorial Panel will showcase the journal’s technology-enhanced articles and resources to engage students in meaningful mathematical investigations.  
ON-Math: Online Journal of School Mathematics Editorial Panel  
National Council of Teachers of Mathematics, Reston, Virginia  

Ballroom G (Convention Center) capacity: 398

617  
Navigating through Problem Solving and Reasoning: Grade 6  
(6–8) Session  
Come engage with the activities in Navigating through Problem Solving and Reasoning: Grade 6. Each content strand will be explored through a rich activity.  
Denisse R. Thompson  
University of South Florida, Tampa, Florida  

Room 355 A (Convention Center) capacity: 264

618  
Creating Your Own Probability Carnival  
(6–8, Teacher of Teachers) Session  
Step right up and take a chance! Learn how to create a probability carnival in your own classroom. Come experience how probability games can combine skills for fractions, decimals, ratios, and percents.  
Kathryn Silvis  
La Roche College, Pittsburgh, Pennsylvania  

Room 251 A/B (Convention Center) capacity: 234

619  
Algebra Connections: Functions Strand  
(6–12) Session  
Functions are what algebra is all about. Come see lessons that foster students’ deeper understanding of functions by exploring functions and helping them see all the connections among the multiple ways to represent functions.  
Virginia Head  
College Preparatory Mathematics (CPM), Grand Prairie, Texas  

Ballroom E (Convention Center) capacity: 398

620  
The Mathematics of The DaVinci Code and Other Dan Brown Novels  
(6–12) Session  
The mathematics in Dan Brown’s novels will be illustrated and discussed: cryptography, the geometry and math of the golden ratio, Fibonacci numbers, symmetry, perspective geometry in art, the mathematics of Leonardo and his inventions, and much more.  
Scott D. Oliver  
Adlai E. Stevenson High School, Lincolnshire, Illinois  

Room 251 F (Convention Center) capacity: 158

621  
Using Recreational Mathematics to Engage and Motivate Students in All Areas of Mathematics  
(6–12) Session  
Through recreational mathematics, students develop and strengthen problem-solving and reasoning skills. Learn how recreational math can be used to excite and motivate students from diverse backgrounds, cultures, and achievement levels.  
Rita H. Barger  
University of Missouri–Kansas City, Kansas City, Missouri  

Room 254 C (Convention Center) capacity: 99
Teaching and Learning with Mathematica®
(6–12) Session
See how the computer program Mathematica and the free player can enhance learning through interactivity and multiple representations. Make cool graphs, amazing animations, and your own problem generator. Samples of students’ work will be shared.
Abigail Brown
Torrey Pines High School, San Diego, California
Room 255 A (Convention Center) capacity: 264

Engaging All Students with “Impossible Geometry”
(6–12, Higher Education) Session
This highly engaging, recreational geometry activity involves examining and creating impossible objects. The session includes a video clip, examples of impossible objects, sample students’ work and comments, and classroom-ready ideas and resources.
Lynda R. Wiest
University of Nevada, Reno, Reno, Nevada
Abraham Ayebo
University of Nevada, Reno, Reno, Nevada
Michael Dornoo
University of Nevada, Reno, Reno, Nevada
Room 355 B (Convention Center) capacity: 356

Strategies for Motivating Students in an Algebra Classroom
(9–12) Session
Students ask, “Why do I need algebra?” Many realize the need for arithmetic, but not for algebra. Participants will explore strategies to motivate students and engage them in the use of algebra outside the class. Handouts will be given.
Sadie Chavis Bragg
Borough of Manhattan Community College, New York, New York
Ballroom A/C (Convention Center) capacity: 732

Probability in Your Classroom
(9–12) Session
Use these lessons involving technology and connections with algebra, geometry, and number sense to help your students experience simulations, expected value, independent and dependent events, the binomial distribution, and more.
Fred Dillon
Strongsville City Schools, Strongsville, Ohio
Ballroom F (Convention Center) capacity: 398

How Mathematics Teachers Can Use PSAT and NMSQT Results to Benefit Their Students
(9–12) Session
Discussion will focus on how teachers can fully use PSAT and NMSQT results to help diagnose and improve their students’ math reasoning skills. Sample math questions and reported skills will be reviewed and analyzed.
Carol A. Jackson
Educational Testing Service, Princeton, New Jersey
Beth Robinson
College Board, New York, New York
Room 355 C (Convention Center) capacity: 237

En Route to Signature Pedagogies in Mathematics Education
(9–12, Higher Education, Teacher of Teachers) Research Session
This session will examine (1) the development and findings of research and professional development on important mathematics and powerful pedagogies and (2) a video-embedded wiki for signature pedagogies in mathematics teaching.
Cos D. Fi
University of Iowa, Iowa City, Iowa
Room 255 C (Convention Center) capacity: 354

Mathematics of the Underground Railroad Quilts
(General Interest) Gallery Workshop
Benjamin Banneker Association presentation
This workshop will explore symmetry, fractions, shapes, patterns, problem solving, and other mathematical concepts using quilt templates associated with the Underground Railroad. Using these concepts, participants will create several quilt patterns.
Edna Loretta Holbrook
Jackson State University, Jackson, Mississippi
Alicia Jefferson
Jackson State University, Jackson, Mississippi
Room 151 D/E/F (Convention Center) capacity: 143
Grant Writing: Tricks of the Trade
(General Interest) Gallery Workshop
Balancing the budget in lean times and funding math intervention programs, manipulatives, and enrichment activities will mean more reliance on grants. Using backward planning strategies, participants will learn the five W’s of grant writing.
Katey Hoehn
KD & Associates, Escondido, California

Room 251 D/E (Convention Center) capacity: 219

Using Concrete, Representational, and Abstract (CRA) Methods to Teach Math to All Students
(General Interest) Gallery Workshop
The presenters will share current research on CRA learning and demonstrate the CRA method for teaching mathematics through hands-on learning activities that are easy to duplicate for all learners.
Mary Little
University of Central Florida, Orlando, Florida
Lynda Penry
University of Central Florida, Orlando, Florida
Joe McNaughton
University of Central Florida, Orlando, Florida
Jodi O’Meara
University of Central Florida, Orlando, Florida

Room 253 A/B (Convention Center) capacity: 135

“I’m Sure!” Enhancing Children’s Probabilistic Reasoning with Problem-Solving Explorations
(3–5) Gallery Workshop
Explore a variety of investigations useful in helping third, fourth, and fifth graders become better problem solvers, address their probabilistic misconceptions, strengthen their number and operation sense, and make connections.
Stephen J. Bloom
Butler University, Indianapolis, Indiana

Room 150 D/E/F (Convention Center) capacity: 143

Multiplication and Division of Fractions: Helping Increase the Certainty of Understanding
(3–8) Gallery Workshop
A deep understanding of the operations of multiplication and division of fractions can be built in several ways. Representations, models, and contexts offer multiple strategies for reasoning about the operations.
Steve Klass
San Diego State University, San Diego, California; Encinitas Union School District, Encinitas, California
Linda Dye
Sweetwater Union High School District, Chula Vista, California

Room 151 A/B/C (Convention Center) capacity: 143

Let’s Solve ‘Em! Mathematical Problems from Singapore Classrooms
(3–8) Gallery Workshop
Participants will solve problems from recent national tests in Singapore. See methods that help learners move from being uncertain to being sure of themselves. Methods used in Singapore will be presented. Go home with a booklet of problems.
Ban Har Yeap
Nanyang Technological University, Singapore, Singapore

Room 250 B/C (Convention Center) capacity: 186

Probability Performances in Grades 3, 5, 7: Games and Beyond!
(3–8) Gallery Workshop
Seven, seven, seven,…? What’s the probability of rolling another seven? Engage in an activity, debrief a video in which students across grade levels grapple with big ideas from probability, and share research-based instructional strategies.
Rosann Hollinger
Milwaukee Public Schools, Milwaukee, Wisconsin
Pandora Bedford
Milwaukee Public Schools, Milwaukee, Wisconsin
Cynthia Cuellar
Milwaukee Public Schools, Milwaukee, Wisconsin

Room 255 F (Convention Center) capacity: 228
8:00 a.m.–9:30 a.m.

