Welcome to the 48th Annual Wisconsin Mathematics Council Conference at Green Lake!

Conference Co-Chair Message

The 2016 Wisconsin Mathematics Council Annual Conference will certainly be filled with Mathematics in Action. In accordance with this year’s theme, you will be able to participate in engaging keynote speakers and interactive workshops based on high leverage teaching practices designed to deepen student learning. At this three-day professional development event, you will be able to choose from sessions focused on technology, mathematical discourse, productive struggle, collaborative learning, and much more. From instructional strategies to assessment practices, we are positive that this conference will allow you to take away strategies to actively engage students in your mathematics classrooms.

Starting with Wednesday’s pre-conference, you can begin “Laying the Foundation for an Exemplary PK-12 Mathematics Program,” discuss with colleagues “Five Instructional Shifts for Supporting Rigorous Standards for All Students in K-12 Classrooms,” explore the benefits of “Creating a Language-Rich Math Class,” or play with technology to answer the question “Who Says Learning Can’t be Fun?”

The WMC Annual Conference will also provide you with the opportunity to network with educators from around the state. Come laugh and learn with others during Wednesday’s IGNITE session at Langford’s Pub in the clubhouse at Lawsonia Golf Course to hear fast-paced presentations from local and national presenters. Mingle with educators and share your academic year successes at the Thursday evening Celebrate WMC reception or get energized by the annual Pi Run on Friday morning, both held on conference grounds.

On behalf of the entire WMC Conference Program Committee, we hope this three-day experience will assist you and your district to put Mathematics in Action to enhance the learning of ALL.

Jennifer Kosiak and Maggie McHugh, Wisconsin Mathematics Council 2016 Conference Co-Chairs

President’s Message

Welcome to the Wisconsin Mathematics Council’s 48th Annual Conference! Based on this year’s theme, you will come away with instructional strategies and assessment practices to put Mathematics in Action in your own educational setting. As always, we have more than 200 high quality and diverse keynotes and working sessions that are sure to engage and inspire you.

We have once again brought in a fantastic line-up of nationally known keynote speakers scheduled on Thursday and Friday. This line-up includes Greg Tang, Juli Dixon, Sandy Atkins, John Mighton, Jennifer Novak, John SanGiovanni, and Michael Todd Edwards. In addition to these engaging keynote speakers, you will also be actively engaged in interactive workshops and presentations led by Wisconsin educators. These sessions will focus on implementing high leverage teaching practices, engaging students in high cognitive demand classroom activities, creating discourse rich mathematics classrooms, and eliciting student thinking through formative and summative assessments. No matter which sessions you attend, I am confident that you will gain a deeper understanding of teaching and learning mathematics.

With over 1,500 educators in attendance, you will also have the opportunity to network with colleagues as you share your passion for mathematics and ideas for the mathematics classroom. For the past 11 years, I have looked forward to the WMC Annual Conference as a venue to collaborate with others, which has in turn, inspired me to become a better educator. I hope that you, too, will be inspired into action after attending the conference. Please feel free to stop by the Kraft Centre Lobby to learn more about the Wisconsin Mathematics Council. I look forward to meeting you and hearing about your experiences at the conference.

This conference would not be possible without the entire WMC Conference Planning Committee who have put in many volunteer hours to make this conference an amazing experience! If you run into one of these hard working individuals, please give them a high five for their dedication to mathematics education in Wisconsin.

I would like to give you a high five for your continued commitment to supporting the mathematical learning of all students and your support for WMC.

Have a great conference!

Jennifer Kosiak, Wisconsin Mathematics Council President
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On-site Registration

On-site registration, located in the Kraft Centre Lobby, is open Wednesday, 6:00 -10:00 p.m., Thursday, 7:00 a.m.-4:30 p.m., and Friday, 7:00 a.m.-1:00 p.m.

Conference Give-Away

Each conference attendee will receive a small token of appreciation from the Wisconsin Mathematics Council and the Annual Conference Committee at registration check-in.

Getting the Most Out of Your Conference Experience

WMC has provided several tools for you to use in order to assist you in making your conference a successful experience!

• Daily conference addendums provide information about any schedule changes that we are made aware of in advance. Addendums are available at the WMC registration table in the Kraft Centre and in the lobbies of the main buildings.

• Use the personal planning pages to schedule sessions that fit your needs. Planners can be found on pages 15 and 49. Make sure to plan at least one keynote speaker into your schedule. Popular sessions fill quickly, so plan alternate sessions in case your chosen session is full.

• Last minute program changes will be listed in the Conference Program Addendum, available at Registration, and on the TV monitors located in the Kraft Centre.

• Grade band specific posters provide a listing of sessions within each grade band.

• Personal assistance from WMC Board members, conference pages and volunteers is available throughout the three-day conference.

Parking

Available parking areas are identified on the Green Lake Conference Center map located on the back cover of this booklet. WMC Pages, who will be wearing red jackets, will direct you to available parking areas. Allow yourself time to park and become acquainted with the conference center grounds prior to your first session. Once the available parking areas are full, participants will be directed by the WMC Pages to road-side parking. Note: Starting on Tuesday, May 3rd, the parking lot next to the Exhibit Hall and adjacent cordoned off area are reserved for our exhibitors.

Shuttle Bus Service

Bus service to the Youth Center will be provided on Thursday and Friday. The bus makes a loop approximately every 15 minutes between the covered entrance of the Kraft Centre and the Youth Center. Shuttle service will begin at 7:15 a.m. and will run to 4:30 p.m. on Thursday and from 7:15 a.m. to 11:30 a.m. on Friday.

The shuttle will also be available on Wednesday evening from 7:00-10:30 p.m., running approximately every 15 minutes, for the IGNITE session, which will take place at Langford’s Pub in the Lawsonia Golf Course clubhouse. Please see information about the IGNITE event under Conference Highlights.

Conference Lunch Options

Conference attendees have two lunch options available; you can eat in the Kraft Centre Dining Room or you can grab a quick lunch in the tent, located across from the Kraft Centre courtyard. If you plan to attend one of the sessions scheduled during the lunch hour, you may wish to pick up your lunch in the tent as a quicker alternative.

WMC Information Booth

The WMC booth is located in the Kraft Centre Lobby. Volunteers and staff will gladly answer questions about the conference schedule and membership. PI-34 packets for your PDP are available as well.

WMC Items for Sale

WMC items, such as logo apparel from Lands End, pins, flash drives, clings, post-it notes, and more, are available to order or for sale at the WMC booth in the Kraft Centre Lobby. Make sure to stop at the WMC booth and check them out!

Lost and Found

Lost and Found is located at the WMC Registration Desk in the Kraft Centre Lobby.

Exhibits

Conference exhibits are located in Pillsbury Hall; be sure to visit the Exhibit Hall to find a wealth of information and items from a variety of publishers and exhibitors. The Exhibit Hall provides a great opportunity to explore the most up-to-date resources and technology available for math educators. Some exhibitors will be giving presentations; look for the Exhibitor Session tag throughout the book for these presentations.

The Exhibit Hall is open from 8:00 a.m. until 4:00 p.m. on Thursday and 8:00 a.m. until 1:30 p.m. on Friday.
Exhibitor Passport

Take your exhibit passport along as you make your way around the entire Exhibit Hall, and make sure each of the exhibitors stamps your passport! When all of your squares are stamped, bring it back to the WMC booth, located in the Kraft Centre Lobby, to be entered in the daily door prize drawings.

District or School Groups

Welcome! Take advantage of your numbers to split up and take in as many sessions as possible. You can copy and share handouts when you get back home. If you’d like a place to meet up and share at the conference, the lounges on the upper (lodging) floors of Kern and Bauer are generally empty during the day. If you need assistance, come to the WMC Booth located in the Kraft Centre Lobby.

Handouts

Please be kind about handouts, and take only one for yourself unless directed otherwise. This leaves enough for everyone in the session and a few extra for those who may have missed it. Our speakers spend their own money to prepare and copy handouts, so please make your own copies for your team when you get home. If you would like additional information from a session, request the speaker’s email address to receive handouts. Thank you for your kind consideration.

Some speakers will be sharing their handouts and/or PowerPoint presentations via WMC’s website at www.wismath.org. These items will be posted after the close of the conference.

Official Conference Badges Are Required

WMC requires attendees to wear their conference name badges at all times during conference hours. Badges must be worn in all sessions and in the Exhibit Hall. The badges not only indicate that you are fully registered for the conference but also serve as a courtesy to other registrants. If you need a replacement name badge, go to On-Site Registration in the Kraft Centre Lobby.

Unauthorized Commercial Solicitation

WMC has a strong commitment to high standards of scholarship and professional development. Commercial solicitation is strictly prohibited in all conference sessions, except those clearly labeled as Exhibitor Sessions. Solicitation of business within the Exhibit Hall by persons other than exhibitors is strictly prohibited. Please report any violations to the WMC On-Site Registration staff in the Kraft Centre Lobby.

Green Lake Conference Center Information

Emergency Contact Number: (920) 294-3323
First Aid: Go to the nearest land line and dial 9-911 or 0

Security

Dial 0 to reach an operator on the Green Lake grounds.

Fire Codes

WMC continues to make every attempt to provide adequate seating for participants at the Annual Conference. For your safety and to adhere to fire regulations, meeting rooms that fill to capacity will be restricted thereafter. Standing room is not an option; only persons occupying a seat will be allowed to remain in meeting rooms.

Smoking/Alcohol Restrictions:

We ask that all attendees observe the Green Lake Conference Center’s non-smoking and no alcohol policies in all meeting rooms, guest accommodations, dining rooms and while on conference center grounds. WMC thanks you for respecting GLCC policies.

Session Location Key

<table>
<thead>
<tr>
<th>Session #</th>
<th>Building - Room (Capacity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>RWI - Mahaney (40)</td>
</tr>
<tr>
<td></td>
<td>Grades 4-8</td>
</tr>
</tbody>
</table>

Don’t Slow Me Down with that Calculator

Learn to master a multitude of little-known, super-shortcut techniques and strategies involving addition, subtraction, fractions, squaring and multiplication that will leave your calculator-dependent friends in the dust.

Cliff Petrak, Brother Rice High School, Chicago, IL.
2016 Annual Conference Committees

Planning & Program Committee
Jennifer Kosiak, UW-La Crosse, La Crosse (Co-Chair)
Maggie McHugh, La Crosse Design Institute, La Crosse (Co-Chair)
Dave Ebert, Oregon High School, Oregon
Teri Hedges, Huegel Elementary School, Madison
Karen Reiss, Mathematics Education Consultant, Germantown

“Celebrate WMC” Event
Jennifer Kosiak, UW-La Crosse, La Crosse
Maggie McHugh, La Crosse Design Institute, La Crosse

Exhibits
Barb Borgwardt, Arcadia School District, Arcadia
Kathi Snyder, Mathematics Education Consultant, La Crosse

Pre-Conference
Becky Walker, CESA 7, Green Bay
Jennifer Lawler, Kenosha Unified School District, Kenosha

Celebrates WMC Event
Jennifer Kosiak, UW-La Crosse, La Crosse
Maggie McHugh, La Crosse Design Institute, La Crosse

Orientation
Cathy Burge, Viking Elementary School, Holmen

Calculators
Mike Tamblyn, Whitewater High School, Whitewater

Technology
Mike King, St. Francis High School, St. Francis
Butch Bretzel, UW-Milwaukee, Milwaukee

Building Support
Mark Getz, West Middleton Elementary School, Middleton

2015–2016 Board of Directors

Jennifer Kosiak, President
Professor of Mathematics
UW-La Crosse, La Crosse

Doug Burge, Past President
Mathematics Teacher
Holmen High School, Holmen

Derek Pipkorn, Secretary
Middle School Mathematics Specialist
Mequon-Thiensville School District, Mequon

Wendy Meyer, Treasurer
Mathematics Teacher
Edgerton High School, Edgerton

Alicia Korth, PK-2 Representative
Second Grade Teacher
Lincoln Elementary School, New London

Paige Richards, Grades 3-5 Representative
Mathematics Program Specialist
Brookhill Institute of Mathematics, Waukesha

Amy Traynor, Grades 6-8 Representative
Mathematics Teacher
DeLong Middle School, Eau Claire

Tony Pickar, Grades 9-12 Representative
Mathematics Teacher
DC Everest School District, Weston

Adam Paape, College/University Representative
Assistant Professor of Education
Concordia University Wisconsin, Mequon

John Korth, Wisconsin Technical College Representative
Mathematics Instructor
Mid-State Technical College, Wisconsin Rapids

Mark Schommer, Statewide Representative
K-12 Mathematics Coordinator
DC Everest School District, Weston

Lori Williams, Statewide Representative
Mathematics Specialist
Mantowoc Public School District, Mantowoc

Mary Ann Hudziak, Administrator/Supervisor Representative
Math & Science Learning Coordinator
CESA 6, Oshkosh

Ken Davis, Ex Officio DPI Representative
Mathematics Consultant
Department of Public Instruction, Madison

Kevin McLeod, Ex Officio
Mathematics Professor
UW-Milwaukee, Milwaukee

Becky Walker, Ex Officio
School Improvement Services Director
CESA 7, Green Bay

Debra Pass, Ex Officio
WMC Executive Services
Wisconsin Mathematics Council Inc., Germantown
Conference Highlights

A Focus on Action
Aligned with the conference theme, *Mathematics in Action*, you will find numerous sessions and workshops focused on engaging students in mathematics. As showcased in the presentation titles below, these sessions and workshops will provide you with best-practice teaching strategies that support students using mathematics for building and developing understanding and enhance learning.

Computer Science
Throughout the conference, you will find numerous sessions focused on engaging elementary, middle, and high school students in computer science.

Effective Leaders, Effective Educators Sessions
On Thursday, May 5, administrators are invited to participate in the Effective Leaders, Effective Educators Administrators’ Series with sessions designed specifically for administrators, featuring nationally and internationally respected educational leaders, including Dr. Juli Dixon, Dr. Sandy Atkins, John SanGiovanni and Jennifer Novak. See page X for more information.

Tweet to Win!
Tweet your favorite WMC Annual Conference moments using #wismath16. We are looking for photos of the conference that showcase *Mathematics in Action* to be shared at the Thursday’s Celebrate WMC event. Each day, we’ll select two people randomly to receive a WMC prize package.

WMC’s IGNITE
Back by popular demand, the WMC Annual Conference will host the 6th Annual IGNITE – now being held in Langford’s Pub! Speakers will each have five minutes to present a key idea or topic. IGNITE sessions are fast-paced, thought provoking, and entertaining. Speakers Sandy Atkins, Juli Dixon, Jenn Kosiak, Kevin McLeod, John Mighton, Derek Pipkorn, John SanGiovanni and Mark Schommer will ignite your passion for mathematics education. A welcome reception with light appetizers and cash bar will follow the IGNITE program. Shuttle bus service between the Kraft Centre and Langford’s Pub, located in the Lawsonia Golf Course clubhouse, will be running approximately every 15 minutes from 7:00 to 10:30 p.m.

Conference T-Shirts
Stop by the WMC table to view this year’s conference t-shirt contest winning designs and purchase your conference t-shirt!

Author Book Signings
Mathematics authors, Sandy Atkins, Juli Dixon, Greg Tang, Jennifer Kosiak and Jenni McCool, will be signing copies of their books. Book signings are scheduled as follows:
Juli Dixon will be signing her book, *A Stroke of Luck*, immediately following her morning keynote address on Thursday from 11:15-11:45 a.m. in the Pillsbury Lobby.
Sandy Atkins will be signing copies of her books immediately following her afternoon keynote address on Thursday from 2:15-2:45 p.m. in the Bauer Lobby.
Jennifer Kosiak and Jenni McCool will be signing copies of their books on Friday morning from 9:15-9:45 a.m. in the Pillsbury Lobby.
Greg Tang will be signing copies of his books immediately following his keynote address on Friday morning from 11:15-11:45 a.m. in the Pillsbury Lobby.