635
Creating Fun in Math Class: Make It Real, Make It Visual
(3–8) Gallery Workshop
Use hands-on learning to create fun and visually pleasing projects in the elementary school math classroom. Combine literature, art, and math to help cement a child’s learning. Activities include name art, patterns, quilting, origami, and more.
Don P. Paver
Columbia Elementary School, Kaysville, Utah
Room 355 F (Convention Center) capacity: 228

636
It’s Not in the Textbook; Now What? Hands-On, Discrete Mathematics in the Middle School
(6–8) Gallery Workshop
Join us for some hands-on examples in discrete math. Activities on vertex edge graphing, four-color theorem, combinations, and more can be applied right away in the classroom. Leave knowing how to get your kids excited about problem solving!
Alanna Webb
Cimarron Springs Elementary School, Surprise, Arizona
Room 151 G (Convention Center) capacity: 194

637
Using Constructions to Teach Geometry Concepts: Lessons, Applications, and Projects
(6–8) Gallery Workshop
Participants will learn how to use constructions to teach triangle classification, develop the triangle inequality theorem, explore how chords and bisectors are related to archaeology, and create nets for three-dimensional shapes.
Bonnie Sue Spence
University of Montana, Missoula, Montana
Room 355 E (Convention Center) capacity: 228

638
Math Forum Online Workshops: Building an Understanding of Probability
(6–8, Teacher of Teachers) Gallery Workshop
Learn about our series of free, online workshops for teachers working in grades 5–9. Teachers explore how technology can help students build their understanding of probability as they model and solve contextualized problems.
Suzanne Alejandre
The Math Forum @ Drexel, Philadelphia, Pennsylvania
Jason Silverman
Drexel University School of Education, Philadelphia, Pennsylvania
Room 355 D (Convention Center) capacity: 166

639
Probability Models to Increase Learning
(6–12) Gallery Workshop
Successful transition from experimental to theoretical probability needs visual models. A variety of probability examples will be examined using number lines, graphs, and area models as ways to represent probability.
Arlene P. Mitchell
RMC Research Corporation, Denver, Colorado
Room 150 G (Convention Center) capacity: 148

640
Unpacking Mathematical Activities with an English Language Learner (ELL) in Mind
(6–12) Gallery Workshop
TODOS: Mathematics for ALL presentation
Lessons for ELLs must attend to what is known to be effective from research. We will do some mathematics, make several math connections, and discuss a research-based lesson plan template that focuses on the needs of ELLs.
Nora G. Ramirez
Board of Directors, National Council of Teachers of Mathematics; TODOS: Mathematics for ALL, Tempe, Arizona
Room 155 B (Convention Center) capacity: 228

641
Enhance Mental Arithmetic Using Krypto
(6–12) Gallery Workshop
Krypto is an arithmetic card game that enhances students’ arithmetic and problem-solving skills through competition. Now, you can focus on content. Participants will play the game and see many variations for different classrooms.
Derek E. Fialkiewicz
Southern Nevada Regional Professional Development Program, Las Vegas, Nevada
Room 255 E (Convention Center) capacity: 228

642
Pentomino and Tangram Explorations
(6–12) Gallery Workshop
Participants will construct a set of pentominoes and tangrams and use them to explore various geometric and algebraic concepts. The explorations nurture a nonanxious attitude, promote cooperation, foster spatial-ability skills, and more.
Fred Decovsky
Teachers Teaching with Technology, Millburn, New Jersey
Room 255 D (Convention Center) capacity: 166
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8:00 a.m.–9:30 a.m.

**643**

It’s Precalculus Party Time!
*(9–12) Gallery Workshop*

Come participate in a variety of activities that cover a range of pre-calculus topics, from trigonometry to vectors. Learn how to conduct math walks, rocket launches, and other fun lessons.

**Tracie J. Catlett**
Louisville Collegiate School, Louisville, Kentucky

*Room 155 A (Convention Center) capacity: 166*

**644**

The Non-Euclidean World of Taxicab Geometry
*(9–12) Gallery Workshop*

Walk the streets of Ideal City to explore a non-Euclidean, real world that reinforces Euclidean definitions. Create a circle that’s a square. Enter a world where pi isn’t 3.14. The world of taxicab geometry is familiar and new.

**C. Anna Savoie**
Garfield High School, Seattle, Washington

*Room 254 B (Convention Center) capacity: 162*

**645**

Group Discovery Guides: Watch Your Students Teach Themselves!
*(9–12, Teacher of Teachers) Gallery Workshop*

Are there topics in your curriculum that you find yourself “forced” to teach lecture-style each year? Come use (and create your own!) small-group discovery learning activities that free you from this front-of-the-room trap.

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

*Room 155 C (Convention Center) capacity: 228*

**646**

Powers to the People: Social Justice Unit Projects for Algebra 2 and Precalculus
*(9–12, Teacher of Teachers) Gallery Workshop*

We will explore end-of-unit projects that address curricular objectives while engaging students in real-life, social justice issues. Focusing on mathematical modeling, the projects include linear inequalities, exponential functions, logs, and regression.

**Erica Litke**
East Side Community High School, New York, New York

**Mohammed Aminyar**
East Side Community High School, New York, New York

*Room 155 F (Convention Center) capacity: 228*

8:30 a.m.–9:30 a.m.

**EW37**

PBS TeacherLine

High Quality Online Learning in Math: Meeting Strategic Professional Development Needs

Mandates for highly qualified teachers, requirements for professional advancement, and other efforts to increase job satisfaction and teacher retention call for educators to find strong professional development options. This session explores the many benefits of using online learning to meet strategic professional development needs.

*Room 250D (Convention Center) capacity: 100*

**EW38**

Casio America, Inc.

Enabling Struggling Students to Achieve in Algebra

Hear one school’s story of how they used the Casio ClassPad to help struggling students succeed in algebra. This presentation will chronicle their journey and the impact it has had.

*Room 250E (Convention Center) capacity: 100*

**EW39**

Tom Snyder Productions

Using Technology to Differentiate Math Instruction in the Classroom

Technology has always held the promise of delivering instruction geared toward the unique needs of each student. Learn about two math software programs that support the goals of math fluency and word-problem comprehension, using self-paced, structured, and motivating environments that automatically adapt to the progress of each student.

*Room 250F (Convention Center) capacity: 100*

9:30 a.m.–10:30 a.m.

**647**

How Good Are Our Large-Scale Math Tests?
*(General Interest) Session*

NCTM has a new on-line tool designed to help all stakeholders evaluate the quality of large-scale mathematics tests or assessment systems. The presenters will demonstrate its use and discuss the quality features that are needed to ensure valid information about what students know and can do.

**Kay Gilliland**
Mills College, Oakland, California

**Michael Brown**
Consultant, San Antonio, Texas

**Steven J. Leinwand**
Ohio Council of Teachers of Mathematics; California Mathematics Council, Washington, DC

*Hall 1 (Convention Center) capacity: 2,000*
648
Bridge across the Americas: Problem Solving in Mathematics Education in Latin America
(General Interest) Session
This session will overview problem solving in Latin America with examples from Chile (problem solving in the secondary school curriculum), Costa Rica (teachers’ and students’ beliefs) and Mexico (problems that help students apply diverse strategies).

Patrick Scott
New Mexico Public Education Department, Santa Fe, New Mexico
Hernan Miranda
Universidad de Santiago de Chile, Santiago, Chile
Angel Ruiz
Universidad de Costa Rica San Pedro, San Jose, Costa Rica
Manuel Santos
Centro de Investigación y de Estudios Avanzados, Mexico City, Distrito Federal, Mexico

Room 355 B (Convention Center) capacity: 356

649
Computers in Early Childhood: The Best of All Possible “Worlds”
(Pre-K–2, Teacher of Teachers) Session
Computer use in the prekindergarten to grade 2 classroom is increasing. We show how computers, used alongside physical manipulatives, can provide the best of all possible worlds—the worlds of math and the worlds of software—in activities and tools.

Julie Sarama
University at Buffalo, State University of New York, Buffalo, New York
Douglas H. Clements
University at Buffalo, State University of New York, Buffalo, New York

Ballroom E (Convention Center) capacity: 398

650
I Didn’t Know They Knew That! Using Formative Assessment to Promote Children’s Early Math Development
(Pre-K–5) Session
Formative assessment can reveal what reasoning underlies grades K–3 students’ math performance and help teachers deliver effective instruction. Learn how and when to apply various assessment techniques and how to use findings to plan instruction.

Herbert Ginsburg
Teachers College, Columbia University, New York, New York

Room 255 C (Convention Center) capacity: 354

651
Supporting All Students at Navajo Elementary School, the TODOS School
(Pre-K–5, Teacher of Teachers) Session
TODOS: Mathematics for ALL presentation
Navajo Elementary School is implementing a new curriculum, building knowledge, and employing reflective practices to foster all students' proficiency in rigorous mathematics. We will share tools, processes, and strategies to improve learning.

Cathy Jeanne Kinzer
New Mexico State University, Las Cruces, New Mexico

Room 254 C (Convention Center) capacity: 99

652
Intervention: An Answer to Closing the Achievement Gap?
(Pre-K–8) Session
What is intervention? Which students profit from intervention? Who provides intervention instruction for struggling students? How much time should be devoted to intervention? How do you find time to do intervention?

Michael C. Hynes
University of Central Florida, Orlando, Florida

Room 254 A (Convention Center) capacity: 99

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9:30 a.m.–10:30 a.m.

653
Score with Games!
(3–5) Session
Learn how math games can improve students’ achievement! Discover games that help differentiate instruction and that motivate students toward higher achievement.

Christopher Triola
Learning Resources, Vernon Hills, Illinois

Room 355 C (Convention Center) capacity: 237

654
Delving Into Data with Investigations and Inspirations
(3–5, Teacher of Teachers) Session
Activities in this session are variations of Investigations in Number, Data, and Space activities that have been developed in the presenter’s classrooms. Fun, hands-on activities with integrated technology provide this daily dose of data.

Ann M. Valentino
Austin Independent School District, Austin, Texas
Sheryl Dawn Hardin
Austin Independent School District, Austin, Texas

Room 355 C (Convention Center) capacity: 237

655
The Keys to Opening Content Reading in the Math Classroom
(3–8) Session
Come discover, through an interactive session, the important keys to unlocking the successes of content reading in the mathematics classroom, and leave with strategies and handouts to assist in your class on Monday morning.

David John Brancamp
Nevada Mathematics Council, Reno, Nevada

Room 251 C (Convention Center) capacity: 116

656
Give Your Students a Hands-On Feel for Analyzing Data Using PowerPoint®!
(3–8, Teacher of Teachers) Session
Constructing graphs to analyze data is a great way for students to work with fractions and decimals. Create interactive work areas for graphing using PowerPoint beyond a slide show! Create pictographs, bar graphs, and more with a hands-on feel.

Margo Lynn Mankus
State University of New York–College at New Paltz, New Paltz, New York

Room 251 A/B (Convention Center) capacity: 234

657
Algebra Rules! (“Rules” versus “Is Awesome”): Building a Deeper Understanding of Functions
(6–8) Session
Explore how students develop recursive and explicit rules using patterns found in ancient stones, running at the Flying Pig Marathon, and planning a sports conference. Students use these rules to analyze functions with tables, graphs, and equations.

Kathy Gavin
University of Connecticut, Storrs, Connecticut

Room 355 C (Convention Center) capacity: 237

658
Using Formative Assessments to Improve Students’ Understandings of Rational Number
(6–8) Session
Learn about a variety of formative assessments that can be used to improve the teaching and learning of rational number. Activities were part of a year-long professional development program that resulted in the creation of professional learning communities.

William S. Bush
University of Louisville, Louisville, Kentucky
Maggie B. McGatha
University of Louisville, Louisville, Kentucky
Peg Darcy
Jefferson County Public Schools (retired), Louisville, Kentucky
Linda Montgomery
Department of Education, Nicholasville, Kentucky

Room 251 F (Convention Center) capacity: 158

659
Using Global Information System (GIS) and Global Positioning System (GPS) to Apply Math in Our Changing World
(6–8) Session
Students can keep track of the changing local landscape by using GPS receivers, aerial photography, and GIS software. Using their math skills, students will estimate the ecological impact of development. A CD of activities will be provided.

Andrew Chiaraviglio
Cary Academy, Cary, North Carolina
Patricia Martin
Cary Academy, Cary, North Carolina

Room 255 A (Convention Center) capacity: 264
9:30 a.m.–10:30 a.m.

660
Using Technology-Based Projects to Foster Geometric Thinking in the Middle Grades
(6–8) Session
Join us to discuss classroom-tested projects that engage students using Geometer’s Sketchpad. Topics will include transformations, quadrilaterals, angle relationships, and more. Activities are aligned with the NCTM Standards and include assessments.

Jennifer Nickell
Lakota Local Schools, Liberty Township, Ohio
Suzanne Rushton Harper
Miami University, Oxford, Ohio
Shannon Driskell
University of Dayton, Dayton, Ohio

Room 255 B (Convention Center) capacity: 356

661
A Completely Computer-Based, Interactive Approach to Middle School Math, Including Algebra
(6–12) Session
Experience a completely computer-based, interactive approach to teaching and learning middle school math that fuses math and technology and empowers students to explore math and challenge assumptions in ways not possible with paper-based resources.

William Masalski
Association of Teachers of Mathematics in Massachusetts, Amherst, Massachusetts

Ballroom A/C (Convention Center) capacity: 732

662
Facilitating Mathematics with Geocaching
(6–12) Session
Geocaching is a hobby that uses a GPS unit to hunt for hidden caches given a set of coordinates. Learn how to use geocaching to help students of all levels, including those with special needs, understand and apply important mathematics!

Kevin DeVizia
Delaware Valley School District, Milford, Pennsylvania

Ballroom B/D (Convention Center) capacity: 732

663
Archimedes and the Emergence of Pi
(6–12) Session
Return to a time circa 250 B.C. and watch pi emerge, infusing Archimedes’ method with today’s technology. With the use of spreadsheets and GeoGebra (free dynamic geometry software), pi will come alive for you and your students.

Edward Knote
Broward County Public Schools, Fort Lauderdale, Florida

Ballroom G (Convention Center) capacity: 398

10:00 a.m.–11:00 a.m.

664
Through Chinese Eyes: Mathematics Education in the United States
(9–12, Higher Education, Teacher of Teachers) Session
Two Chinese students will reflect on U.S. mathematics education from their perspectives. The audience will share inspirations and frustrations and then actively discuss established national goals and the reality in the United States.