Celebrate WMC Event
There’s no need to leave the conference grounds when you attend the Celebrate WMC Reception at the Green Lake Conference Center on Thursday evening. Plan to spend time with your colleagues, meet WMC current and past leadership, and visit with friends while you enjoy a generous variety of hors d’oeuvres, a beer and wine cash bar, and great conversation. A short awards and recognition program will be part of the reception as well as the popular WMEF Heads and Tails Raffle (see below for more information). Registration for the reception is FREE with your Thursday conference registration!
WMEF Heads and Tails Event
Make plans to attend the Fourth Annual Heads & Tails event, sponsored by the Wisconsin Mathematics Education Foundation (WMEF) in conjunction with the Houghton Mifflin Harcourt Publishing Company, as part of the Celebrate WMC event on Thursday evening. This is a great opportunity to win a $400 Amazon gift card! Houghton Mifflin Harcourt Publishing Company has graciously donated funding for the prizes. Participation in the event is just $15, allowing two opportunities to participate. You can sign up for the Heads & Tails Raffle at the WMEF booth on Wednesday afternoon and all day Thursday. Proceeds from this fundraiser will go toward supporting WMEF-sponsored awards, scholarships and grants that provide funding for classroom projects.

WMEF Raffle
In conjunction with the Heads & Tails event, WMEF is holding a raffle. Items include a signed Packer football, Brewers tickets, a pearl necklace, a registration for the 2016 WMC Annual Conference, and much, much more! Raffle tickets can be purchased at the WMEF booth – 1 ticket for $5 or 5 tickets for $20.

WMC Movie Night
Nova: The Great Math Mystery
Join NOVA on a mathematical mystery tour—a provocative exploration of math’s astonishing power across the centuries. Math has been essential to everything from the first wireless radio transmissions to the prediction and discovery of the Higgs boson and the successful landing of rovers on Mars. Astrophysicist and writer Mario Livio, along with a colorful cast of mathematicians, physicists, and engineers, follow math from Pythagoras to Einstein and beyond. It all leads to the ultimate riddle: Is math a human invention or the discovery of the language of the universe?

Fifth Annual Pi Run
Get out your running shoes and participate in the Fifth Annual Pi Run, with proceeds benefitting the Wisconsin Mathematics Education Foundation. The 3.14 kilometer fun run/walk around the Green Lake Conference Center wooded grounds starts and finishes on Hillside Road and will take place on Friday morning at 6:28 a.m. before the conference. Winners will receive a pie, sponsored from the Hubbard Avenue Diner! You can find more information or register for this event at the WMEF table in the Kraft Centre Lobby.

Math Intervention
2-year certificate program

- Designed for K-8 and Special Education Teachers
- Learn to use assessment tools to design focused interventions for students struggling with math
- Credit and non-credit options available
- Now forming cohorts across Wisconsin for Summer

uwosh.edu/go/MSEmath
Greg Tang is the New York Times best-selling author of a groundbreaking series of math picture books from Scholastic that includes *The Grapes of Math*. He’s also the inventor of the internationally acclaimed math app Kakooma and the creator of the popular, online math site GregTangMath.com. Greg has been called the “math missionary” for the dedication and passion he has shown in sharing his love of math with students, teachers, and parents. (Friday)

Juli K. Dixon, Ph.D., is a professor of mathematics education at the University of Central Florida (UCF). She coordinates the award-winning Lockheed Martin/UCF Academy Master of Education in K–8 mathematics and science and the PhD in mathematics education. Dr. Dixon is focused on improving teachers’ mathematics knowledge for teaching so that they can communicate and justify mathematical ideas and also expect their students to explain their mathematical thinking. Prior to joining the faculty at UCF, Dr. Dixon was a secondary mathematics educator at the University of Nevada, Las Vegas, and a public school mathematics teacher in urban school settings at the elementary, middle, and secondary levels. Dr. Dixon’s keynote is made possible through the generous support of Houghton Mifflin Harcourt. (Thursday)

John Mighton, OC, is a mathematician, author, playwright, and the founder of JUMP Math, a charitable organization that works to educate students in mathematics. He tirelessly volunteers his time and expertise at JUMP Math as the lead curriculum developer for the JUMP Math Student Assessment and Practice Books and Teacher’s Resources. He also donates all proceeds from publications to JUMP Math. He is the author of *The Myth of Ability* and *The End of Ignorance*. Mighton also advised Matt Damon and Ben Affleck on the script for Good Will Hunting, and as an actor in the film. His one major line is a reference to his main idea in The Myth of Ability: that most people never get a chance because a teacher does not take the time to show them how to learn. John Mighton’s keynote is made possible through the generous support of the Brookhill Institute of Mathematics. (Thursday and Friday)

John SanGiovanni is an elementary mathematics instruction facilitator for the Howard County Public School System in Maryland. He is currently serving a three-year term on the Board of Directors of the NCTM. He is also an adjunct instructor and frequent speaker at both regional and national conferences. John has written extensively on implementing the Common Core Standards for Mathematical Practice in the K-8 classroom.

Jennifer Novak is a resource teacher for the Howard County public schools in Maryland. She has been a member of the curriculum development team for Algebra I and has served as the lead for the Algebra II writing team. She has presented at county in-services and the N.S.A. Mathematics Symposium, and has co-presented at the Governor’s Academy in Maryland. (Thursday)

Sandy Atkins, Ph.D., is the owner and Executive Director of Creating AHAs, LLC. An inspiring speaker, Dr. Atkins is committed to finding those ‘aha moments’ when mathematical connections are made by teachers and students. She is the author of *Creating Fraction and Decimal AHAs* and *Creating a Language Rich Math Class*. With particular interest in effective mathematics intervention, Sandy works closely with teachers across the United States to help them pinpoint student disconnects and close mathematical concept gaps. (Thursday and Friday)

Michael Todd Edwards, Ph.D., is an Associate Professor of Mathematics Education at Miami University in Oxford, Ohio. He is the co-editor of the GeoGebra North American Journal and co-director of the GeoGebra Institute of Ohio. Dr. Edwards’ research interests focus on the teaching and learning of school mathematics with technology (specifically dynamic mathematics software), ethical issues surrounding the use of free software and the free software movement, and writing as a vehicle to learn mathematics at all levels of instruction. (Thursday and Friday)
**Meetings & Event Overview**  
**Wednesday, May 4, 2016**

### WEDNESDAY

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>7:30 a.m.</td>
<td>Pre-Conference Check-in (Kraft Centre Lobby)</td>
</tr>
<tr>
<td>8:30 a.m.–4:00 p.m.</td>
<td>Pre-Conference Workshops</td>
</tr>
<tr>
<td>12:00 noon–1:00 p.m.</td>
<td>Pre-Conference Lunch</td>
</tr>
<tr>
<td>2:00–8:00 p.m.</td>
<td>Exhibitor Check-in (Pillsbury)</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>Check-in for Green Lake Lodging</td>
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<tr>
<td>5:00–6:30 p.m.</td>
<td>Dinner served in Kraft Centre Dining Room (requires separate ticket purchased from Green Lake Conference Center)</td>
</tr>
<tr>
<td>5:15–6:00 p.m.</td>
<td>NCSM dinner served in Mitchell Dining Room (requires separate ticket purchased from Green Lake Conference Center)</td>
</tr>
<tr>
<td>6:00–7:30 p.m.</td>
<td>WI Mathematics Leadership Council Spring Meeting (Kraft Centre Tower Dining Room)</td>
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<tr>
<td>6:00–10:00 p.m.</td>
<td>On-site Registration (Kraft Centre Lobby)</td>
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<tr>
<td>8:00 p.m.</td>
<td>WMC’s IGNITE Session and Welcome Social (Langford’s Pub, Lawsonia Golf Course clubhouse)</td>
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#### NCSM DINNER

**5:15-6:00 p.m. Kraft Centre Mitchell Dining Room**  
NCSM, a sister organization to NCTM, is the Council for Leadership in Math Education. If you are interested in leadership at a grade, building, CESA, state, or national level, please join us for dinner and an informal chat that will provide up to date information about resources, trends, and strategies to support leadership, coaching, supporting or supervising math teachers from K-12. Pick up your dinner in the Kraft Centre Dining Room (ticket required; see GLCC lodging form to order tickets) or bring your own dinner to the Mitchell Dining Room.

#### WI MATHEMATICS LEADERSHIP COUNCIL NETWORKING DINNER

**6:00-7:30 p.m. Kraft Centre Tower Dining Room**  
Anyone serving in a leadership capacity is invited to attend and network with colleagues. Feel free to eat prior to the meeting or pick up and bring your dinner (ticket required for GLCC dinner option; see GLCC lodging form to order tickets).

#### WMC’S IGNITE SESSION & WELCOME SOCIAL

**8:00 p.m. Langford’s Pub in the Lawsonia Golf Course clubhouse**  
Don’t miss WMC’s Wednesday evening IGNITE Session where speakers will each have five minutes to present a key idea or topic. IGNITE sessions are fast paced, thought provoking, and entertaining. National and Wisconsin mathematics personalities Speakers Sandy Atkins, Juli Dixon, Jenn Kosiak, Kevin McLeod, John Mighton, Derek Pipkorn, John SanGiovanni and Mark Schommer, will be participating. A social will be held immediately following the IGNITE Session.

*If a session you wanted to attend is full, look for posters in the lobbies of main conference buildings for session alternatives.*
## Pre-Conference Workshops
### Wednesday, May 4, 2016

**8:30 a.m. - 4:00 p.m.**

**P001**
**Bauer - Morehouse A/B/C**

**Laying the Foundation for an Exemplary PK-12 Mathematics Program, Developing Effective Teaching Practices, and Creating a Plan of Action**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:30-8:30 a.m.</td>
<td>Registration</td>
<td>Kraft Centre Lobby</td>
</tr>
</tbody>
</table>
| 8:30-10:00 a.m.| **Foundations for an Exemplary PK-12 Mathematics Program,** John SanGiovanni and Jennifer Novak, Howard County Public School System, Ellicott City, MD  
In one district, an exemplary mathematics program is grounded in research-based effective strategies and aligned to the Danielson Framework. This PK-12 program is built on three pillars so that every child has access to advanced mathematics before graduating high school. This session will support the creation of a mathematics lens for the Danielson Framework. It will highlight the strategies for consistent, high-quality initial instruction, intervention, equity, and access. It will also feature plans for supporting mathematics teachers, coaches, administrators, and parents. Programmatic tools and resources will be shared. | Bauer-Morehouse ABC        |
| 10:15-11:45 a.m.| **Mathematics Leaders Developing Effective Teaching Practices – Part 1** ! Grades K-5 Breakout, John SanGiovanni  
This grade band specific session will take a deep dive with setting goals, posing purposeful questions, facilitating discourse, and making use of evidence. The session will feature professional learning designed for teachers and administrators in a district’s PK-12 program. Sessions will connect ideas of exemplary mathematics and the Danielson Framework featured in session 1 as well as implementing and data collection featured in session 3. Professional learning sessions, structures, and resources will be shared.  
Grades 6-12 Breakout, Jennifer Novak | Bauer-Morehouse A          |
|                | **Grades 6-12 Breakout, Jennifer Novak**                                | Bauer-Morehouse BC        |
| 12:00-12:45 p.m.| Lunch                                                                   | Kraft Centre Dining Room  |
| 1:00-2:30 p.m. | **Mathematics Leaders Developing Effective Teaching Practices – Part 2**  
Grades K-5 Breakout, John SanGiovanni  
Grades 6-12 Breakout, Jennifer Novak | Bauer-Morehouse A          |
|                | **Grades 6-12 Breakout, Jennifer Novak**                                | Bauer-Morehouse BC        |
| 2:45-4:00 p.m. | **A Plan of Action**                                                    | Bauer-Morehouse ABC       |

**John SanGiovanni** is an elementary math supervisor in Howard County, Maryland. John is an author, professor, consultant, and frequent speaker at local and national conferences.

**Jennifer Novak** is a resource teacher for the Howard County public schools in Maryland. She has presented at county in-services, the Maryland Governor’s Academy, and the N.S.A. Mathematics Symposium.
Pre-Conference Workshops
Wednesday, May 4, 2016

8:30 a.m. - 4:00 p.m.

P002
Kern-Boehr/Cary

Five Instructional Shifts for Supporting Rigorous Standards for All Students in K-12 Classrooms

Explore five essential instructional shifts that emphasize the mathematical practices and the content they support for all students in K-12 classrooms. Engage with high cognitive demand tasks and how to support them during instruction. Enhance your understanding of the shifts through the use of authentic video in classrooms.

Juli Dixon, Ph.D., is a professor of mathematics education at the University of Central Florida (UCF). She coordinates the award-winning Lockheed Martin/UCF Academy Master of Education in K–8 mathematics and science and the PhD program in mathematics education. Dr. Dixon is focused on improving teachers’ mathematics knowledge for teaching so that they can communicate and justify mathematical ideas and also expect their students to explain their mathematical thinking.

P003
RWI-Crystal

Creating a Language-Rich Math Class

A language-rich mathematics class is an exciting place. Students are describing their thinking, defending their answers, and discussing mathematical ideas. If we listen carefully to what they say, they will tell us what they understand. Join this interactive session and learn practical strategies for:

- introducing students to math language that gives meaning to the terms and symbols they use everyday
- building flexibility and precision in students’ use of math language structuring activities to make them more language-rich.

Sandy Atkins, Ph.D., is the owner and Executive Director of Creating AHAs, LLC. An inspiring speaker, Dr. Atkins is committed to finding those ‘aha moments’ when mathematical connections are made by teachers and students. Her sessions are thought provoking and practical.

P004
Bauer-Boddie/LaDue

Let’s Play! Who Says Learning Can’t be Fun?

In this session, we will play. Learning should be fun, for the learner and also for the teacher. Come and join me as I show you some interesting ways to use Google Apps for Education and other technology resources in the classroom for math instruction, practice, and assessment. You will get time to explore and also create lessons that adapt to the needs of your learners. Gaming will also be infused into this session, and I will share an Everyday Math unit, gamified! Don’t miss the fun!