Yan Wang
University of Tennessee, Knoxville, Tennessee

Room 250 A (Convention Center) capacity: 123

665
“Bad Graph” Experiences and Teachable Moments: Using the TI-84 Plus™ to Encourage Classroom Discourse
(9–12, Teacher of Teachers) Session
Most mathematics teachers who use technology have had “bad graph” experiences. Although such events may be frustrating, they also provide opportunities for teachable moments for students and teachers. Several examples are explored in this talk.

Michael Todd Edwards
Miami University, Oxford, Ohio

Room 355 A (Convention Center) capacity: 264

EW40
Pearson
AMP Up Your Math Scores!
There’s a lot of talk about the Focal Points, but what does a program built on them look like? Get a sneak peek at the new middle school intervention program with a quest for coherence and comprehension.

Room 250D (Convention Center) capacity: 100

EW41
Pearson
What? Not All Your Students Love Math?
Not all students love math, but all students deserve materials that will enable them to meet their high school graduation requirements successfully and be prepared for college. This session describes textbooks for the math-phobic.

Room 250E (Convention Center) capacity: 100

EW42
People’s Education
Intervention That Works in Your Classroom!
Learn how to implement intervention programs with formative assessments, pacing charts, pre- and posttests, and more into your classroom or after-school programs, and help your students master core skills and achieve test success!

Room 250F (Convention Center) capacity: 100
10:00 a.m.–11:30 a.m.

666
Human Graphs: Making Data Analysis and Probability Accessible to All Students
(General Interest) Gallery Workshop
Benjamin Banneker Association presentation
Learn data analysis and probability concepts using workshop participants as the data points. Participants will construct and analyze box-and-whisker and stem-and-leaf plots. Participants will also visit hands-on probability stations.

Shelley Jones
Central Connecticut State University, New Britain, Connecticut
Cheryl Adeyemi
Virginia State University, Petersburg, Virginia

Room 151 G (Convention Center) capacity: 194

667
Trisect an Angle and Double a Cube
(General Interest) Gallery Workshop
Participants will have the opportunity to construct special instruments to solve two famous problems in the history of mathematics. We will discuss why these tools actually solve these famous “impossible” problems.

Lowell F. Lynde, Jr.
University of Arkansas at Monticello, Monticello, Arkansas

Room 355 F (Convention Center) capacity: 228

668
Math Coaching: A Work in Progress!
(Teacher of Teachers, 6–8) Gallery Workshop
Currently coaching or thinking of starting? This workshop will focus on tools and strategies successfully employed by two experienced math coaches. Participants will discuss actual coaching situations and apply strategies shared. Handouts will be provided.

Paul V. Ridgway
Rahway Middle School, Rahway, New Jersey
Sara Torpey
Linden Public Schools, Linden, New Jersey

Room 151 D/E/F (Convention Center) capacity: 143

669
Roots to Blossoms: A Garden of Possibilities for Mathematical Representations in Primary School Classrooms
(Pre-K–2) Gallery Workshop
Developing mathematical minds for transition from manipulatives to numerical symbols is like gardening. Learn how to plant seeds of mathematical knowledge in your students’ minds through the integration of mathematics, literacy, and science.

Lana Bray Thomas
University of Louisville, Louisville, Kentucky
Elizabeth Todd Brown
University of Louisville, Louisville, Kentucky

Room 251 D/E (Convention Center) capacity: 219

670
Investigating Data and Probability with Hands-On Activities
(Pre-K–5) Gallery Workshop
Engage in activity-based problems to foster students’ learning in data analysis and probability! Presenters will share many of their favorite lessons, complete with standards and assessments, to promote statistical reasoning and conceptual knowledge.

Mary Majerus
Westminster College, Fulton, Missouri
Debra Ann Perkowski
Westminster College, Fulton, Missouri

Room 155 F (Convention Center) capacity: 228

671
Fractions: From Concepts to Mastery
(3–5) Gallery Workshop
Learn to use commercial and student-made manipulatives in a variety of ways to develop students’ understanding of concepts and the computation of fractions, percents, and decimals. Tips and tricks for computation will be shared.

Norman Labush
Cooper City Elementary School, Cooper City, Florida; Florida Atlantic University Davie Campus, Davie, Florida

Room 155 B (Convention Center) capacity: 228

672
Use Microsoft® Word, PowerPoint®, and Excel to Teach Geometry? You Bet!
(3–5) Gallery Workshop
This session will give hands-on experiences to show how easy it can be to use Word, Excel, and PowerPoint to teach math skills such as congruency, similarity, symmetry, plane figures, 3-D objects, flips, slides, turns, and more.

Chris Cuppett
Wicomico County Board of Education, Salisbury, Maryland

Room 254 B (Convention Center) capacity: 162
10:00 a.m.–11:30 a.m.

673 Demystifying Dice: Discovering the Math

(3–8) Gallery Workshop

Are you intrigued by multisided dice and want to maximize learning opportunities by using them more often? Come prepared to play dice games and discover the math personalities of multisided dice and their potential for use in your math program.

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

Room 150 G (Convention Center) capacity: 148

674 There’s More to Mean than Add ‘Em Up and Divide by N

(3–8, Teacher of Teachers) Gallery Workshop

Come interact with a representation of mean you’ve never seen before, demonstrate its seven properties, and make better connections with standard deviation. Explore a sequential articulation of methods and models across the grade bands.

Kevin John Reins
University of South Dakota, Vermillion, South Dakota

Room 150 D/E/F (Convention Center) capacity: 143

675 Looking at Intervention through a Concrete Lens

(3–8, Teacher of Teachers) Gallery Workshop

Participants will explore decision-making models that enable facilitators and teachers to select appropriate strategies and activities to use with struggling teachers and struggling students. Participants will receive draft versions of the tools.

Nancy Kay Berkas
Consultant, Fort Atkinson, Wisconsin

Room 151 A/B/C (Convention Center) capacity: 143

676 Meeting Standards with a Deck of Playing Cards

(3–8, Teachers of Teachers) Gallery Workshop

Engage in hands-on activities that use a deck of playing cards to meet Content and Process Standards. Activities will include variations of card games with a mathematical twist (e.g., Integer War, Attribute Eights) and other card-based tasks.

Deborah Ann McAllister
University of Tennessee at Chattanooga, Chattanooga, Tennessee

Room 255 D (Convention Center) capacity: 166

677 Algebra as Representation: Helping All Students Make the Transition from Arithmetic to Algebra

(3–12) Gallery Workshop

Powerful visual models, important activities, and questioning strategies help all students recognize and describe patterns and use algebra as a language as they make the challenging transition from elementary to middle and high school algebra.

Andy Clark
Portland Public Schools (retired), Portland, Oregon; Great Source Education Group, Portland, Oregon

Room 250 B/C (Convention Center) capacity: 186

678 Solving Equations with a Hop, Skip, Jump, or a Little Magic

(6-12) Gallery Workshop

By actively engaging in contexts of jumping, playing with seesaws, or solving a magic trick, students develop solutions conceptually. See how to use these contexts to build conceptual understanding and move to abstract procedures.

Sheldon James Erickson
Fresno Unified School District, Fresno, California; AIMS Education Foundation, Fresno, California

Room 355 D (Convention Center) capacity: 166

679 The Wheel! When Is It Not a Circle? Graph It! Discover Peaks, Valleys, and More!

(6–12, Teacher of Teachers) Gallery Workshop

Using a bicycle wheel, we will explore graphical representations that connect with more sophisticated concepts. We will develop prior knowledge that bridges to such trig concepts as amplitude, frequency, and period in a meaningful, real manner.

Lauren Anne Flood
Marist College, Poughkeepsie, New York

John F. McAdam
Marist College, Poughkeepsie, New York

Room 155 C (Convention Center) capacity: 228

680 Bowl Your Way to a Better Understanding of Probability and Data Analysis

(6–12, Teacher of Teachers) Gallery Workshop

Learn how to use a bowling simulator (provided) to have fun with probability and data analysis. Analyze and compare the simulator outcomes with theoretical predictions and our own experiences and with real-life bowling. Bring a graphing calculator.