Velvet Holmes infuses creativity as an Information Technology Literacy teacher with the Oregon School District. Personalized learning has been the focus in her district for the past 4 years, so she’s learned many strategies towards a learner-centered environment. Her passion is teaching everyone that it’s OK to fail! It’s the first attempt in learning-embrace it!
# Pre-Conference Workshops
## Wednesday, May 4, 2016

**2016 Computer Science Educators Summit – Building Computer Science Opportunity in Wisconsin**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>8:00-9:00 a.m.</td>
<td>Registration</td>
<td>Kraft Centre Lobby</td>
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<tr>
<td>9:00-10:00 a.m.</td>
<td><strong>Keynote: The Current Landscape of CS in K-12, Owen Astrachan, Duke University</strong></td>
<td>Kern – Brayton Case</td>
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<tr>
<td>10:10 a.m.-</td>
<td><strong>Elementary Strand</strong></td>
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<tr>
<td>12:30 p.m.</td>
<td>Code.org K-5 Modules and Other K-8 Modules, Jenna Garcia, Code.org</td>
<td>Kern - Brown</td>
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<td><strong>High School Strand</strong></td>
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<td></td>
<td>AP Computer Science Principles Session, Owen Astrachan, Duke University &amp; Robert Juranitch, University School of Milwaukee</td>
<td>Kern - Hanson</td>
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<td><strong>Administrator/District Strand</strong></td>
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<td></td>
<td>Why Should CS be Included in K-12 Districts and Schools? Andy Kuemmel, Madison West High School &amp; Joe Kmoch, Milwaukee Public Schools</td>
<td>Kern - Stansbury</td>
</tr>
<tr>
<td>12:45-1:45 p.m.</td>
<td><strong>Lunch Keynote: Are We There Yet? Keeping Equity at the Forefront of CS for All, Gail Chapman, University of California-Los Angeles</strong></td>
<td>Mitchell Dining Room, Kraft Centre</td>
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<td>2:00-4:20 p.m.</td>
<td><strong>Elementary Strand</strong></td>
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<td>Scratch Workshop, Philip East, University of Northern Iowa</td>
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<td>Exploring Computer Science - Teaching and Learning Computer Science through Inquiry, Gail Chapman, University of California-Los Angeles &amp; Linnea Logan, Whitefish Bay High School</td>
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<td></td>
<td>Overview of Curricula and Resources for K-8 and High School, Andy Kuemmel, Madison West High School &amp; Dennis Brylow, Marquette University</td>
<td>Kern – Stansbury</td>
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<tr>
<td>4:30-5:00 p.m.</td>
<td><strong>Summary Q &amp; A, Evaluation and Prizes</strong>, Robert Juranitch &amp; CSTA-WI Board</td>
<td>Kern – Brayton Case</td>
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Meetings & Event Overview
Thursday, May 5, 2016

6:30–8:30 a.m.
Breakfast served in Kraft Centre Dining Room (requires separate ticket purchased from Green Lake Conference Center)

7:00 a.m.–4:30 p.m.
On-site Registration (Kraft Centre Lobby)

7:00–7:45 a.m.
First Timer Orientation (Kraft Centre Tower Dining Room)
Look for the red, yellow and blue balloons!

8:00 a.m.–4:00 p.m.
Visit the Exhibit Hall (Pillsbury)

8:00 a.m.
Sessions Begin

10:00 a.m.
Check out time for Green Lake lodging

10:30 a.m.–1:00 p.m.
Lunch

10:30 a.m.–1:00 p.m.
WMC President’s Luncheon (RWI-Veranda B)

3:00-3:30 p.m.
Graduate Credit Course Drop-in Session (RWI-Veranda B)

3:45-4:30 p.m.
Wisconsin Mathematics Council Annual Meeting (Bauer-Beaty)

4:00 p.m.
Sessions conclude

4:30-7:30 p.m.
Celebrate WMC (Kraft Centre Dining Room) including the WMEF Heads and Tails Raffle Event

8:00 p.m.
WMC Movie Night
Nova - The Great Math Mystery (Bauer-Morehouse B/C)

FIRST TIMERS WELCOME/orientation
7:00-7:45 a.m. Kraft Centre Tower Dining Room
Meet new friends and get acquainted with the conference ins and outs. The Membership Committee will provide an overview of the conference program, answer questions and help you select appropriate sessions. Bring your breakfast or just drop in for valuable information to make the most of your first Annual Conference experience. Look for the red, yellow and blue balloons!

Effective Leaders, Effective Educators Strand
Please note individual session locations.

• 7:45-9:00 a.m. Kraft Centre Mitchell Dining Room
 Administrator’s Series Kickoff Breakfast with Dr. Juli Dixon

• 9:30-11:00 a.m. Lakeview Room
 Giving ALL Students a Voice: Alex’s Story – Dr. Juli Dixon & Alex Dixon

• 11:30 a.m.-12:30 p.m. Lakeview Room
 Supporting the Productive Struggle – John SanGiovanni & Jennifer Novak

• 1:00-2:00 p.m. Bauer-Morehouse C
 Tips for Creating a Language-Rich Math Class – Dr. Sandy Atkins

• 2:30-3:30 p.m. Kern-Hanson
 Administrators - What Do You Need to Know About Teaching and Learning Mathematics? – Dr. Becky Walker (interactive wrap-up session)

WSMI Fellows Breakfast
8:00 a.m.–9:00 a.m., Kraft-Tower Dining Room
You are part of an online mathematics community of instructional leaders, the WSMI (Wisconsin Statewide Mathematics Initiative) Fellows. You worked hard all semester to incorporate high cognitive demand tasks, analyze your students’ work, and make instructional decisions based on student learning. Isn’t it time we all met face to face? Grab your breakfast in the dining hall and meet together in the adjoining room. We will discuss the next steps for you and your district. This session is open to all WSMI Fellows.

WMC President’s Luncheon
11:00 a.m.-12:30 p.m., RWI – Veranda B
WMC’s President cordially invites all Wisconsin Mathematics Council Past Presidents to attend this annual gathering. Meet with friends, review WMC directions and explore new directions. By invitation only.
AUTHOR BOOK SIGNINGS
Mathematics authors, Juli Dixon and Sandy Atkins, will be signing copies of their books today as follows:

Juli Dixon will be signing her book, A Stroke of Luck, immediately following her morning keynote address on Thursday from 11:15-11:45 a.m. in the Pillsbury Lobby.

Sandy Atkins will be signing copies of her books immediately following her afternoon keynote address on Thursday from 2:15-2:45 p.m. in the Bauer Lobby.

GRADUATE CREDIT COURSE DROP-IN SESSION
3:00-3:45 p.m. RWI-Veranda B
Earn one graduate credit through UW–La Crosse for attending the WMC Annual Conference. To qualify, participate in two of the three days of the conference. You must also drop-in during this course session to receive additional assignments. The cost is $110 in addition to WMC conference registration; on-line course registration and payment information can be found on the WMC website.

WMC ANNUAL MEETING
3:45-4:30 p.m. Bauer-Beaty
ALL ARE INVITED to learn about the business of the Wisconsin Mathematics Council. Enjoy refreshments and conversation with WMC board and committee members as they share plans and review the past year’s accomplishments. A short business meeting will inform you of WMC activities and encourage you to become more involved.

“CELEBRATE WMC”
4:30-7:30 p.m. Kraft-Main Dining Room
There’s no need to leave the conference grounds when you attend the “Celebrate WMC” Reception at the Green Lake Conference Center on Thursday evening. Plan to spend time with your colleagues, meet WMC current and past leadership, and visit with friends while you enjoy a generous variety of hors d’oeuvres, a beer and wine cash bar, and great conversation. A short awards and recognition program will be part of the reception as well as the popular Wisconsin Mathematics Education Foundation Heads and Tails Raffle. Participation is FREE with your Thursday conference registration!

MOVIE NIGHT — NOVA – THE GREAT MATH MYSTERY
8:00 p.m. Bauer-Morehouse B/C
(2015) Join NOVA on a mathematical mystery tour—a provocative exploration of math’s astonishing power across the centuries. Math has been essential to everything from the first wireless radio transmissions to the prediction and discovery of the Higgs boson and the successful landing of rovers on Mars. Astrophysicist and writer Mario Livio, along with a colorful cast of mathematicians, physicists, and engineers, follow math from Pythagoras to Einstein and beyond. It all leads to the ultimate riddle: Is math a human invention or the discovery of the language of the universe?
In 2010, Wisconsin adopted the Common Core State Standards for Mathematics. Six school districts implemented the standards using ORIGO Stepping Stones. After three years with the curriculum, all six districts have increased educational outcomes. With one district realizing increases that exceeded state averages for mathematics proficiency by more than 10 percent.

### Average Increases in Mathematics Proficiency 2012-2014

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<tr>
<td><strong>ORIGO Stepping Stones Schools</strong></td>
<td><strong>7%</strong></td>
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<tr>
<td><strong>Wisconsin State Average</strong></td>
<td><strong>2%</strong></td>
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</table>

All data available in the full report

**WHY CHOOSE ORIGO STEPPING STONES?**

- Continual online updates that provide a cost effective program solution.
- Multiple online and print resources to engage students.
- Written to reflect the content and intent of the CCSSM.

When planning your session choices, write down the session number, building and room. Also select some nearby alternatives in the event that your first choice is full.

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<td>“Mistakes Grow Our Brains!”: Teaching the Mathematical Mindset in our Classrooms and Schools</td>
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<td>Introduction to the CCSSM Instructional Shifts</td>
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<td>Bauer-Lightbody</td>
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<td>Building Common Core Learning Trajectories for Students and Teachers: Supporting Core and Interventions K-5</td>
</tr>
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<td>Kern-Cary</td>
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<td>Ensuring Mathematical Success for All: What’s Our Role as Instructional Leaders?</td>
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<td>It is Not &quot;New&quot; Math; it is Deeper Learning</td>
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<td>Giving ALL Students a Voice: Alex’s Story</td>
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<td>136</td>
<td>Kern-Johnson</td>
<td>9:30-11:00 a.m.</td>
<td>Administrators: 3 Strategies/Increase Students’ Math Achievement</td>
</tr>
<tr>
<td>154</td>
<td>YC-Cummings</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Developing Conceptual Fluency to Support Interventions</td>
</tr>
<tr>
<td>155</td>
<td>Kern-Hanson</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Exploring Math Tasks and Student Work with the WSMI Fellows</td>
</tr>
<tr>
<td>156</td>
<td>RWI-Crystal</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>National Board Certification: Professional Development that Matters</td>
</tr>
<tr>
<td>157</td>
<td>RWI-Veranda A</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Planting Seeds of Change: Building a Flexible Mathematics Framework to Meet the Needs of All Students</td>
</tr>
<tr>
<td>201</td>
<td>YC-Cummings</td>
<td>1:00-4:00 p.m.</td>
<td>What is Number Sense and How Should We Teach It?</td>
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<td>202</td>
<td>Kern-Brown</td>
<td>1:00-2:00 p.m.</td>
<td>Growing Growth Mindsets K-3</td>
</tr>
<tr>
<td>203</td>
<td>Kern-Brown</td>
<td>1:00-2:00 p.m.</td>
<td>Say What?! Using Speaking &amp; Listening Standards to Enhance Mathematical Conversations</td>
</tr>
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<td>204</td>
<td>YC-Huber-Evans</td>
<td>1:00-2:00 p.m.</td>
<td>K-8 STEM: Horizontally Aligning a Viable Standards</td>
</tr>
<tr>
<td>205</td>
<td>Bauer-Morehouse C</td>
<td>1:00-2:00 p.m.</td>
<td>Living Outside the Box: Developing Solutions for Closing the Mathematics Achievement Gap</td>
</tr>
<tr>
<td>206</td>
<td>Bauer-Lightbody</td>
<td>1:00-2:00 p.m.</td>
<td>The Coherence Map: A Tool for Mathematical Success</td>
</tr>
<tr>
<td>207</td>
<td>YC-Dominguez Cox</td>
<td>1:00-2:00 p.m.</td>
<td>Roundtable Discussion -What Strategies Positively Impact English Language Learners in a Mathematics Classroom?</td>
</tr>
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<td>227</td>
<td>RWI-Veranda A</td>
<td>2:30-4:00 p.m.</td>
<td>Reaching for the Standards and Building the Base of Mathematical Development</td>
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<td>228</td>
<td>YC-Huber-Evans</td>
<td>2:30-4:00 p.m.</td>
<td>Math Workshop in Action</td>
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<tr>
<td>229</td>
<td>RWI-Veranda C</td>
<td>2:30-4:00 p.m.</td>
<td>What’s the Problem?</td>
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<tr>
<td>230</td>
<td>Bauer-Morehouse C</td>
<td>2:30-4:00 p.m.</td>
<td>Problem Solving; The Path to Success for all Students</td>
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<td>231</td>
<td>Kraft-Tower Dining Room</td>
<td>2:30-4:00 p.m.</td>
<td>Increasing Procedural Fluency through Games</td>
</tr>
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<td>232</td>
<td>Bauer-Morehouse B</td>
<td>2:30-4:00 p.m.</td>
<td>Using Depth of Knowledge to Add Rigor to the Math Classroom</td>
</tr>
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<td>233</td>
<td>Bauer-Boddie</td>
<td>2:30-4:00 p.m.</td>
<td>NEARpod - Learn About a Free Interactive App/Website that Can Revolutionize Your Classroom</td>
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<td>Deepening Mathematical Understanding Using Literacy Tools</td>
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<td>Promoting Productive Discourse – Making Thinking Public</td>
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<td>236</td>
<td>YC-Fordham Ballenger</td>
<td>2:30-4:00 p.m.</td>
<td>Developing Multiplication Concepts</td>
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<td>Kern-Hanson</td>
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<td>Administrators - What Do You Need to Know About Teaching and Learning Mathematics?</td>
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<td>Instructional Practices that Make a Difference</td>
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<td>Habits of Mind for Students and Teachers</td>
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<td>My Favorites: A Collaboration of Ideas &amp; Sharing</td>
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<td>9:30-11:00 a.m.</td>
<td>Giving ALL Students a Voice: Alex’s Story</td>
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<td>136</td>
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<td>Think It: Tools for Multiplication and Division</td>
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<td>152</td>
<td>RWI-McGarvey</td>
<td>9:30-11:00 a.m.</td>
<td>Developing K-2 Numeracy Concepts</td>
</tr>
<tr>
<td>154</td>
<td>YC-Cummings</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Developing Conceptual Fluency to Support Interventions</td>
</tr>
<tr>
<td>155</td>
<td>Kern-Hanson</td>
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<td>Administrators: 3 Strategies to Increase Your Students' Math Achievement</td>
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<td>YC-Dominguez Cox</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>The Power Duo: Discourse and Mathematical Representations</td>
</tr>
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<td>Bauer-LaDue</td>
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<td>Planting Seeds of Change: Building a Flexible Mathematics Framework</td>
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<td>202</td>
<td>Kern-Brayton Case A</td>
<td>1:00-2:00 p.m.</td>
<td>Growing Growth Mindsets K-3</td>
</tr>
<tr>
<td>203</td>
<td>Kern-Brown</td>
<td>1:00-2:00 p.m.</td>
<td>Say What?! Using Speaking/Listening Standards</td>
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<td>What Strategies Positively Impact English Language Learners/Math Classroom?</td>
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<td>208</td>
<td>Kern-Brayton Case B</td>
<td>1:00-2:00 p.m.</td>
<td>Going Beyond Fast Facts: Balanced Approach/Assessing Multiplication Fluency</td>
</tr>
<tr>
<td>209</td>
<td>Kern-Boehr</td>
<td>1:00-2:00 p.m.</td>
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<td>2:30-4:00 p.m.</td>
<td>Promoting Productive Discourse – Making Thinking Public</td>
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<td>YC-Ng Jones</td>
<td>2:30-4:00 p.m.</td>
<td>Changing Mindsets of Elementary Students: Putting Research into Practice</td>
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<td>248</td>
<td>Kern-Hanson</td>
<td>2:30-3:30 p.m.</td>
<td>Administrators - What Do You Need to Know/Teaching and Learning Math?</td>
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<tr>
<td>103</td>
<td>Bauer-Boddie</td>
<td>8:00-9:00 a.m.</td>
<td>Utilize the Personal Math Trainer in Your K – 5 GO Math! Classroom</td>
</tr>
<tr>
<td>104</td>
<td>Kern-Brayton Case B</td>
<td>8:00-9:00 a.m.</td>
<td>Breakout EDU - The Power of Practice</td>
</tr>
<tr>
<td>105</td>
<td>RWI-Crystal</td>
<td>8:00-9:00 a.m.</td>
<td>Implementing Growth Mindset in an Elementary Classroom</td>
</tr>
<tr>
<td>106</td>
<td>Bauer-Veranda A</td>
<td>8:00-9:00 a.m.</td>
<td>Instruction to the CCSSM Instructional Shifts</td>
</tr>
<tr>
<td>107</td>
<td>Bauer-Morehouse C</td>
<td>8:00-9:00 a.m.</td>
<td>Teaching and Learning Mathematics with a Growth Mindset</td>
</tr>
<tr>
<td>108</td>
<td>Lakeview</td>
<td>8:00-9:00 a.m.</td>
<td>Leveraging Quality Mathematics Tasks</td>
</tr>
<tr>
<td>109</td>
<td>RWI-Veranda C</td>
<td>8:00-9:00 a.m.</td>
<td>Instructional Practices that Make a Difference</td>
</tr>
<tr>
<td>110</td>
<td>YC-Cummings</td>
<td>8:00-9:00 a.m.</td>
<td>Leveraging STEM to Support the Mathematical Practices</td>
</tr>
<tr>
<td>111</td>
<td>YC-Fordham Ballenger</td>
<td>8:00-9:00 a.m.</td>
<td>Habits of Mind for Students and Teachers</td>
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<td>112</td>
<td>Kern-Hanson</td>
<td>8:00-9:00 a.m.</td>
<td>My Favorites: A Collaboration of Ideas &amp; Sharing</td>
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<td>128</td>
<td>Kraft-Mitchell Dining Room</td>
<td>9:30-11:00 a.m.</td>
<td>Using the Math Practice Standards to Create Learning Goals</td>
</tr>
<tr>
<td>129</td>
<td>YC-Huber-Evans</td>
<td>9:30-11:00 a.m.</td>
<td>If Timed Tests Aren’t the Answer, How Do We Assess Fluency?</td>
</tr>
<tr>
<td>130</td>
<td>Bauer-Lightbody</td>
<td>9:30-11:00 a.m.</td>
<td>Building Common Core Learning Trajectories for Students and Teachers</td>
</tr>
<tr>
<td>131</td>
<td>Kern-Cary</td>
<td>9:30-11:00 a.m.</td>
<td>Ensuring Mathematical Success for All: Role as Instructional Leaders?</td>
</tr>
<tr>
<td>132</td>
<td>Bauer-Beaty</td>
<td>9:30-11:00 a.m.</td>
<td>It is Not &quot;New&quot; Math; it is Deeper Learning</td>
</tr>
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<td>141</td>
<td>Kern-Brown</td>
<td>9:30-11:00 a.m.</td>
<td>Unique 3D Box Design, for Upper Elementary Students</td>
</tr>
<tr>
<td>142</td>
<td>Kern-Brayton Case A</td>
<td>9:30-11:00 a.m.</td>
<td>Mind Over Matter: Developing Growth Mindsets in Middle Grades</td>
</tr>
<tr>
<td>155</td>
<td>Kern-Hanson</td>
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<td>Supporting the Productive Struggle</td>
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<td>What Makes Algebra so Difficult?</td>
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<td>162</td>
<td>Kern-Cary</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Addition and Subtraction of Fractions on the Number Line</td>
</tr>
<tr>
<td>163</td>
<td>YC-Ng Jones</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Complex Related Problems and Promoting Algebraic Thinking</td>
</tr>
<tr>
<td>164</td>
<td>YC-Huber-Evans</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Modeling and STEM: Modeling Matter and Gas Laws Using MathScience</td>
</tr>
<tr>
<td>165</td>
<td>RWI-Mahaney</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Connecting a State Vision of STEM Education to Mathematics Lessons</td>
</tr>
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<td>Living Outside the Box Solutions for Closing the Mathematics Achievement Gap</td>
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<td>Kern-Johnson</td>
<td>1:00-2:00 p.m.</td>
<td>But I Teach MATH!</td>
</tr>
<tr>
<td>212</td>
<td>Kern-Stansbury</td>
<td>1:00-2:00 p.m.</td>
<td>Number Lines, Fractions, and Rational Numbers: Deepen Understanding</td>
</tr>
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<td>213</td>
<td>Bauer-LaDue</td>
<td>1:00-2:00 p.m.</td>
<td>Ultimate Engagement with Pear Deck</td>
</tr>
<tr>
<td>214</td>
<td>Lakeview</td>
<td>1:00-2:00 p.m.</td>
<td>Extreme Equality: Close the Achievement Gap in Math</td>
</tr>
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<td>215</td>
<td>RWI-Crystal</td>
<td>1:00-2:00 p.m.</td>
<td>Let Them Fail: Engaging Students in Productive Struggle</td>
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<td>Bauer-Morehouse A</td>
<td>1:00-2:00 p.m.</td>
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<td>Understanding Fraction Multiplication &amp; Division with Visual Models</td>
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<td>Kern-Cary</td>
<td>2:30-4:00 p.m.</td>
<td>Math/Science Integration for Earth's Sake</td>
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<td>Bauer-Lightbody</td>
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<td>Building Common Core Learning Trajectories for Students and Teachers</td>
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<tr>
<td>249</td>
<td>Kern-Johnson</td>
<td>2:30-3:30 p.m.</td>
<td>Using Number Line Model/Strengthen Students' Understanding of Fractions</td>
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<td>Bauer-Morehouse C</td>
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<td>Teaching and Leading Mathematics with a Growth Mindset</td>
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<td>Lakeview</td>
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<td>Kern-Hanson</td>
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<td>&quot;That Makes Sense!...Meaningful Conversations in Math Class&quot;</td>
</tr>
<tr>
<td>9</td>
<td>RWI-McGarvey</td>
<td>8:00-9:00 a.m.</td>
<td>ACT - Aligned by Design - Small School Update</td>
</tr>
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<td>Bauer-LaDue</td>
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<td>8:00-9:00 a.m.</td>
<td>Supporting Teachers in Action!</td>
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<td>Bauer-Morehouse B</td>
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<td>Transformational Geometry - Immediate Interactive Investigations – Gr 7-11</td>
</tr>
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<td>TY-Dominguez Cox</td>
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<td>Highlighting Student Successes</td>
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<td>14</td>
<td>Kern-Johnson</td>
<td>8:00-9:00 a.m.</td>
<td>AVID Interactive Notebooks &amp; Mathematics</td>
</tr>
<tr>
<td>15</td>
<td>Kern-Brayton Case A</td>
<td>8:00-9:00 a.m.</td>
<td>Posing Purposeful Questions: Informing Teachers, Informing Students</td>
</tr>
<tr>
<td>16</td>
<td>Lakeview</td>
<td>9:30-11:00 a.m.</td>
<td>It is Not &quot;New&quot; Math; it is Deeper Learning</td>
</tr>
<tr>
<td>17</td>
<td>YC-Fordham Ballenger</td>
<td>9:30-11:00 a.m.</td>
<td>Giving ALL Students a Voice: Alex’s Story</td>
</tr>
<tr>
<td>18</td>
<td>RWI-Veranda C</td>
<td>9:30-11:00 a.m.</td>
<td>Pentaland: A Whole New World in Base Five</td>
</tr>
<tr>
<td>19</td>
<td>Kern-Brayton Case A</td>
<td>9:30-11:00 a.m.</td>
<td>Doing and Talking Math: Engaging ELs in the Discourse of Math Practices</td>
</tr>
<tr>
<td>20</td>
<td>Bauer-Morehouse B</td>
<td>9:30-11:00 a.m.</td>
<td>Mind Over Matter: Developing Growth Mindsets in Middle Grades</td>
</tr>
<tr>
<td>21</td>
<td>Bauer-Morehouse A</td>
<td>9:30-11:00 a.m.</td>
<td>Statistical Significance: What is it?</td>
</tr>
<tr>
<td>22</td>
<td>YC-Dominguez Cox</td>
<td>9:30-11:00 a.m.</td>
<td>Reasoning from Data: Making Inferences</td>
</tr>
<tr>
<td>23</td>
<td>Kraft-Tower Dining Room</td>
<td>9:30-11:00 a.m.</td>
<td>The Many Ways to Teach Math with Patty Paper</td>
</tr>
<tr>
<td>24</td>
<td>YC-Cummings</td>
<td>9:30-11:00 a.m.</td>
<td>Differentiating Algebra Instruction through Modeling with Functions</td>
</tr>
<tr>
<td>25</td>
<td>Kern-Boehr</td>
<td>9:30-11:00 a.m.</td>
<td>Active Learning Strategies</td>
</tr>
<tr>
<td>26</td>
<td>RK-Mahaney</td>
<td>9:30-11:00 a.m.</td>
<td>Getting Students Working and Keeping Them Working</td>
</tr>
<tr>
<td>27</td>
<td>Bauer-LaDue</td>
<td>9:30-11:00 a.m.</td>
<td>Building and Tinkering in the Computer Science Lab</td>
</tr>
<tr>
<td>28</td>
<td>RWI-Mahaney</td>
<td>9:30-10:30 a.m.</td>
<td>Using Data Visualization to Help Students Reflect and Improve</td>
</tr>
<tr>
<td>29</td>
<td>RWI-Crystal</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Exploring Math Tasks and Student Work with the WSMI Fellows</td>
</tr>
<tr>
<td>30</td>
<td>RWI-Veranda A</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>National Board Certification...Professional Development that Matters</td>
</tr>
<tr>
<td>31</td>
<td>Lakeview</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Supporting the Productive Struggle</td>
</tr>
<tr>
<td>32</td>
<td>Bauer-LaDue</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>SCRATCH Programming: It's Not Just for All Ages!</td>
</tr>
<tr>
<td>33</td>
<td>Bauer-Lightbody</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>What Makes Algebra so Difficult?</td>
</tr>
<tr>
<td>34</td>