Terry Baylor
Shippensburg University, Shippensburg, Pennsylvania

Room 253 A/B (Convention Center) capacity: 135
10:00 a.m.–11:30 a.m.

681
Serving Unit-Circle Trigonometry on a Paper Plate
(9–12) Gallery Workshop
We will build students’ understanding of unit-circle trigonometry on a paper plate. Students will be engaged with colors, triangles, and patterns as they construct connections between unit-circle and right-angle trigonometry.

Vicki Lyons
Lone Peak High School, Highland, Utah
Todd Vawdrey
Lone Peak High School, Highland, Utah

Room 255 E (Convention Center) capacity: 228

682
From Manipulatives to Geometry, Algebra, and Technology: Solving an Ancient Optimization Problem
(9–12) Gallery Workshop
Use manipulatives, geometry, algebra, data analysis, and technology to solve an optimization problem posed in the first century A.D. The TI-Nspire will be used to construct a model of the problem and analyze data.

Elizabeth Gasque
Consultant, Charleston, South Carolina

Room 255 F (Convention Center) capacity: 228

683
Thinking inside the Box: Using Games to Teach Geometric Concepts
(9–12) Gallery Workshop
Game playing will be introduced as an effective teaching technique for accomplishing specific curriculum objectives and reinforcing NCTM Standards. Participants will play the games and reflect on the impact they make on learning and motivation.

Michael Robert Patterson
Advanced Technologies Academy, Las Vegas, Nevada

Room 355 E (Convention Center) capacity: 228

684
Explorations That Improve Students’ Understanding of Limits and Derivatives
(9–12, Higher Education) Gallery Workshop
This session will share several investigations we have used in the classroom to help strengthen students’ understanding of limits and derivatives. We will discuss some ideas for developing these investigations and offer reproducible copies.

Ken M. Collins
Charlotte Latin School, Charlotte, North Carolina

Room 155 A (Convention Center) capacity: 166

11:00 a.m.–12:00 noon

685
Have Radical Learning Techniques Closed the Gap? A Closer Examination of the Algebra Project
(General Interest) Session
Benjamin Banneker Association presentation
A review of the growth of the algebra project and whether its underlying philosophy has minimized the achievement gap.

Heather Trotter
Benjamin Banneker Association, Columbia, Maryland

Room 355 C (Convention Center) capacity: 237

686
Common Mistakes and Misconceptions
(Teacher of Teachers) Session
This interactive session addresses statistical concepts that may be difficult for students to understand. The activities will employ the recommendations found in the GAISE Pre-K–12 report (www.amstat.org/education/gaise).

Martha Aliaga
American Statistical Association, Alexandria, Virginia

Room 251 C (Convention Center) capacity: 116

About Learning, Inc. introduces 4MAT® 4 Algebra
The System of Mathematics
We compare ourselves to others constantly. We compare prices. We compare stores, restaurants, cities, music and all manner of things.

How can we represent situations that are not equal?

“Almost,” and “Close, but not quite,” are two phrases used often in life. Without knowing it, we use the idea of inequalities almost on a daily basis.

In this unit you will study the properties of inequalities and their applications to the real world.

How are comparisons in our lives and comparisons in mathematics related?

For more information, visit Booth #702 and attend our workshop on Friday, April 11 from 1-2pm, Room 250D.
www.aboutlearning.com/4mat4algebra.htm
How Are a Slinky and the Concept of Slope Related?
(Teacher of Teachers, 6–8) Session
Participants will engage in an investigation in which they will measure, represent, compare, and analyze data to unpack important algebraic ideas. Experience and be ready to teach a challenging concept meaningfully!

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

Room 254 C (Convention Center) capacity: 99

Diagnostic Intervention in the Primary Grades
(Pre-K–2) Session
Hear about the successes, challenges, and initial research findings of the Kentucky primary mathematics diagnostic intervention initiative involving 88 mathematics intervention teachers and more than 3,000 students.

Alice Gabbard
Kentucky Center for Mathematics, Highland Heights, Kentucky

Ballroom B/D (Convention Center) capacity: 732

Standards in Action
(Pre-K–2) Session
Studies show that students achieve more when engaged in hands-on learning activities. Teachers will join in manipulative-based activities aligned with NCTM Standards and Curriculum Focal Points and designed to meet students’ needs better.

Carrie Murphy
Learning Resources, Vernon Hills, Illinois

Room 255 B (Convention Center) capacity: 356

Making Research-Based Innovations Work in Large, Urban Settings: Lessons Learned
(Pre-K–2, Teacher of Teachers) Research Session
How can an innovation work at all necessary levels? See results of a three-city, longitudinal research project in early math. Information from students, teachers, and administrators reveals the crucial components of a successful scale-up.

Douglas H. Clements
University at Buffalo, State University of New York, Buffalo, New York

Julie Sarama
University at Buffalo, State University of New York, Buffalo, New York

Room 255 A (Convention Center) capacity: 264

Measuring Up: Mathematical Tools for the Mathematically Gifted and Challenged Student in the Same Classroom
(Pre-K–5) Session
This session provides hands-on opportunities to examine the integration of inquiry, measurement, and comparative language to solve problems, which promotes metacognition and critical-thinking skills in math, especially in a diverse group of learners.

Teresa Ann Le Sage
University of Houston—Victoria, Victoria, Texas

Barba Aldis Patton
University of Houston—Victoria, Victoria, Texas

Room 254 A (Convention Center) capacity: 99

Curriculum-Based Evaluation: Collaboration between General- and Special-Education Math Teachers
(PreK–8) Session
Teachers will learn about strategies for working together to implement curriculum-based evaluation to meet the math needs of all students. Case studies will be presented to illustrate the problem-solving process. Resources will be shared.

Bridget Kelley
Western Washington University, Bellingham, Washington

Ballroom H/J (Convention Center) capacity: 732

Solidifying Vocabulary and Conceptual Understanding through the Use of Graphic Organizers
(Pre-K–8) Session
This interactive session will help teachers see the power of, and gain practice using, several graphic organizers. The graphic organizers Concept Circles, Frayer Models, List-Group-Label, and Semantic Feature Analysis will be highlighted.

Cecil Richard Crouch
Pennsylvania Training and Technical Assistance Network, Pittsburgh, Pennsylvania

Room 250 A (Convention Center) capacity: 123
I Can Solve It! Developing Students’ Persistence and Flexibility in Problem Solving
(3–5) Session
How do you develop the “I can solve it” attitude and flexibility of students’ thinking? Teachers who participated in NCTM’s 2006–07 Lesson Study share lessons and teaching strategies that develop persistence and flexibility.

Jennifer M. Suh
George Mason University, Fairfax, Virginia
Stacy Graham
Boalsburg Elementary School, Boalsburg, Pennsylvania
Gwen Kopeinig
Lewisboro Elementary School, South Salem, New York
Brooke Bertholet
Flint Hill School, Oakton, Virginia
Terry Ferrarone
Katonah-Lewisboro Schools, Katonah, New York

Ballroom A/C (Convention Center) capacity: 732

Making Sense of Division
(3–5) Session
Come explore large-number division strategies that highlight the development of number and operation sense. Emphasis will be placed on using context to explore division situations as participants engage in sense-making computation strategies.

Melissa E. Hedges
Milwaukee Public Schools, Milwaukee, Wisconsin
Beth Ann Schefelker
Milwaukee Mathematics Partnership, Milwaukee Public Schools, Milwaukee, Wisconsin

Room 355 B (Convention Center) capacity: 356

Using Virtual Manipulatives to Model Computation with Fractions
(3–8) Session
This session will focus on representing computations with fractions using virtual manipulatives from the National Library of Virtual Manipulatives.