<td>YC-Ng Jones</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Complex Related Problems and Promoting Algebraic Thinking</td>
</tr>
<tr>
<td>35</td>
<td>YC-Huber-Evans</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Modeling and STEM: Modeling Matter and Gas Laws Using Math and Science</td>
</tr>
<tr>
<td>36</td>
<td>RWI-Mahaney</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Connecting a State Vision of STEM Education to Mathematics Lessons</td>
</tr>
<tr>
<td>37</td>
<td>Kern-Brayton Case B</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Tape Diagrams: They’re Not Just for Ratios!</td>
</tr>
<tr>
<td>38</td>
<td>Kern-Brayton Case A</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Develop Students' Mathematical Habits of Minds</td>
</tr>
<tr>
<td>39</td>
<td>Bauer-Morehouse B</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Old Dogs, New Flips</td>
</tr>
<tr>
<td>40</td>
<td>Bauer-Morehouse A</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Effective Coaching Strategies for the Mathematics Classroom</td>
</tr>
<tr>
<td>41</td>
<td>Kern-Boehr</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Teaching with Technology: GeoGebra Exploration</td>
</tr>
<tr>
<td>42</td>
<td>Bauer-Morehouse C</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Tips &amp; Tricks on the TI-84, TI-84CE (color), &amp; TI-SmartView for Grades 7-12</td>
</tr>
<tr>
<td>43</td>
<td>Kern-Stransbury</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Let’s Team Up!</td>
</tr>
<tr>
<td>44</td>
<td>Bauer-Morehouse A</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Supporting Algebraic Thinking for the Struggling Learners in Grades 7-10</td>
</tr>
<tr>
<td>45</td>
<td>Bauer-Lightbody</td>
<td>1:00-2:00 p.m.</td>
<td>The Coherence Map: A Tool for Mathematical Success</td>
</tr>
<tr>
<td>46</td>
<td>TY-Dominguez Cox</td>
<td>1:00-2:00 p.m.</td>
<td>What Strategies Positively Impact English Language Learners in a Mathematics Classroom?</td>
</tr>
<tr>
<td>47</td>
<td>Kern-Johnson</td>
<td>1:00-2:00 p.m.</td>
<td>But I Teach MATH!</td>
</tr>
<tr>
<td>48</td>
<td>Kern-Stransbury</td>
<td>1:00-2:00 p.m.</td>
<td>Number Lines, Fractions, Rational Numbers: Best Representation to Deepen Understanding</td>
</tr>
<tr>
<td>49</td>
<td>Bauer-Lightbody</td>
<td>1:00-2:00 p.m.</td>
<td>Ultimate Engagement with Pear Deck</td>
</tr>
<tr>
<td>50</td>
<td>Lakeview</td>
<td>1:00-2:00 p.m.</td>
<td>Extreme Equally: Using Evidence Based Methods to Close the Achievement Gap in Math</td>
</tr>
<tr>
<td>51</td>
<td>RWI-Crystal</td>
<td>1:00-2:00 p.m.</td>
<td>Let Them Fail: Engaging Students in Productive Struggle</td>
</tr>
<tr>
<td>52</td>
<td>Bauer-Morehouse A</td>
<td>1:00-2:00 p.m.</td>
<td>I am Flipped for Math</td>
</tr>
<tr>
<td>53</td>
<td>RWI-Veranda A</td>
<td>1:00-2:00 p.m.</td>
<td>Building Statistical Thinkers in the Middle Grades</td>
</tr>
<tr>
<td>54</td>
<td>RWI-McGarvey</td>
<td>1:00-2:00 p.m.</td>
<td>Using the TI-Nspire to Explore, Investigate, and Discover in the Geometry Classroom</td>
</tr>
<tr>
<td>55</td>
<td>Kern-Hanson</td>
<td>1:00-2:00 p.m.</td>
<td>Standards Based Learning: Moving Students</td>
</tr>
<tr>
<td>56</td>
<td>YC-Ng Jones</td>
<td>1:00-2:00 p.m.</td>
<td>Being in Two or Three Places at the Same Time Teaching Math!</td>
</tr>
<tr>
<td>57</td>
<td>Bauer-Morehouse C</td>
<td>2:30-4:00 p.m.</td>
<td>Problem Solving: The Path to Success for all Students</td>
</tr>
<tr>
<td>58</td>
<td>Kern-Boehr</td>
<td>2:30-4:00 p.m.</td>
<td>Increasing Procedural Fluency through Games</td>
</tr>
<tr>
<td>59</td>
<td>Bauer-Morehouse B</td>
<td>2:30-4:00 p.m.</td>
<td>Using Depth of Knowledge (DOK) to Add Rigor to the Mathematics Classroom</td>
</tr>
<tr>
<td>60</td>
<td>Bauer-Lightbody</td>
<td>2:30-4:00 p.m.</td>
<td>NEARpod - Learn About a Free Interactive App/Website that Can Revolutionize Your Classroom</td>
</tr>
<tr>
<td>61</td>
<td>Kern-Brown</td>
<td>2:30-4:00 p.m.</td>
<td>Deepening Mathematical Understanding Using Literacy Tools</td>
</tr>
<tr>
<td>62</td>
<td>YC-Dominguez Cox</td>
<td>2:30-4:00 p.m.</td>
<td>Get Your Students in on the Action!</td>
</tr>
<tr>
<td>63</td>
<td>TY-Ng Jones</td>
<td>2:30-4:00 p.m.</td>
<td>Changing Mindsets of Elementary Students: Putting Research into Practice</td>
</tr>
<tr>
<td>64</td>
<td>Kern-Cary</td>
<td>2:30-4:00 p.m.</td>
<td>Math/Science Integration for Earth’s Sake</td>
</tr>
<tr>
<td>65</td>
<td>Bauer-Lightbody</td>
<td>2:30-4:00 p.m.</td>
<td>Building Common Core Learning Trajectories for Students and Teachers</td>
</tr>
<tr>
<td>66</td>
<td>Bauer-Morehouse A</td>
<td>2:30-4:00 p.m.</td>
<td>Principles to Actions’ Effective Mathematics Teaching Practices in the Middle Grades</td>
</tr>
<tr>
<td>67</td>
<td>Kern-Brayton Case A</td>
<td>2:30-4:00 p.m.</td>
<td>Performance Tasks and Rubric-Based Grading</td>
</tr>
<tr>
<td>68</td>
<td>Kern-Moderator Coh</td>
<td>2:30-4:00 p.m.</td>
<td>Create an Android App with MIT App Inventor</td>
</tr>
<tr>
<td>69</td>
<td>Lakeview</td>
<td>2:30-4:00 p.m.</td>
<td>Giving ALL Students a Voice: Alex’s Story</td>
</tr>
<tr>
<td>70</td>
<td>CPM (College Preparatory Mathematics) Networking Session</td>
<td>2:30-3:30 p.m.</td>
<td>CPM (College Preparatory Mathematics) Networking Session</td>
</tr>
<tr>
<td>71</td>
<td>Kern-Boehr</td>
<td>2:30-3:30 p.m.</td>
<td>What I Learned about Blended Learning in a High School Mathematics Classroom</td>
</tr>
<tr>
<td>#</td>
<td>Location</td>
<td>Time</td>
<td>Title</td>
</tr>
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</tr>
<tr>
<td>104</td>
<td>Kern-Brayton Case B</td>
<td>8:00-9:00 a.m.</td>
<td>Breakout EDU - The Power of Practice</td>
</tr>
<tr>
<td>105</td>
<td>Bauer-Morehouse A</td>
<td>8:00-9:00 a.m.</td>
<td>Teaching and Leading Mathematics with a Growth Mindset</td>
</tr>
<tr>
<td>106</td>
<td>Lakeview</td>
<td>8:00-9:00 a.m.</td>
<td>Leveraging Quality Mathematics Tasks</td>
</tr>
<tr>
<td>107</td>
<td>YC-Forham Ballenger</td>
<td>8:00-9:00 a.m.</td>
<td>Habits of Mind for Students and Teachers</td>
</tr>
<tr>
<td>108</td>
<td>Kern-Hanson</td>
<td>8:00-9:00 a.m.</td>
<td>My Favorites: A Collaboration of Ideas &amp; Sharing</td>
</tr>
<tr>
<td>109</td>
<td>RWI-McGarvey</td>
<td>8:00-9:00 a.m.</td>
<td>ACT - Design by - Small School Update</td>
</tr>
<tr>
<td>110</td>
<td>Bauer-LaDue</td>
<td>8:00-9:00 a.m.</td>
<td>&quot;That Makes Sense!...Meaningful Conversations in Math Class&quot;</td>
</tr>
<tr>
<td>111</td>
<td>YC-Ng Jones</td>
<td>8:00-9:00 a.m.</td>
<td>A Realistic &quot;Standards-Based Grading&quot; Approach for Any Math Class</td>
</tr>
<tr>
<td>112</td>
<td>Kern-Boehr</td>
<td>8:00-9:00 a.m.</td>
<td>Supporting Teachers in Action!</td>
</tr>
<tr>
<td>113</td>
<td>Bauer-Morehouse B</td>
<td>8:00-9:00 a.m.</td>
<td>Transformational Geometry - Immediate Interactive Investigations</td>
</tr>
<tr>
<td>114</td>
<td>YC-Dominguez Cox</td>
<td>8:00-9:00 a.m.</td>
<td>Highlighting Student Successes</td>
</tr>
<tr>
<td>115</td>
<td>Kern-Johnson</td>
<td>8:00-9:00 a.m.</td>
<td>Using Real-World Data and TI-Nspire Technology in Statistics</td>
</tr>
<tr>
<td>116</td>
<td>Kern-Cary</td>
<td>8:00-9:00 a.m.</td>
<td>Adding a Computer Science Endorsement to Your License</td>
</tr>
<tr>
<td>117</td>
<td>Bauer-Morehouse A</td>
<td>8:00-9:00 a.m.</td>
<td>Mathematical Modeling, Harry Potter, and the Zombie Apocalypse</td>
</tr>
<tr>
<td>118</td>
<td>RWI-Mahany</td>
<td>8:00-9:00 a.m.</td>
<td>Early Math Placement Tool (EMP): Preparing Students for College Level Math</td>
</tr>
<tr>
<td>119</td>
<td>Kern-Bayley</td>
<td>8:00-9:00 a.m.</td>
<td>Supporting Algebraic Thinking for the Struggling Learners in Grades 7-10</td>
</tr>
<tr>
<td>120</td>
<td>Kern-Brayton Case A</td>
<td>9:30-11:00 a.m.</td>
<td>Pentaland: A Whole New World in Base Five</td>
</tr>
<tr>
<td>121</td>
<td>RWI-Veranda C</td>
<td>9:30-11:00 a.m.</td>
<td>Doing and Talking Math: Engaging ELs in the Discourse of Math Practices</td>
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<tr>
<td>122</td>
<td>Bauer-Boehr</td>
<td>9:30-11:00 a.m.</td>
<td>Supporting the Productive Struggle</td>
</tr>
<tr>
<td>123</td>
<td>Kern-Boehr</td>
<td>9:30-11:00 a.m.</td>
<td>Developing a Computer Science Endorsement</td>
</tr>
<tr>
<td>124</td>
<td>Bauer-Boehr</td>
<td>9:30-11:00 a.m.</td>
<td>Connecting a State Vision of STEM Education to Mathematics Lessons</td>
</tr>
<tr>
<td>125</td>
<td>Kern-Bayley</td>
<td>9:30-11:00 a.m.</td>
<td>Building and Tinkering in the Computer Science Lab</td>
</tr>
<tr>
<td>126</td>
<td>RWI-Mahany</td>
<td>9:30-11:00 a.m.</td>
<td>Tips and Tools for the AP Computer Science A Exam and Building a CS program</td>
</tr>
<tr>
<td>127</td>
<td>RWI-Crystal</td>
<td>9:30-11:00 a.m.</td>
<td>Effective Teaching through the Umbrella of Questioning</td>
</tr>
<tr>
<td>128</td>
<td>RWI-Mahany</td>
<td>9:30-11:00 a.m.</td>
<td>Using Data Visualization to Help Students Reflect and Improve</td>
</tr>
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<td>129</td>
<td>RWI-Crystal</td>
<td>11:30 a.m.-12:30 p.m.</td>
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<td>RWI-Veranda A</td>
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<td>National Board Certification...Professional Development that Matters</td>
</tr>
<tr>
<td>131</td>
<td>Lakeview</td>
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<td>Bauer-Morehouse B</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Old Dogs, New Flips</td>
</tr>
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<td>135</td>
<td>YC-Forham Ballenger</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Effective Coaching Strategies for the Mathematics Classroom</td>
</tr>
<tr>
<td>136</td>
<td>Bauer-Boddie</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Teaching with Technology: GeoGebra Exploration</td>
</tr>
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<td>137</td>
<td>Bauer-Morehouse C</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Tips &amp; Tricks on the TI-B4, TI-B4CE (color), &amp; TI-SmartView for Grades 7-12</td>
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<tr>
<td>138</td>
<td>Kern-Stansbury</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Let's Team Up!</td>
</tr>
<tr>
<td>139</td>
<td>Bauer-Morehouse A</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Supporting Algebraic Thinking for the Struggling Learners in Grades 7-10</td>
</tr>
<tr>
<td>140</td>
<td>Kern-Brown</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Build Math Foundations for College Readiness</td>
</tr>
<tr>
<td>141</td>
<td>Kern-Boehr</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Computer Science Principles: A New Advanced Placement Course</td>
</tr>
<tr>
<td>142</td>
<td>Kern-Stansbury</td>
<td>11:30 a.m.-12:30 p.m.</td>
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<td>144</td>
<td>Kern-Johnson</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Building and Tinkering in the Computer Science Lab</td>
</tr>
<tr>
<td>145</td>
<td>Kern-Bayley</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>College and Career Ready Mathematics: The Case for Rational Functions</td>
</tr>
<tr>
<td>146</td>
<td>Kern-Johnson</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Students Who Don't Place into the Math Course They Want and/or Need</td>
</tr>
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<td>147</td>
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</tr>
<tr>
<td>148</td>
<td>YC-Forham Ballenger</td>
<td>1:00-2:00 p.m.</td>
<td>Algorithms Schmalgorithms! Do We Always Need the Shortcuts?</td>
</tr>
<tr>
<td>149</td>
<td>RWI-Mahany</td>
<td>1:00-2:00 p.m.</td>
<td>Let Them Fail: Engaging Students in Productive Struggle</td>
</tr>
<tr>
<td>150</td>
<td>Bauer-Morehouse A</td>
<td>1:00-2:00 p.m.</td>
<td>I am Flipped for Math</td>
</tr>
<tr>
<td>151</td>
<td>RWI-Veranda A</td>
<td>1:00-2:00 p.m.</td>
<td>Using the TI-Nspire to Explore, and Discover in the Geometry Classroom</td>
</tr>
<tr>
<td>152</td>
<td>Kern-Hanson</td>
<td>1:00-2:00 p.m.</td>
<td>Standards Based Learning: Moving Students Understanding</td>
</tr>
<tr>
<td>153</td>
<td>YC-Ng Jones</td>
<td>1:00-2:00 p.m.</td>
<td>Being in Two or Three Places at the Same Time Teaching Math!</td>
</tr>
<tr>
<td>154</td>
<td>Bauer-Morehouse B</td>
<td>1:00-2:00 p.m.</td>
<td>Cassady's Polygon Task: Fostering Mathematical Creativity with GeoGebra</td>
</tr>
<tr>
<td>155</td>
<td>RWI-Mahany</td>
<td>1:00-2:00 p.m.</td>
<td>Data Literacy in Statistics</td>
</tr>
<tr>
<td>156</td>
<td>RWI-Veranda C</td>
<td>1:00-2:00 p.m.</td>
<td>Let's Team Up!</td>
</tr>
<tr>
<td>157</td>
<td>Kern-Boehr</td>
<td>1:00-2:00 p.m.</td>
<td>Using Desmos in Secondary Math Classes</td>
</tr>
<tr>
<td>158</td>
<td>Kern-Brown</td>
<td>1:00-2:00 p.m.</td>
<td>5 STEPS TO A 5: AP COMPUTER SCIENCE A (Java)</td>
</tr>
<tr>
<td>159</td>
<td>RWI-Mahany</td>
<td>1:00-2:00 p.m.</td>
<td>Accelerating Developmental Students to Credit Bearing Courses</td>
</tr>
<tr>
<td>160</td>
<td>RWI-Veranda A</td>
<td>1:00-2:00 p.m.</td>
<td>Increasing Procedural Fluency through Games</td>
</tr>
<tr>
<td>161</td>
<td>Bauer-Morehouse B</td>
<td>1:00-2:00 p.m.</td>
<td>Using Depth of Knowledge (DOK) to Add Rigor to the Mathematics Classroom</td>
</tr>
<tr>
<td>162</td>
<td>Bauer-Boddie</td>
<td>1:00-2:00 p.m.</td>
<td>NEAP - Learn About a Free Interactive App/Webisode/Revitalize Your Classroom</td>
</tr>
<tr>
<td>163</td>
<td>Kern-Brown</td>
<td>1:00-2:00 p.m.</td>
<td>Deepening Mathematical Understanding Using Literacy Tools</td>
</tr>
<tr>
<td>164</td>
<td>Kern-Brayton Case A</td>
<td>1:00-2:00 p.m.</td>
<td>Performance Tasks and Rubric-Based Grading</td>
</tr>
<tr>
<td>165</td>
<td>Bauer-LaDue</td>
<td>1:00-2:00 p.m.</td>
<td>Create an Android App with MIT App Inventor</td>
</tr>
<tr>
<td>166</td>
<td>Lakeview</td>
<td>1:00-2:00 p.m.</td>
<td>Giving ALL Students a Voice: Alex's Story</td>
</tr>
<tr>
<td>167</td>
<td>Kern-Brayton Case A</td>
<td>1:00-2:00 p.m.</td>
<td>B.Y.O.D. (Bring Your Own Device!)</td>
</tr>
<tr>
<td>168</td>
<td>RWI-Mahany</td>
<td>1:00-2:00 p.m.</td>
<td>Effective Teaching with Mathematics: Visualization and Live Interaction</td>
</tr>
<tr>
<td>169</td>
<td>RWI-Mahany</td>
<td>2:30-3:30 p.m.</td>
<td>PENTALAND: A Whole New World in Base Five</td>
</tr>
<tr>
<td>170</td>
<td>Kern-Boehr</td>
<td>2:30-3:30 p.m.</td>
<td>STEM Careers - Helping Students Understand the Possibilities in STEM Careers</td>
</tr>
<tr>
<td>171</td>
<td>RWI-Mahany</td>
<td>2:30-3:30 p.m.</td>
<td>AP Stats FRQs: Hypothesis Tests &amp; the 4 Step Process</td>
</tr>
<tr>
<td>172</td>
<td>Bauer-Boehr</td>
<td>2:30-3:30 p.m.</td>
<td>Accelerating Developmental Students to Credit Bearing Courses</td>
</tr>
<tr>
<td>#</td>
<td>Location</td>
<td>Time</td>
<td>Title</td>
</tr>
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</tr>
<tr>
<td>104</td>
<td>Kern-Brayton Case B</td>
<td>8:00-9:00 a.m.</td>
<td>Breakout EDU - The Power of Practice</td>
</tr>
<tr>
<td>107</td>
<td>Bauer-Morehouse C</td>
<td>8:00-9:00 a.m.</td>
<td>Teaching and Leading Mathematics with a Growth Mindset</td>
</tr>
<tr>
<td>112</td>
<td>Kern-Hanson</td>
<td>8:00-9:00 a.m.</td>
<td>My Favorites: A Collaboration of Ideas &amp; Sharing</td>
</tr>
<tr>
<td>153</td>
<td>RWI-Mahaney</td>
<td>9:30-10:30 a.m.</td>
<td>Using Data Visualization to Help Students Reflect and Improve</td>
</tr>
<tr>
<td>171</td>
<td>Bauer-Morehouse C</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Tips &amp; Tricks on the TI-84, TI-84CE (color), &amp; TI-SmartView</td>
</tr>
<tr>
<td>172</td>
<td>Kern-Stansbury</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Let's Team Up!</td>
</tr>
<tr>
<td>178</td>
<td>Bauer-Beaty</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>College and Career Ready Mathematics: The Case for Rational Functions</td>
</tr>
<tr>
<td>179</td>
<td>Kern-Johnson</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Students Who Don't Place into the Math Course They Want and/ or Need</td>
</tr>
<tr>
<td>220</td>
<td>YC-Ng Jones</td>
<td>1:00-2:00 p.m.</td>
<td>Being in Two or Three Places at the Same Time Teaching Math!</td>
</tr>
<tr>
<td>225</td>
<td>Kern-Cary</td>
<td>1:00-2:00 p.m.</td>
<td>5 STEPS TO A 5: AP COMPUTER SCIENCE A(Java)</td>
</tr>
<tr>
<td>226</td>
<td>Bauer-Beaty</td>
<td>1:00-2:00 p.m.</td>
<td>Accelerating Developmental Students to Credit Bearing Courses</td>
</tr>
<tr>
<td>247</td>
<td>RWI-McGarvey</td>
<td>2:30-4:00 p.m.</td>
<td>Effective Teaching with Mathematica: Visualization and Live Interaction</td>
</tr>
</tbody>
</table>

Thursday, May 5, 2016
Grades 13-16

Three Ways YOU Can Support WMEF

as we provide scholarships and grants to improve math education in the state of Wisconsin.

- **The Bucket Raffle**  
  Win great prizes! Deadline Thursday 5:30 p.m.
- **Heads or Tails Raffle**  
  Two chances to win a $400 Amazon gift card!
- **5th Annual Pi Run**  
  Get a magnetic bumper sticker & a commemorative t-shirt.

Come to the WMEF booth in Pillsbury Hall for tickets and details!

Thank you to our sponsors

- McGraw Hill  
  Brauer Education Grant Sponsor
- Houghton Mifflin Harcourt  
  Heads or Tails Raffle Sponsor
- Medical College of Wisconsin Biostatistics  
  Pi Run/Walk Sponsor
8:00-9:00 AM

Thursday, May 5, 2016

8:00 - 9:00 a.m.  60 Minute Sectionals

101
Kern-Brown (32)
Grades PK-2

What is Number Sense and How Should We Teach It?
Do you have students counting on their fingers to add? What relationships/strategies do they need? How does your instruction impact their understanding? Get your questions answered! Students will think like Mathematicians!

Lynn Rule, MathRack, Wheaton, IL
teachgoldenrule@comcast.net

103
Bauer-Boddie (32)
Grades PK-6 Exhibitor

Utilize the Personal Math Trainer in Your K – 5 Go Math! Classroom
In this interactive session, participants will engage in a variety of hands-on experiences to learn how to effectively use the adaptive functionality of the Personal Math Trainer to enhance learning in grades K - 5. Participants should bring login & passwords for their Think Central account for Go Math. The goal is to build deeper understanding and confidence to begin implementing this adaptive technology in teachers’ respective learning environments.

Tricia Chmill, Houghton Mifflin Harcourt, Delafield, WI
patricia.chmill@hmhco.com

104
Kern-Brayton Case B (64)
Grades K-16

Breakout EDU - The Power of Practice
Experience the excitement and energy of an escape room as you work with other to solve a series of mathematical puzzles and problems. Will you breakout? Only time will tell. Session will be limited to 12 Breakout collaborators and up to 12 additional practice observers who will silently collect evidence of mathematical practices in the work of the team. Collaborators and observers will participate in the debrief after this time-limited exercise. Learn how to connect with a nationwide cadre of Breakout EDU educators through Facebook and Pinterest and bring the power of this collaborative experience to your organization. Bring your own device and be on time. The Breakout orientation will begin precisely at the appointed hour with the timer beginning three minutes later!

Kari Augustine, Mathematics Education Consultant, Marshall, WI

Each day’s addendum will list session cancellations that we are made aware of in advance.

105
RW1-Crystal (64)
Grades PK-8

Implementing Growth Mindset in an Elementary Classroom
Growth Mindset is a popular new term in the world of education. Come learn about how two teachers began implementing growth mindset in their classrooms. You will leave inspired with activities and resources to help your students continue to grow!

Kari Dulmes, Kosciuszko Elementary School, Cudahy, WI
dulmesk@cudahysd.org

Melissa Lew, Kosciuszko Elementary School, Cudahy, WI
Introduction to the CCSSM Instructional Shifts
In this session participants will be introduced to and become more familiar with the key instructional shifts of focus, coherence and rigor, required by the Common Core State Standards for Mathematics (CCSSM). Engage in hands-on learning and return to your district with professional development activities that can be replicated.

Astrid Fossum, Student Achievement Partners, Milwaukee, WI
afossum@studentsachieve.net
Kristine Gettelman, Milwaukee Public Schools, Milwaukee, WI

Teaching and Leading Mathematics with a Growth Mindset
Inspired by the work of Carol Dweck, Jo Boaler and others, many educators are working to help students develop a growth mindset towards mathematics. Perhaps even more important to students’ success is the mindset of mathematics teachers and school leaders. This session will discuss the importance of growth mindset in creating classrooms and systems for greater equity and achievement in mathematics.

Jennifer Lawler, Kenosha Unified School District, Kenosha, WI
jlawler@kusd.edu

Leveraging Quality Mathematics Tasks
Need a mathematics task? You could just “Google it.” But what will you find when you do? Will it be worth doing? Will it be rigorous? Will it be a quality task? In this session, participants will explore the characteristics of quality mathematics tasks. Participants will review tools to identify rigor and quality in mathematics tasks. The session will also feature strategies for improving and enhancing mathematics tasks. Print and online resources will be shared.

John SanGiovanni, Howard County Public School System, Ellicott City, MD
Jennifer Novak, Howard County Public School System, Ellicott City, MD

Habits of Mind for Students and Teachers
In this session we will share tasks used in professional development to promote the habits of mind associated with the Math Practices.

Sherrie Serros, UW-Eau Claire, Eau Claire, WI
serrossj@uwec.edu
Erick Hofacker, UW-River Falls, River Falls, WI
Kathryn Ernie, UW-River Falls, River Falls, WI
Sue Ahrendt, UW-River Falls, River Falls, WI
Terri Magnuson, Clayton School District, Clayton, WI
My Favorites: A Collaboration of Ideas & Sharing
My Favorites, a session where teachers share their favorite things in 5-10 minutes. Join me in sharing your favorite ideas, from teaching math to classroom organization. Learn how to take this back to your school and department as a great PD tool. Interested in sharing? Reach out to me on Twitter (@algebrainiac1).

Jessica Bogie, Fischer Middle School, Plainfield, IL
jessica_bogie@ipsd.org

A Realistic “Standards-Based Grading” Approach for Any Math Class
By implementing this grading strategy into any math classroom, your students will instantly be responsible not only for learning subject material, but also retaining it throughout the entire year. You can have students re-learning material during fourth quarter about standards taught in the first quarter, because it affects them. The students can take charge of their own grade, because their “grade book” shows them exactly where they need improvement. We will show you how we transformed our grading policy without a complete overhaul of what we were teaching and show you how you can use the same strategy for any of your classes.

Paul Frank, Rosholt High School, Rosholt, WI
pafrank@rosholt.k12.wi.us
Brady Huebner, Rosholt High School, Rosholt, WI

Supporting Teachers in Action!
This session is designed for math/instructional leaders. We will discuss what effective support for math teachers looks like in terms of professional development that is active and in terms of instructional coaching that is embedded in the action of teaching. Multiple successful models of teacher support will be shared along with time for sharing between those attending.

Tracy Frank, CPM Educational Program, Sun Prairie, WI
tracyfrank@cpm.org

Transformational Geometry - Immediate Interactive Investigations – Gr 7-11
Creatively integrate discovery, reasoning, technology, and pedagogy. Your students will become engaged quickly (15 seconds) and deeply by interacting with the geometry - using a handheld device, iPad, or computer. Obtain all materials.

Tom Reardon, Fitch High School/Youngstown State University, Poland, OH
tom@tomreardon.com
Highlighting Student Successes
Learn ways in which a highlighter can give immediate feedback to your students while in class. You will participate in multiple activities which are used in our classroom that promote active engagement, collaborative learning, and individual accountability. This allows students to learn from their mistakes and guides teachers on how to tailor their instruction based on typical errors noticed throughout the activity.

Lisa Stomberg, Ashwaubenon High School, Ashwaubenon, WI
lstomberg@ashwaubenon.k12.wi.us
Cassandra Burns, Ashwaubenon High School, Ashwaubenon, WI

AVID Interactive Notebooks & Mathematics
Learn about a powerful organization tool to use in your classroom. The interactive notebook will streamline your classroom, get your students doing more mathematics and provide a common organization for all student work. We will learn about the notebook, do some math and create actual notebook pages.

Kent Wedemeyer, Cardinal Heights Upper Middle School, Sun Prairie, WI
kdwedem@sunprairieschools.org

Posing Purposeful Questions: Informing Teachers, Informing Students
According to Principles to Actions, effective teachers using a variety of question types gather and use evidence to support and engage students and learning in the classroom. We will look at the different types of questions asked during a typical math lesson and the pattern of questioning used in the classroom. Using sample problems, we will create meaningful questions allowing teachers to evaluate and adapt their lesson to the needs of their students.

Melissa Thomley, Instructional Math Coach, Verona, WI

WIMaTHS: Wisconsin Mathematical Tasks for High School
This session will share the progress of the WIMaTHS project, designed to identify and curate high cognitive demand tasks that align to the Wisconsin Pivotal Understandings. These Pivotal Understandings (equivalence, rate of change, comparison, predictability) have been identified as bringing coherence to students’ high school mathematics experiences. Learn about the project, where to get access to the tasks for use in your classroom, and how you can get involved.

Michael Steele, UW-Milwaukee, Milwaukee, WI
steelem@uwm.edu

Using Real-World Data and TI-Nspire Technology in Statistics and ALL Other Math Classes
You have to include a section in your high school math class called Statistics. What are you going to do? It is just mean, median and mode? Is it just drawing a bunch of graphs? Not anymore! It’s time to look at normal distributions, relative frequency, associations and trends. What does it really mean to be an outlier or to be a line of best fit? How can I use TI technology and real-world data to help my students gain a deep understanding of these concepts?

Jessica Kachur, Bradford High School, Kenosha, WI
jkachur@kusd.edu
8:00-9:00 AM • 9:30-11:00 AM
Thursday, May 5, 2016

8:00-9:00 AM • 60 Minute Sectionals

123
Kern-Cary (32)
Grades 9-12

Adding a Computer Science Endorsement to Your License
Teachers of high school computer science courses must hold a 405 (1405) license. Recently the DPI created a way for Professional, Master, or Life educators who hold a 400(1400) license to add a computer science endorsement by passing a content test. Participants in this session will discuss computer science licensing, the license by content test pathway, and ways to prepare for the test.

Andy Kuemmel, Madison West High School, Madison, WI
akuemmel@madison.k12.wi.us

124
Bauer-Morehouse A (50)
Grades 9-12

Mathematical Modeling, Harry Potter, and the Zombie Apocalypse
Did you know there is a geometric math model in the Harry Potter book series? How about creating a math model about the zombie apocalypse? At Clark Street Community School, students apply math to interdisciplinary subjects through projects and seminars. In this presentation, we will discuss how in a new age of learning, we can all approach math in a more relevant and meaningful way. We will discuss how math works at Clark Street along with examples of ways you can incorporate math modeling into your own classroom.

Mary Lee McKenzie, Clark Street Community School, Middleton, WI
mmckenzie@mcpasd.k12.wi.us

125
RWI-Mahaney (40)
Grades 9-12

A Course Responding to the UWM Study on Placement and 4 Units of High School Math
SURPRISE!! Taking a 4th unit of high school math does NOT always result in students faring better on the UWM placement test than students with 3 units. The session outlines an innovative 4th year course meeting study recommendations.

Beth Ritsema, Mathematics Education Consultant, Caledonia, MI
beth.ritsema@gmail.com

8:00-9:00 AM

126
Bauer-Beaty (50)
Grades 9-12

Early Math Placement Tool (EMPT): Preparing Students for College Level Math
The EMPT is a free program that assists students in planning and preparing for the expectations of college-level math.

Mark Schroeder, UW Center for Placement Testing, Madison, WI
mjschroeder@wisc.edu
Sonya Sedivy, UW Center for Placement Testing, Madison, WI

9:30-11:00 AM • 90 Minute Workshops

127
Kern-Stansbury (32)
Grades PK-3

Fact Fluency in Action: Rolling Out a Fact Fluency Plan
How do you assess students on basic facts without creating the anxiety that comes with timed tests? This is the question that started our Fact Fluency Movement in the School District of Beloit. This session will cover the development and implementation of our plan, including the introduction to teachers, strategy instruction, and use of data.

Megan King, Kolak Education Center, Beloit, WI
mking@sdb.k12.wi.us
Kim Woodkey, Merrill Elementary School, Beloit, WI

128
Bauer-Mitchell Dining Room (50)
Grades PK-6

Using the Math Practice Standards to Create Learning Goals
The eight Standards for Mathematical Practice are the core of great math instruction and student learning. In this session you will take an in-depth look at each of the standards, discuss how to get your students actively engaged in the SMPs, examine what proficiency looks like across grade levels, and learn how to use these practices to create meaningful and measurable learning objectives for your students.

Ashley Bingenheimer, School District of River Falls, River Falls, WI
ashley.bingenheimer@rfsd.k12.wi.us
If Timed Tests Aren’t the Answer, How Do We Assess Fluency?
In *Principles to Actions*, being fluent is defined as choosing flexibly among strategies, understanding and explaining approaches, and producing accurate answers efficiently. Learn how to confer with students to truly assess their fluency. Then, experience multiple methods that nurture fluency.

Jennifer Metke, Slinger Schools, Slinger, WI  
jennifer.metke@slingerschools.org  
Stephanie Bernander, UW-Oshkosh, Oshkosh, WI

Building Common Core Learning Trajectories for Students and Teachers: Supporting Core and Interventions K-5
This session supports elementary teachers and coaches as they analyze the major work of their grade level(s). Participants will gain understanding of and experience with building student-centered, asset-based learning trajectories to support and monitor progress toward and beyond grade level proficiencies. Participants are encouraged to bring a laptop.

Kerry Motoviloff, Madison Metropolitan School District, Madison, WI  
kmotoviloff@madison.k12.wi.us  
Kristina Whiting, Madison Metropolitan School District, Madison, WI

Ensuring Mathematical Success for All: What’s Our Role as Instructional Leaders?
The teaching of mathematics is complex. It requires teachers to have a deep understanding of the mathematical knowledge, which they are expected to teach in order to support all learners. (*Principles to Actions*, 2014) As we begin to learn more about the eight mathematics teaching practices, how do we as instructional leaders support teachers’ efforts in their daily professional work with implementing them?

Nancy Puerzer, Oriole Lane School, Mequon, WI  
npuerzer@mtsd.k12.wi.us  
Lisa O’Malley, Oriole Lane School, Mequon, WI

It is Not “New” Math; it is Deeper Learning
Within three years, the School District of Menomonee Falls, WI, grades K-5, dropped by 37% the number of students scoring below the 50% percentile on the Universal Screener MAP. Join us as we share the journey: where we have been, where we are now, and where we are going.

Paula Muehler, School District of Menomonee Falls, Menomonee Falls, WI  
muchpau@sdmfschools.org  
Ryan Hausmann, School District of Menomonee Falls, Menomonee Falls, WI

Fact Fluency
Van de Walle and Lovin (2006): “Fortunately we know quite a bit about helping children develop fact mastery, and it has little to do with the quantity of drill or the drill techniques. Three components or steps to this end [have been] identified.” Join me to see how the Manitowoc Public Schools are implementing these three important steps.

Lori Williams, Manitowoc Public School District, Manitowoc, WI  
williams1@mpsd.k12.wi.us

Number Fact Strategies for Addition and Subtraction
Success in mathematics for the future requires quick recall of number facts. The goal of mental computation depends upon knowledge of effective strategies. This session will outline the steps - introduce, reinforce, practice and extend – for addition and subtraction fact strategies.

Rosemary Irons, ORIGO Education, Mathematics Education Consultant, Whiteside, Queensland Australia
9:30-10:30 AM • 9:30-11:00 AM

Thursday, May 5, 2016

9:30 - 10:30 a.m.  Keynote Speaker

135
Lakeview (300)
Grades K-8 Keynote

Giving ALL Students a Voice: Alex’s Story
Students with special needs are often taught exclusively through direct instruction. Learn first-hand from a student with special needs how direct instruction was successfully replaced with teaching for understanding in a discourse-rich environment. Explore extensions to these best practices through a video exploration of important teaching shifts to support increased productive mathematical discourse for ALL students. www.astrokeofluck.net

Juli Dixon, University of Central Florida, Orlando, FL
juli.dixon@ucf.edu
Alex Dixon, Orlando, FL

9:30 - 11:00 a.m.  90 Minute Workshops

137
YC-Ng Jones (42)
Grades 2-6

Developing the Use of Visual Representations to Support Fraction Understanding
Visual representations are a powerful way to engage and effectively develop abstract math concepts, such as fraction understanding and operations, for all students. Choosing the correct visual representation depends on context and content. Manipulating concrete items, drawing tape diagrams or placing numbers on a number line all can help to connect ideas and make abstract fraction concepts more concrete. Progressively developing these techniques and strategies early on will give students tools, strategies and ways of thinking which they can use as concepts advance.