Joy Bronston Schackow
University of South Florida, Tampa, Florida

Ballroom G (Convention Center) capacity: 398

Using Origami in Teaching Geometry
(3–8) Session
Investigating and constructing origami models that help students understand important concepts of Euclidian geometry: line segments, perpendicular and parallel lines, congruency, similarity, area, and perimeter.

Alla Korinevskaya
Tarbut V’torah Community Day School, Irvine, California

Room 355 A (Convention Center) capacity: 264

One Great Problem
(6–8) Session
Participants will solve the Toothpick Problem. Extensions will be offered to model differentiation. Connections within mathematics will be made. Bring your sense of humor, and be prepared to have a great time solving a great problem!

Mary Buck
Helena Middle School, Helena, Montana

Room 251 F (Convention Center) capacity: 158

Texas Hold’em 101
(6–12) Session
So you want to be a poker pro? Learn some of the basic probabilities important to the success of stars on television. Although I’m a math teacher, my brother has made a million bucks on the poker tour. Handouts for classroom use will be provided.

William John Carli
Alliance City Schools, Alliance, Ohio

Ballroom F (Convention Center) capacity: 398

Taking the Uncertainty out of Writing Quality Multiple-Choice Items for Assessments
(6–12) Session
This session will use NAEP-type items to illustrate tips for editing items. An item review checklist will be provided to help participants write quality multiple-choice items for their classroom, district, or state assessments.

Antionette (Toni) Sue McCarthy
Pearson Education, Inc., Iowa City, Iowa
David Sanderson
Pearson Education, Inc., Iowa City, Iowa

Room 251 A/B (Convention Center) capacity: 234

Can I Become the Math Teacher I Am Destined to Be? Certainly!
(9–12) Session
Strategies for managing classrooms, motivating students, mastering mathematics, and meeting everyone’s expectations, including your own, will be shared in an interactive, empowering dialogue. First-year teachers are especially welcome!

Thomas Evitts
Shippensburg University, Shippensburg, Pennsylvania

Ballroom E (Convention Center) capacity: 398
11:00 a.m.–12:00 noon

702
Shaping the Culture of Ninth-Grade Algebra 1 Classrooms
(9–12) Session
Classroom culture and students’ views of intelligence can be obstacles to achievement. We will present interventions aimed at shaping classroom culture, through a focus on effective effort, metacognition, interpersonal skills, and problem solving.
Lisa Brown
Charles A. Dana Center, University of Texas at Austin, Austin, Texas
Danielle Seabold
Charles A. Dana Center, University of Texas at Austin, Austin, Texas
Susan Hudson Hull
Charles A. Dana Center, University of Texas at Austin, Austin, Texas

703
Mathematical Processing Instrument for Calculus (MPIC)
(9–12, Higher Education, Teacher of Teachers) Research Session
Understanding calculus is strongly related to students’ abilities to synthesize visual and analytic thinking. We will introduce an instrument designed to determine students’ preferences for graphic or analytic representational schemes in calculus.
Erhan Selcuk Haciomeroglu
University of Central Florida, Orlando, Florida
Leslie Aspinwall
Florida State University, Tallahassee, Florida
Norma Presmeg
Illinois State University, Normal, Illinois

12:00 noon–1:30 p.m.

704
Meeting the Standards for English Learners through Comprehensible Input
(General Interest) Gallery Workshop
Todos: Mathematics for ALL Presentation
This hands-on workshop presents methodologies that teachers can employ with students who speak little or no English. It then models how to implement these strategies by presenting an actual lesson in a foreign language.
Elmano Martins Costa
California State University, Stanislaus, Turlock, California; Todos: Mathematics for ALL, Turlock, California

705
Writing for NCTM Journals: Tips and Discussion with Editorial Panel Members
(General Interest) Session
Tips, guidelines, and descriptions of the four school journals will be presented. Small groups, facilitated by Editorial Panel members, will be formed for questions and answers relative to writing for each journal.
Mathematics Teacher Editorial Panel
National Council of Teachers of Mathematics, Reston, Virginia

706
Moving from One-Size-Fits-All Lessons to Differentiated Instruction in Mathematics
(General Interest) Gallery Workshop
Learn how to differentiate instruction successfully in mathematics by using ongoing assessment, flexible and purposeful grouping structures, targeted instruction, levels of cognitive demand, and learning frameworks.
Jennifer Taylor-Cox
Innovative Instruction, Severna Park, Maryland
PRESENTATION:
Transforming Math Education with Music and Technology
Friday, 8–9 AM ● Room 254C
Linda Lang and Bella Soler

PRESENTATION:
Cutting Through Word Problem Confusion in Pre-Algebra and Algebra Using the Concept of Rate
Saturday, 12:30–1:30 PM ● Room 251C
Dr. Matthew Peterson, MIND Research Institute Co-Founder

Hosted Reception
Friday, 5–7 PM ● Cocktails & Hors D’oeuvres
Hilton Salt Lake City Center, Trofi North Room (In Trofi Restaurant)
255 S. West Temple, Salt Lake City, UT 84101

MIND Research Institute 888-751-5443 www.mindresearch.net
MIND Research Institute is a neuroscience and education research-based, non-profit corporation.

MIND Research Institute’s Algebra Readiness is a new, one-year curriculum that rebuilds a solid math foundation for struggling middle and high school students, who would otherwise enroll in, and fail, Algebra I. ST Math: Algebra Readiness Supplemental courseware is also available as an intervention for use with third-party textbooks. MIND Research Institute also provides standards-aligned, supplemental ST Math: K-5 and ST Math+Music™ programs, for elementary schools to better reach students of all academic and language proficiencies. The ST Math™ courseware is based on more than 30 years of neuroscience and education research at the University of California, and is continually improved through data mining over 20 million student sessions and 9 years of standardized math test results.
Professional Development for Mathematics Teachers of English Learners: A Joint English Language Development/Mathematics Perspective
(Teacher of Teachers, 6–12) Gallery Workshop
Students read, write, listen, and speak about mathematics as a result of collegial teacher discussions on academic and content vocabulary development, scaffolded graphic organizers, and honed questioning skills.

Diane Theresa Kinch
Pomona Unified School District, Pomona, California; TODOS: Mathematics for ALL, Claremont, California
Rachel Heller
Pomona Unified School District, Pomona, California

Room 151 A/B/C (Convention Center) capacity: 143

Enhancing Elementary Data Analysis and Probability through Technology
(Pre-K–5) Gallery Workshop
Explore the possibilities of using interactive white boards to teach data analysis and probability. Several elementary school teachers will demonstrate lessons from the NCTM series Navigating through Data Analysis and Probability.

Linda Pickering
Oconee County School System, Watkinsville, Georgia

Room 151 G (Convention Center) capacity: 194

Data and Math: A Moving Experience
(3–5) Gallery Workshop
Participants will engage in movement-based activities in order to generate data. The data will then be discussed, organized, and recorded. Numerous formats of both concrete and visual representations will be included.

Marilyn Sue Ford
University of Nevada, Las Vegas, Las Vegas, Nevada
Virginia Usnick
University of Nevada, Las Vegas, Las Vegas, Nevada

Room 150 D/E/F (Convention Center) capacity: 143

The Art of Geometry
(3–5) Gallery Workshop
Looking for ways to enhance geometry? Explore the art of visual geometry. Vocabulary development, spatial perception, and translational geometry will be explored through origami, tessellations, constructions, and modular arithmetic.