Alison Terry, Kosciuszko Elementary School, Cudahy, WI
Amy Paladino, School District of Cudahy, Cudahy, WI

138
RWI-Veranda C (48)
Grades 2-12

Doing and Talking Math: Engaging ELs in the Discourse of Math Practices
Presenters will share tools developed for both teachers and students to support engagement in meaning-making discourse, and will report on teachers’ positive experience and enhanced understanding of Mathematical Practices.

Rita MacDonald, UW-Madison, Madison, WI
rkmacdonald@wisc.edu

139
YC-Fordham Ballenger (42)
Grades 2-12

Pentaland: A Whole New World in Base Five
Ever wondered if there is life on another planet? If so, do they do math on that planet? Well wonder no more; welcome to Pentaland! A land where things seem a little out of the ordinary. A land where there are not as many digits as there are on Earth. Yet the people who inhabit this land are still able to do math much like we do on Earth. Come and explore our new land and learn the powerful connections understanding base five can have on students depth of knowledge about base ten.

Travis Logslett, Chippewa Falls Middle School, Chippewa Falls, WI
logsletm@chipfalls.org

T H U R S D A Y

136
RWI-Veranda A (48)
Grades 2-6 Exhibitor

Think It: Tools for Multiplication and Division
This interactive session will focus on building the connection between multiplication and division through the use of thinking strategies. Actively engaging participants in the use of strategies not only expands their own understanding of the concepts but also models quality mathematics instruction, leading to procedural fluency

Rob Nickerson, ORIGO Education, Lakewood, CO
r_nickerson@origomath.com

180
Bauer-Boddie (32)
Grades K-8 Exhibitor

How Educators are Meeting the Needs of their Students with i-Ready and Ready Math CCSS
Come to learn about how schools around the country are meeting the needs of all their students with i-Ready and Ready Math CCSS. Tyrone Holmes will be speaking about how i-Ready is a unique blended model of online instruction and teacher-led instruction driven by a single source of diagnostic data. He’ll share the scientific and empirical research on all students, such as economically disadvantage, ELL, G&T, and SPED. Curriculum samples will be available.

Tyrone Holmes, Curriculum Associates, Inc., North Billerica, MA

135
Lakeview (300)
Grades K-8 Keynote

Giving ALL Students a Voice: Alex’s Story
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Juli Dixon, University of Central Florida, Orlando, FL
juli.dixon@ucf.edu
Alex Dixon, Orlando, FL

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Alison Terry, Kosciuszko Elementary School, Cudahy, WI
Amy Paladino, School District of Cudahy, Cudahy, WI

138
RWI-Veranda C (48)
Grades 2-12

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Rita MacDonald, UW-Madison, Madison, WI
rkmacdonald@wisc.edu

139
YC-Fordham Ballenger (42)
Grades 2-12

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Travis Logslett, Chippewa Falls Middle School, Chippewa Falls, WI
logsletm@chipfalls.org
Comparing Fractions: Using Strategies and Discourse to Develop Conceptual Understanding
Participants will be asked to compare fractions by using different strategies. They will draw pictures to make sense of the problem and their strategies will be shared with the group. Come ready to do some math! The focus will be on Grade 3.

Heidi Eisenreich, University of Central Florida, Orlando, FL heisenreich@knights.ucf.edu
Bhesh Mainali, UW-Superior, Superior, WI

Unique 3D Box Design for Upper Elementary Students: Engaging and Expanding Student Problem-Solving and Visual Literacy
Have you been looking for a unit that will inspire your students to love math? By looking at consumer boxes, and using flat geometric nets, starting with flattened cubes and pyramids and leading to pentagonal dodecahedrons and much more, this ongoing project lets students be creative, while at the same time engages them in challenging mathematical thinking. This unit has incredible power to help students in problem-solving, visual literacy and geometry, and measurement skills. They love it and will keep asking for more.

Peter Wilson, University Lake School, Hartland, WI peter.wilson@universitylake.org

Mind Over Matter: Developing Growth Mindsets in Middle Grades
“I can’t...YET!” Changing students’ beliefs in what they can do mathematically. How to teach students about how their brain can grow and how to stretch their thinking. We will share ideas on number talks, activities that encourage a productive struggle, and how to provide feedback to foster brain growth.

Jane Lewis, Greenfield Middle School, Greenfield, WI jlewis@greenfield.k12.wi.us
Danielle Pierro, Greenfield Middle School, Greenfield, WI

Statistical Significance: What is It?
Get ready to experience a task that shows how student expectations in Statistics change as students move from middle into high school. Participants will engage in a hands-on activity that follows the progression of the CCSS-M Statistics standards. Leave the presentation with ready activities to be used immediately.

Sara Brown, Brookhill Institute of Mathematics, Waukesha, WI sara.brown@brookhillmath.org
Jeff Ziegler, Brookhill Institute of Mathematics, Waukesha, WI

The Many Ways to Teach Math with Patty Paper
This interactive session will explore how patty paper (an inexpensive manipulative) can be used to teach key concepts in middle and high school math with a specific emphasis on key ideas from geometry and algebra.

Matthew Chedister, UW-La Crosse, La Crosse, WI mchedister@uwlax.edu
<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Workshop ID</th>
<th>Location</th>
<th>Grades</th>
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<tbody>
<tr>
<td>9:30-11:00</td>
<td>90 Minute Workshops</td>
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<tr>
<td>9:30-11:00</td>
<td>146</td>
<td></td>
<td>Kraft-Tower Dining Room (50)</td>
<td>6-12</td>
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<tr>
<td></td>
<td><strong>Differentiating Algebra Instruction through Modeling with Functions</strong></td>
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<td>Participants will engage in two problems that differentiate modeling with functions by utilizing different representations. Problems are from a hybrid professional development course that we plan to offer in Fall 2016.</td>
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<td>Gwyneth Hughes, UW-Madison, Madison, WI <a href="mailto:ghughes2@wisc.edu">ghughes2@wisc.edu</a></td>
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<td>9:30-11:00</td>
<td>147</td>
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<td>YC-Cummings (64)</td>
<td>6-12</td>
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<td></td>
<td><strong>Active Learning Strategies</strong></td>
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<td>Be ready to participate in hands-on activities that you can use in any math class. Handouts of every activity that is shown will be provided to you. Some will be repeats from previous presentations such as the amazing race, substitute it, and line it up, but there will be many new ones such as heads up.</td>
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<td>Shellie Kamminga, Marengo Community High School, Marengo, IL <a href="mailto:kammingas@mchs154.org">kammingas@mchs154.org</a></td>
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<td>9:30-11:00</td>
<td>148</td>
<td></td>
<td>Kern-Brayton Case B (64)</td>
<td>6-12</td>
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<td><strong>Getting Students Working and Keeping Them Working</strong></td>
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<td>Have you ever had students struggle to get started in a problem? Or a student who quickly found an answer and did not have any other math to explore? Some of these student behaviors can be replaced with ideas from Math Practice Standard #1 “Make sense of problems and persevere in solving them”. Join us to explore and practice strategies to get students working and keep them working.</td>
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<td>Mary Mooney, Milwaukee Public Schools, Milwaukee, WI <a href="mailto:mooneyme@milwaukee.k12.wi.us">mooneyme@milwaukee.k12.wi.us</a></td>
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<td>Cynthia Schoonover, Washington High School, Milwaukee, WI</td>
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<td>Bauer-LaDuc (24)</td>
<td>6-12</td>
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<td><strong>Building and Tinkering in the Computer Science Lab</strong></td>
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<td>Using an Arduino computer, a breadboard, and a few basic circuit elements, you will build a device and then write the computer program to make it “functional”. This type of Physical Computing activity is a perfect entry-point for learning basic electronics and an introduction to event-driven programming, appropriate for grades 6-12. You will leave the session with extensive resources about how to implement these types of hands-on creating/computing activities into your new or existing programming courses, and you’ll learn about the growing Makerspace movement where art, craft, electronics and computers merge in a community setting.</td>
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<td>John Quinn, Wausau West High School, Wausau, WI <a href="mailto:jquinn@wausauschools.org">jquinn@wausauschools.org</a></td>
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<td>Kern-Boehr (50)</td>
<td>9-12</td>
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<td><strong>Tips and Tools for the AP Computer Science A Exam and Building a CS program</strong></td>
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<td>This presentation will examine the AP Computer Science Curriculum from objects to recursion. The panelists will share their experiences with the new CS Labs. The session will end with a discussion of post AP experiences for students including the data structures course and competition programming.</td>
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<td>Robert Getka, Parker/Craig High School, Janesville, WI <a href="mailto:rgetka@janesville.k12.wi.us">rgetka@janesville.k12.wi.us</a></td>
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<td>Janice Bain, Craig High School, Janesville, WI</td>
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<td>9:30-11:00</td>
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<td>RWI-Crystal (64)</td>
<td>9-12</td>
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<td><strong>Effective Teaching through the Umbrella of Questioning</strong></td>
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<td>Participants will discuss the benefits of proactively planning student directed questions to launch, check for understanding and summarize a lesson. All of these questioning strategies will be modeled through the lens of a high school mathematics lesson.</td>
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<td>Colleen Thompson, Mishicot High School, Mishicot, WI <a href="mailto:colleenthompson@cpm.org">colleenthompson@cpm.org</a></td>
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<td>Lisa Hennessey, Sun Prairie High School, Sun Prairie, WI</td>
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Developing K-2 Numeracy Concepts
In this hands-on workshop, participants will explore research-based ideas and materials to help students develop strong numeracy concepts. Participants will use the following hands-on manipulatives as we explore various numeracy activities: five and ten frames, two colored counters, bead racks, cards with a variety of numerical representations, and dice. Come join me for a fun and informative workshop. You’ll walk away with ideas to use immediately.

Cindy Pray, A Level Above Learning, Thornton, CO
cindy@alevelabovelearning.com

Using Data Visualization to Help Students Reflect and Improve
How do you get students to reflect on their learning habits? More importantly, how do you show them their lack of learning strategies directly contribute their poor grades? Come see how the conversation about learning has changed in our math classrooms by having students track their progress and map how their strategies correlate to their performance in the classroom.

Casey Ulrich, Menomonee Falls High School, Menomonee Falls, WI
ulricas@sdmfschools.org
Paul Franzowiak, Menomonee Falls High School, Menomonee Falls, WI

Administrators: 3 Strategies to Increase Your Students’ Math Achievement
This presentation will target school leaders and how to implement a plan to increase math achievement in your school. Participants will learn about three strategies that teachers can implement in their classroom to address the needs of all students in Tier I in an effort to increase math understanding. These strategies will include setting learning goals, implementing a guided math framework, and facilitating number talks as a way to integrate the Standards for Mathematical Practice. Participants will learn effective strategies for supporting staff in their change efforts.

Amber Evenson, Peshtigo Elementary Learning Center, Peshtigo, WI
evensona@peshtigo.k12.wi.us
11:30 AM-12:30 PM

Thursday, May 5, 2016

11:30 a.m.-12:30 p.m.  60 Minute Sectionals

156
RWI-Crystal (64)
Grades PK-12

Exploring Math Tasks and Student Work with the WSMI Fellows
Come find out what a statewide online mathematics community of instructional leaders, the WSMI (Wisconsin Statewide Mathematics Initiative) Fellows, learned about increasing cognitive demand. Join us as participants share their math tasks and student work using NCTM’s book *Principles to Actions* as a framework for implementing tasks that promote reasoning and problem solving. WSMI Fellows was developed in collaboration with the Brookhill Institute of Mathematics, Wisconsin Mathematics Council (WMC) and the Department of Public Instruction (DPI).

Paige Richards, Brookhill Institute of Mathematics, Waukesha, WI
paige.richards@brookhillmath.org
Sara Brown, Brookhill Institute of Mathematics, Waukesha, WI
Jeff Ziegler, Brookhill Institute of Mathematics, Waukesha, WI

157
RWI-Veranda A (48)
Grades PK-12

National Board Certification...Professional Development that Matters
National Board Certification is a rigorous and worthwhile professional development program that focuses on having an impact on student learning. This session will discuss requirements and incentives of the process.

Stacy Shrode, Kimberly High School, Kimberly, WI
sshrode@kimberly.k12.wi.us
Kelly Jansen, Kimberly High School, Kimberly, WI
Jodi King, Kimberly High School, Kimberly, WI

11:30 a.m.-12:30 p.m.  Keynote Speaker

158
Lakeview (300)
Grades K-12

Supporting the Productive Struggle
We learn through struggle. Yet for many of our students, and even some colleagues, the idea of struggle conjures negative connotations. In this session, participants will consider what struggle means to them and how one’s struggles can be made positive. The session will feature strategies for developing productive struggle in the mathematics classroom. Participants will also reflect on the actions they take in order to promote productive struggle in mathematics classrooms. Resources will be shared.

John SanGiovanni, Howard County Public School System, Ellicott City, MD
Jennifer Novak, Howard County Public School System, Ellicott City, MD

159
YC-Dominguez Cox (42)
Grades 2-3

The Power Duo: Discourse and Mathematical Representations
Visual representations help students build a deeper understanding of math concepts and procedures. This session will show the power of engaging students in mathematical discourse through using and connecting representations.

Eric Kanters, Maple Grove Elementary School, Greenfield, WI
ekanters@greenfield.k12.wi.us
Nicole Hawkins, Greendale School District, Greendale, WI

It is wise to select alternative sessions in advance so that you can quickly move to another session. Popular sessions often fill up 20 minutes before the starting time. All sessions fill on a first-come, first-served basis.
SCRATCH Programming for All Ages!
Would you like to engage your students in programming? Come to this session and learn to write your own programs in minutes. Students easily design and create stories and games. They learn about programming techniques including looping and variables. Share and learn ways to include these engaging computational thinking activities in your curriculum. SCRATCH can be used effectively for students from early elementary through college. Come and try it yourself!

Linnea Logan, Whitefish Bay High School, Whitefish Bay, WI
linnea.logan@wfbschools.com

What Makes Algebra so Difficult?
Is it the shock of letters or the shock of thinking? Does it depend on the ability to switch from concrete to abstract? Does it matter if students know their facts or not? Join us for a discussion on the foundational principles essential to ensure students are ready for Algebra and learn about targeted, cutting-edge intervention solutions proven to accelerate academic growth.

Stephanie Deming, Voyager Sopris Learning, New Hope, MN
stephanie.deming@voyagersopris.com
Mackenzie Hutchinson, Voyager Sopris Learning, New Hope, MN

Complex Related Problems and Promoting Algebraic Thinking
The entry point to a problem-based lesson is launching a problem for teachers and making sense of a problem for students. When students encounter a new problem (target), they can transfer some solution methods from an old problem (source). However, students’ lack of structural awareness might hinder these types of transfers. In this session, participants will explore some upper-elementary and lower-middle grade level generalizations and have opportunities to think about ways that can be used for students’ source knowledge across the related target problems. In addition to that, participants will work on a variety of related problems across two domains of Algebra and Geometry.

Sinan Kanbir, Illinois State University, Normal, IL
skanbir@ilstu.edu
11:30-12:30 PM
Thursday, May 5, 2016

11:30 a.m.-12:30 p.m.  60 Minute Sectionals

164
YC-Huber-Evans (64)
Grades 4-8

**Modeling and STEM: Modeling Matter and Gas Laws Using Math and Science**
Be prepared to travel through a learning sequence intended to help your students use STEM practices to dispel misconceptions about matter while discovering new mathematical relationships.