Julie Eastburn
Council Rock School District, Holland, Pennsylvania
Gina Pflanz
Council Rock School District, Richboro, Pennsylvania

Room 155 C (Convention Center) capacity: 228

Build It! Measure It! Transform It!
(3–5) Gallery Workshop
Would you like for students to have solid conceptual understanding of geometry instead of memorizing for the test? In this workshop, we will use manipulatives to build understanding of geometric figures and transformations in the coordinate plane.

Kim Aiello
North Carolina TEAM 2, Catawba County Schools, Newton, North Carolina
Shana Runge
North Carolina TEAM 2, Cleveland County Schools, Shelby, North Carolina
Karen McCain
North Carolina TEAM 2, Randolph County Schools, Asheboro, North Carolina

Room 255 E (Convention Center) capacity: 228

Our Favorite Activities That Integrate Data Collection, Science, Language Arts, and Social Studies!
(3–5) Gallery Workshop
Participants will experience hands-on activities that integrate data collection and analysis through children’s books. Other disciplines will also be highlighted, and handouts will be available.

Maria Diamantis
Southern Connecticut State University, New Haven, Connecticut

Room 355 E (Convention Center) capacity: 228

The Power of Working and Thinking in Different Bases
(3–5, Teacher of Teachers) Gallery Workshop
Build bases with pattern blocks and color tiles. Practice the four operations and gain experience with math facts. Strengthen the understanding of place value and algorithms. Open-ended problems and sample activities are included in the handout.

Peggy McLean
Nueva School, Hillsborough, California

Room 255 F (Convention Center) capacity: 228
Translations, Rotations, and Reflections: Transforming Objects with TI Graphing Calculators

(6-8) Gallery Workshop

The “lists” and “stat plot” features of the TI-84 calculator are used to graph objects. By experimenting with changes in x-y coordinates, participants discover and develop function rules to create translations, reflections, and rotations.

Linda Bridges
University of Alabama in Huntsville, Huntsville, Alabama

Room 251 D/E (Convention Center) capacity: 219

Developing Fluency and Certainty with Fractions, Decimals, Percents, and Probability

(6-8) Gallery Workshop

Participants will work on unusual problems and activities about fractions, decimals, percents, and probability. They will discuss their use in middle school classes. The Foul Shooter problem, the Game of 6 3/4, the Game of 5.75, and more will be included.

James R. Matthews
Siena College, Loudonville, New York

Room 355 F (Convention Center) capacity: 228

Statistics Made in America

(6-8, Teacher of Teachers) Gallery Workshop

Come explore interdisciplinary statistical activities and projects relating to data about the United States. Discuss the use of technology and assessment techniques for the activities and projects. Leave with new ideas and classroom-ready materials.

Mandy McDaniel
Boise State University, Boise, Idaho

Room 155 B (Convention Center) capacity: 228

Lahal, Hidden Ball, and Stick Dice: Probability Investigations Using Native American Games of Chance

(6-12) Gallery Workshop

Participants will learn Native American games of chance and complete activities using tree diagrams, combinations, Pascal’s triangle, and the binomial theorem to investigate the mathematics, analyze fairness, and discuss strategies for the games.

Leslee Francis Pelton
University of Victoria, Victoria, British Columbia

Tim Pelton
University of Victoria, Victoria, British Columbia

Karen Moore
University of Victoria, Victoria, British Columbia

Room 355 D (Convention Center) capacity: 166

Tent Revival: An Investigation of Quadratics

(6-12) Gallery Workshop

Participants will explore the algebraic and geometric applications of a tent design using multiple approaches and multiple technologies. Participants will experience a classroom activity so they can teach it the way students learn it!

Valerie Muller
Carnegie Learning, Greenville, South Carolina

Room 254 B (Convention Center) capacity: 162
### 12:00 noon–1:30 p.m.

**720**

**Sickle Cell Anemia and Malaria**  
*(9–12) Gallery Workshop*

People with one sickle-cell gene are protected from malaria; people with two sickle-cell genes have sickle cell disease. Using probability and recursion, we’ll study the relationship between sickle-cell genes and malaria.

**Julie L. Graves**  
North Carolina School of Science and Mathematics, Durham, North Carolina

*Room 155 A (Convention Center) capacity: 166*

### 12:30 p.m.–1:30 p.m.

**723**

**Mysteries and Histories of Pi**  
*(General Interest) Session*

Participants will Risk knowledge of pi in a fun game as they learn fascinating information about the only topic that has continued to captivate mathematicians for over 4000 years. Risk can be adapted to any classroom topic.

**Janet Teeguarden**  
Ivy Tech Community College of Indiana, Indianapolis, Indiana

*Room 355 A (Convention Center) capacity: 264*

**724**

**Using Cognitive Coaching to Improve Mathematics Teaching and Learning**  
*(Teacher of Teachers) Session*

Learn how mathematics coaches in a statewide program are using cognitive coaching to improve the teaching and learning of mathematics. An overview of the research-based cognitive coaching model and a variety of implementation plans will be shared.

**Peg Darcy**  
Jefferson County Public Schools (retired), Louisville, Kentucky

**Maggie B. McGatha**  
University of Louisville, Louisville, Kentucky

*Room 255 C (Convention Center) capacity: 354*

### Saturday

**721**

**Hands-On, Minds-On Geometry**  
*(9–12) Gallery Workshop*

Participate in some fun, quick geometry activities that will increase students’ interest—and teachers’ enthusiasm—by engaging students actively. Discover how manipulatives will spice up your teaching and help kids retain what they learn.

**Gary Kubina**  
Retired, Mobile, Alabama

*Room 155 F (Convention Center) capacity: 228*

**722**

**From Plato to Leonardo: Geometric Constructions for the High School Classroom**  
*(9–12, Teacher of Teachers) Gallery Workshop*

Bring a straightedge, compass, and scissors to investigate Plato’s dissection, Leonardo’s curvilinear shape, Leonardo’s claw, a Mascheroni construction, and others. These constructions are the basis for quilt patterns that will accompany the workshop.

**Elaine Krajeneke Ellison**  
West Lafayette High School (Retired), West Lafayette, Indiana

*Room 250 B/C (Convention Center) capacity: 186*

**725**

**Strategies to Enhance Mathematics Achievement: Preparing Preservice and Professional Teachers to Work with Families**  
*(PreK–5) Session*

Tired of hearing students exclaim, “My parents couldn’t help me because they don’t know how to do this,” or hearing parents say “I was never good at math?” The session will discuss how NC A&T SU trains its teachers to work with families using toolkits.

**Tyrette S. Carter**  
North Carolina Agricultural and Technical State University (NC A&T SU), Greensboro, North Carolina

**Loury O. Floyd**  
North Carolina Agricultural and Technical State University (NC A&T SU), Greensboro, North Carolina

*Ballroom A/C (Convention Center) capacity: 732*

**726**

**Spiral Your Review! A Workshop Approach to Math Instruction**  
*(Pre-K–8) Session*

This session focuses on keeping students mindful of the skills you teach. Learn how to integrate such topics as data analysis, geometry, and more using a math workshop approach. Different techniques for implementing a spiral review will be shared.

**John Moritz**  
Copper King Elementary School, Phoenix, Arizona

*Room 355 C (Convention Center) capacity: 237*
**727**
Differentiating Instruction in Grades 3–5
*(3–5) Session*
Hands-on activities to help every student! Differentiate every lesson, not just learning stations or tiered assignments. Rich tasks, scaffolding, and grouping will be discussed and illustrated through activities involving number and geometry.

Janet H. Caldwell  
Rowan University, Glassboro, New Jersey  
*Ballroom B/D (Convention Center) capacity: 732*

**728**
Keeping Track of Time: Representing Elapsed Time on an Open Timeline
*(3–5) Session*
Elapsed time is difficult for students. Recording strategies to add or subtract are used with a timeline for elapsed time. This student-tested method for elapsed-time problems will be introduced with whole numbers and extended to the timeline.

Juli K. Dixon  
University of Central Florida, Orlando, Florida  
*Room 251 A/B (Convention Center) capacity: 234*

**729**
A Better Balance: A Proven Approach to Success in Computation
*(3–5) Session*
Students need to develop a range of computation strategies that begins with number facts and broadens as it extends to larger numbers. The presenter will demonstrate activities from this approach, which is currently used in many other countries.

James Burnett  
Origo Education, Saint Charles, Missouri  
*Room 251 F (Convention Center) capacity: 158*

**730**
Cutting through Word-Problem Confusion in Prealgebra and Algebra Using the Concept of Rate
*(3–8, Teacher of teachers) Research Session*
Word problems involving multiplication and division traditionally cause difficulties that are greatly reduced when students learn to recognize and work with rates. This session demonstrates an effective way to teach rates, including research data.

Matthew Peterson  
MIND Institute, Costa Mesa, California  
*Room 251 C (Convention Center) capacity: 116*

**731**
Making Research Work: A Research Lesson on Proportional Reasoning
*(6–8, Teacher of Teachers) Session*
How do we teach proportional reasoning for conceptual understanding? Come hear and experience how a group of middle school teachers created a research lesson on proportional reasoning, and gain a tried-and-true lesson to take back to your students.

Rachelle D’Lynn Meyer  
Baylor University, Waco, Texas  
Trena L. Wilkerson  
Baylor University, Waco, Texas  
Mark Stephen Montgomery  
Waco Independent School District, Waco, Texas  
*Room 255 B (Convention Center) capacity: 356*

**732**
Probabilistically Correct: Probability Games and Simulations to Increase Students’ Motivation and Understanding
*(6–12) Session*
Engaging probability activities will be presented. These activities will promote conceptual understanding and provide advanced probabilistic thinking. Finally, common errors in probability made by students will be examined.

Dovie Kimmins  
Middle Tennessee State University, Murfreesboro, Tennessee  
Jeremy J. Winters  
Middle Tennessee State University, Murfreesboro, Tennessee  
*Ballroom E (Convention Center) capacity: 398*

**733**
Talking Probability in a Collaborative Online Environment
*(6–12) Session*
The Virtual Math Teams project provides online synchronous collaborative learning opportunities for students in grades 6–12. Gain insights into the mathematics of middle and high school students working on probability problems in live chats.

Stephen Weimar  
The Math Forum @ Drexel, Philadelphia, Pennsylvania  
*Room 255 A (Convention Center) capacity: 264*
12:30 p.m.–1:30 p.m.

735 Exploring Sequences and Series through Multiple Representations
(9–12) Session
The power of graphical and numerical representations helps learners explore sequence and series. See how handheld technology assists in developing an understanding of these important concepts to help students move from algebra to calculus.

Richard Parr
Rice University School Mathematics Project, Houston, Texas
Ballroom F (Convention Center) capacity: 398

736 Success in Algebra: A Coteaching Model for Inclusive Classrooms
(9–12) Session
This session will describe a model for coteaching algebra that has successfully prepared at-risk students for Maryland’s high-stakes algebra test and for upper-level math courses. Four years of students’ performance data will be shared.

Scott Ruehl
Howard County Public Schools, Ellicott City, Maryland
Ballroom H/J (Convention Center) capacity: 732

737 General-Purpose Tools in Mathematics
(9–12) Session
For many students, the utility of mathematics lies in a style of work—the habits of mind that allow one to look at the world through a mathematical lens. We will show activities from a new NSF curriculum, the CME Project, that promote these habits.

Al Cuoco
Education Development Center, Inc., Newton, Massachusetts
Bowen Kerins
Education Development Center, Inc., Newton, Massachusetts
Hall 1 (Convention Center) capacity: 2000

738 Easy Polynomial Factoring Boxes
(9–12) Session
Have you wished for one easy factoring method? The grouping method works, but why does it work? Factoring boxes can easily factor any three- or four-term polynomial with fewer sign mistakes, and it’s easy to explain why they work.

Barbara Helen Glass
Sussex County Community College, Newton, New Jersey
Room 250 A (Convention Center) capacity: 123

739 Making Mathematics Fun, Accessible, and Yet Challenging through Technology
(9–12, Higher Education) Session
Motivating students with graphical and geometric animations and capturing numerical measurements after animations makes learning mathematics fun and accessible, yet challenging, when solving problems analytically.

Wei-Chi Yang
Radford University, Radford, Virginia
Room 355 B (Convention Center) capacity: 356

740 Be Certain: We Can Learn How to Teach Mathematics from Its History
(Higher Education, Teacher of Teachers) Session
A variety of problems from different cultures and times will be exposed. The participants will experience genuine opportunities to discuss deep mathematical ideas, and they will leave with material ready to be used in their classrooms.

Greisy Winicki Landman
California State Polytechnic University Pomona, Pomona, California
Room 254 A (Convention Center) capacity: 99

2:00 p.m.–3:00 p.m.

741 Winning Event
Closing Event
Remarks by NCTM President Francis (Skip) Fennell

The speaker will share what remains consistent in a changing world and a value-based concept of self-empowerment that will help all of us not only meet change but also reach into the depths of our capabilities and perform to our greatest potential.

Born on a South Dakota Indian reservation, Billy Mills became involved early in distance running. After graduation from the University of Kansas, he became a Marine Corps officer and continued training for the Olympics. He competed in the marathon and 10,000 meter run, having trained his body, mind, and soul for peak performance. Today, he is a businessman, author, and national spokesperson for Running Strong for American Indian Youth, a project of the Christian Relief Service.

Billy Mills
Billy Mills Speakers Bureau, Fair Oaks, California
Hall 1 (Convention Center) capacity: 2000
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Equity & Diversity Issues - Equity, Diversity, Alternative Schools, Funding, Multilingual, Special Needs, Gifted, Community Relations, State and Federal Legislation, Outreach and Advocacy, and Accountability
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<td>Program Overview and First Timers’ Orientation</td>
<td>1</td>
<td>Hall 3</td>
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<td>5:30 p.m. – 7:00 p.m.</td>
<td>Opening Session</td>
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<td>59th Annual Delegate Assembly</td>
<td>4</td>
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<td>9:30 a.m. – 10:30 a.m.</td>
<td>Learn↔Reflect Kickoff Session</td>
<td>69</td>
<td>Ballroom B/D</td>
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<td>1:00 p.m. – 2:30 p.m.</td>
<td>New and Preservice Teacher Workshop</td>
<td>187</td>
<td>Room 155 E</td>
<td>(Convention Center)</td>
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<td>3:30 p.m. – 4:30 p.m.</td>
<td>Learn↔Reflect Reflection Session</td>
<td>275</td>
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<td>(Convention Center)</td>
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<td>3:30 p.m. – 5:00 p.m.</td>
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<td>305</td>
<td>Hall 1</td>
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<td>Exhibit Hall</td>
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<td>7:00 a.m. – 7:45 a.m.</td>
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<td>306</td>
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<td>2:00 p.m. – 3:00 p.m.</td>
<td>NCTM Business Meeting</td>
<td>518</td>
<td>Room 250 A (Convention Center)</td>
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<tr>
<td>3:30 p.m. – 5:00 p.m.</td>
<td>Keynote Address by NCTM President-Elect Henry (Hank) Kepner</td>
<td>607</td>
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<td>4:45 p.m. – 5:30 p.m.</td>
<td>New Teacher Celebration Session!</td>
<td>608</td>
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<td>2:00 p.m. – 3:00 p.m.</td>
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