Melissa McDonald, Jack Young Middle School, Baraboo, WI
mmcdonald@barabooschools.net
Damion Beth, Baraboo School District, Baraboo, WI

165
RWI-Mahaney (40)
Grades 4-12

**Connecting a State Vision of STEM Education to Mathematics Lessons**
Building on the Wisconsin vision for STEM education, we will dig into two examples of STEM lessons (one upper elementary and one secondary) that authentically link to mathematics concepts and practices. We will then create and discuss guidelines for quality STEM lessons.

Kevin Anderson, WI Department of Public Instruction, Madison, WI
kevin.anderson@dpi.wi.gov

166
Kern-Brayton Case B (64)
Grades 6-8

**Tape Diagrams: They’re Not Just for Ratios!**
Come hear about multiple ways to use tape diagrams to build mathematical understanding of a wide range of concepts. Tape diagrams are a great visual model to help students reason about ratios, percents, fraction operations, and solving equations.

Melinda MacLeish, South Milwaukee Middle School, South Milwaukee, WI
mmacleish@sdsdm.k12.wi.us
Katrina Madden, South Milwaukee Middle School, South Milwaukee, WI

167
Kern-Brayton Case A (64)
Grades 6-12 Exhibitor

**Develop Students’ Mathematical Habits of Minds**
Participants will engage in a variety of hands-on experiences that can easily be implemented in any middle or high school classroom to develop algebraic habits of minds in all students. Strategies based on the NSF funded research led by Paul Goldenburg and his EDC colleagues will be shared. This session will be a sample of what is available in the Transition to Algebra classroom resource.

Tricia Chmill, Houghton Mifflin Harcourt, Delafield, WI
patricia.chmill@hmhco.com

168
Bauer-Morehouse B (100)
Grades 6-12

**Old Dogs, New Flips**
After 25 years of direct instruction in the classroom, I switched to a flipped Geometry curriculum. It was an arduous journey, and much more work than staying with the more traditional model. Find out why I decided to change and what mistakes I’ve made along the way. This is a great section for the person considering flipping a classroom or a new “flipper.” This section will also include time for sharing tips and strategies for flipping.

Michael Dorn, Milton High School, Milton, WI
dornm@milton.k12.wi.us

169
YC-Fordham Ballenger (42)
Grades 6-12

**Effective Coaching Strategies for the Mathematics Classroom**
Collaborate with two math specialists around strategies they successfully used with teachers to improve feedback structures and instructional efficiency. Discover ways to provide “non-evaluative” feedback that will improve the usage of best practice in each math classroom.

Kelly Lam, Lake Shore Middle School, Mequon, WI
klam@mtdsd.k12.wi.us
Derek Pipkorn, Steffen Middle School, Mequon, WI
170
Bauer-Boddi (32)
Grades 6-12

Teaching with Technology: GeoGebra Exploration
Participants will be introduced to the best practice of integrating technology for effective teaching of math. Using computers, participants will learn and explore different features of free mathematical software (GeoGebra) and utilize it to make and test some dynamic math applets. Participants will also learn how to integrate GeoGebra for effective math lessons. Opportunities will be also provided on how to find, explore, and utilize GeoGebra applets to enhance students’ math understanding.

Bhesh Mainali, UW-Superior, Superior, WI
bmainali@uwsuper.edu
Heidi Eisenreich, University of Central Florida, Orlando, FL

171
Bauer-Morehouse C (100)
Grades 6-16

Tips & Tricks on the TI-84, TI-84CE (color), & TI-SmartView for Grades 7-12
For new and experienced users. See how to use as an evaluator of complex expressions easily, trace on a graph and table simultaneously, use color photos and much more. Fully utilize the TI-SmartView graphing calculator emulator.

Tom Reardon, Fitch High School/Youngstown State University, Poland, OH
tom@tomreardon.com

172
Kern-Stansbury (32)
Grades 6-16

Let’s Team Up!
We will explore strategies and systems to promote better functioning teams in a cooperative math classroom. Participants will leave with more strategies in their tool belt that could be applied the very next week!

Katrina Reeve, DeForest Area High School, DeForest, WI
kreeve@deforestschools.org
Erin Yao, DeForest Area High School, DeForest, WI

173
Bauer-Morehouse A (50)
Grades 7-10

Supporting Algebraic Thinking for the Struggling Learners in Grades 7-10
The reasoning about expressions and equations called for in the Common Core State Standards for Mathematics is inherently connected to the ability to “look for and make use of structure” as described in the mathematical practice standards. But what does that mean for our struggling learners? In this session, participants will explore tasks that support these learners so that they can understand what the structure of different but equivalent expressions can reveal about the patterns of growth they represent. Low floor, high ceiling problems that require students to build context from expressions and write expressions from context will be shared.

Michelle Parks, CESA 10, Chippewa Falls, WI

174
RWI-McGarvey (24)
Grades 9-12

Common Core at Its Core: The Interactive Mathematics Program
Whether you are teaching an integrated math sequence, or a traditional Algebra 1, Geometry, Algebra 2 sequence, experience how you can help students learn to draw simultaneously from many areas of math to solve real-life “big problems” and to help them think creatively and critically.

James Lynn, University of Illinois at Chicago, Chicago, IL
jlynn@uic.edu

175
Kern-Boehr (50)
Grades 9-12

Computer Science Principles: A New Advanced Placement Course
Starting in the 2016-17 school year, the College Board will roll out its new AP Computer Science Principles course. The presenter, who has taught the course for four years and is a member of the AP CS Principles Development Committee, will share an overview of the course and ideas for its implementation.

Andy Kuemmel, Madison West High School, Madison, WI
akuemmel@madison.k12.wi.us
11:30 AM-12:30 PM • 1:00-4:00 PM
Thursday, May 5, 2016

11:30 a.m.-12:30 p.m. 60 Minute Sectionals

176
RWI-Veranda C (48)
Grades 9-12

Calculator Scene Investigation
What type of polygon does this look like? This is a lesson on providing numerical evidence to prove the type of polygon. “It looks like a . . .” is not sufficient evidence. After we gather and calculate numerical evidence, and present a case, a decision will be rendered before the jury convicting the polygon of classification.

Mary Walz, Sauk Prairie High School, Prairie du Sac, WI
mary.walz@saukprairieschools.org

177
Kern-Brown (32)
Grades 9-12 Exhibitor

Build Math Foundations for College Readiness
MindTap for College Ready Math is a digital, 9-12 solution designed for learners who require additional support in algebra topics prior to embarking on future mathematics study at the college level. Positioned to also address the needs of the college readiness classroom, this flexible digital program helps ensure that a fourth year math classroom consists of a thoughtful and meaningful learning experience that leads into credit-bearing courses in college. MindTap for College Ready Math is compatible with mobile devices, such as iPads, allowing for practice and review at any time. This session will serve as a thorough review of key functionality and features including assignment chains, games, communication tools, and more.

Sebastian Andino, National Geographic/Cengage Learning, Independence, KY

178
Bauer-Beaty (50)
Grades 9-16

College and Career Ready Mathematics: The Case for Rational Functions
Rational functions are often difficult for students because they require understanding of zeroes, asymptotes, point discontinuities, and end behaviors. We will investigate behaviors of rational functions symbolically and graphically. Examples will include tasks that indicate what students need to know for work beyond their high school classes.

Christopher Hlas, UW-Eau Claire, Eau Claire, WI
hlascs@uwec.edu

179
Kern-Johnson (50)
Grades 9-16

Students Who Don’t Place into the Math Course They Want and/or Need
UW-System has a math placement test to help students determine in which math course they will be successful. What are some options for students who don’t place into the course they want and/or need for their academic plans?

Kelly Kohlmetz, UW-Milwaukee, Milwaukee, WI
kellyk2@uwm.edu

1:00 - 4:00 p.m. 3 Hour Workshop

201
YC-Cummings (64)
Grades PK-6

Planting Seeds of Change: Building a Flexible Mathematics Framework to Meet the Needs of All Students
Come along as we share ideas for building a flexible framework for instruction that is seeped in differentiation, discourse, and true enrichment while promoting a richer understanding of mathematics for all students. We will focus on how to build a high-quality elementary mathematics framework from the ground up while embracing the Standards for Mathematical Practices and increasing the mathematical thinking of all students.

Sarah Trimner, DC Everest School District, Weston, WI
strimmer@dee.k12.wi.us

Please make sure to turn off your cell phone or pager during Conference events.
1:00-2:00 p.m.  60 Minute Sectionals

Mark Schommer, DC Everest School District, Weston, WI
202
Kern-Brayton Case A (64)
Grades PK-3

Growing Growth Mindsets K-3
We are in charge of our own smartness! When students are aware of their ability to grow their brains, they develop a growth mindset and are motivated to learn. Join us as we share projects, ideas, and resources teachers can implement in their classrooms to foster a growth mindset.

Alyssa Murphy, Wilson Elementary School, Mequon, WI
amurphy@mtsd.k12.wi.us
Michelle Painter, Wilson Elementary School, Mequon, WI

203
Kern-Brown (32)
Grades PK-6

Say What?! Using Speaking & Listening Standards to Enhance Mathematical Conversations
Participants will learn how to use CCSS of Speaking and Listening Standards to support students as they develop the ability to have rigorous Mathematical conversations. We will make a direct connection between Literacy and Math standards; focusing on constructing viable arguments and making sense of mathematical claims. Examples will be given on how to actualize this in the classroom using digital tools.

Kelly Luedeke, Electa Quinney School, Kaukauna, WI
luedekek@kaukauna.k12.wi.us
Julie Ruck, Jefferson Elementary School, Oshkosh, WI

204
YC-Huber-Evans (64)
Grades PK-6

K–8 STEM: Horizontally Aligning a Viable Standards
How do schools horizontally align a curriculum that supports both CCSS Mathematics and NGSS learning targets? We will take you on our journey of strategically developing a curriculum where NGSS topics support essential CCSS Mathematics learning targets in developing a curriculum where Science, Technology, Engineering and Mathematics all support each other.

Steven Shadel, Niles Township District 219, Skokie, IL
stesha@d219.org
Lois Wisnewski, Niles Township District 219, Skokie, IL

1:00-2:00 p.m.  Keynote Speaker

205
Bauer-Morehouse C (100)
Grades PK-6

Living Outside the Box: Developing Solutions for Closing the Mathematics Achievement Gap
With current pressures to perform, districts are seeking solutions to improve achievement. What is needed is thinking and living outside of the box bringing new solutions to old problems. In this interactive session, participants will investigate a process that has been used to close the mathematics achievement gap at an award winning school.

Sandy Atkins, Creating AHAs, St. Petersburg, FL

206
Bauer-Lightbody (32)
Grades PK-8

The Coherence Map: A Tool for Mathematical Success
Participants will deepen their understanding of the CCSS instructional shifts while engaging with a free digital tool (Student Achievement Partners: Coherence Map) that helps aid in planning lessons and units with mathematical coherence. The tool enhances planning scaffolded learning opportunities that support students who are behind as well as advancing; by identifying gaps in a student’s knowledge as a standard is traced back through its logical prerequisites and by creating challenging learning experiences for students who are ready for more.

Astrid Fossum, Student Achievement Partners, Milwaukee, WI
afossum@studentsachieve.net

Be sure to visit the Exhibit Hall located in Pillsbury.
Roundtable Discussion - What Strategies Positively Impact English Language Learners in a Mathematics Classroom?
Participants will discuss what they are using in classrooms to meet the needs of their English Language Learners. Presenters will share their experiences, successes, and challenges. Please come and share your ideas and hopefully, we will all gain some new strategies for our classrooms.

Kari Andrews, La Causa Charter School, Milwaukee, WI karilynna@lacausa.org
Sheryll Richert, La Causa Charter School, Milwaukee, WI
Peggy Rice, La Causa Charter School, Milwaukee, WI

Going Beyond Fast Facts: A Balanced Approach to Assessing Multiplication Fluency
Participants will investigate the limitations of timed tests, and explore formative assessments that can give teachers in third grade information about the key aspects of mathematical fluency: efficiency, accuracy, and flexibility.

Danielle Palm, Clemens School, Milwaukee, WI zivneydm@milwaukee.k12.wi.us
Kristine Gettelman, Milwaukee Public Schools

Elementary Math Specialists for Learning and Leading
This presentation advocates for the development of elementary mathematics specialists to enhance teaching and learning of rich mathematics. Findings stem from the research of a development program that empowers mathematics teachers through learning and leadership.

Kimberly White, Carroll University, Waukesha, WI whitek@carrollu.edu
Nathan Rosin, Sun Prairie Area School District, Sun Prairie, WI
Number Lines, Fractions, and Rational Numbers: Choosing the Best Representation to Deepen Understanding

By the time young students first come to our classrooms, they already have a fairly developed internal number line to organize number systems. The objective of this workshop is to present the main features (or distractors) of different number lines that pose several challenge levels for students. Through hands-on activities with different number lines, explore how to make deliberate use of these different number lines to deepen and expand student understanding of fractions and rational numbers, their magnitudes, equivalencies, and relationships with other numbers.

Veronica Ocampo, Milwaukee Public Schools, Milwaukee, WI
ocampovocampov@gmail.com

Madeline Neuworth, Milwaukee Public Schools, Milwaukee, WI

Ultimate Engagement with Pear Deck

One of my favorite classroom tools! Pear Deck helps teachers efficiently understand individual students’ progress through interactive, engaging, and real-time assessments and presentations. Ideal for the one-to-one classroom, students interact individually with questions within the Pear Deck while teachers monitor individual and class answers to enhance understanding. Pear Deck is available in free and paid versions.

Angie Osheim, Ripon Middle School, Ripon, WI
osheimaripon.k12.wi.us

Let Them Fail: Engaging Students in Productive Struggle

Discover how to engage your students by fostering productive struggle in the mathematics classroom. Learn how to transform traditional tasks into opportunities for sense making. Ask the right questions and watch your students fail and succeed like never before.

Derek Pipkorn, Steffen Middle School, Mequon, WI
dpipkorn@mtsd.k12.wi.us

Extreme Equality: Using Evidence Based Methods to Close the Achievement Gap in Math

New research in cognitive science suggests that almost all children have the ability to learn and love learning math. Research also suggests that while children benefit from exploring concepts and making discoveries on their own, they also need to receive a good deal of rigorous guidance from the teacher. In this talk I will give examples of evidence-based methods of teaching (such as scaffolding, continuous assessment, incremental variations and elicited explanations) that foster resilience and curiosity in all students and that have helped many teachers dramatically close the achievement gap in math.

John Mighton, University of Toronto, Toronto, Ontario, Canada
I am Flipped for Math

What is a Flipped Classroom? In short, a “flipped classroom” switches around the traditional order of teaching with the purpose of creating a more in depth and supportive environment in the classroom when the teacher is present and able to help students. It allows for students to receive a more individualized math education where my actual face-to-face time with them is being used effectively. This results in them understanding the content at a higher and deeper level than before. In addition, it challenges students to learn how to take charge of their learning and manage their time, becoming resourceful learners. Lastly, it provides time for more “Higher-Order Thinking” discussion and questioning during class time, helping students to become reflective communicators and to think more deeply about the subject. I have utilized my flipped classroom to differentiate my seventh grade lessons and improve my overall mathematics instruction. My students have become better math students and have developed a deeper understanding of math due to this flip. Come and learn how you can flip your classroom too!

**Lynn Schaal**, New London Middle School, New London, WI
lschaal@newlondon.k12.wi.us

Using the TI-Nspire to Explore, Investigate, and Discover in the Geometry Classroom

We will be using the Geometry application on the TI-Nspire to show how you can let students explore geometric properties, investigate geometric constructions, and discover properties of tessellations. By using the TI-Nspire Navigator system, you can let your students explore freely while checking for understanding using the class snapshot feature. Some experience with the Geometry application would be beneficial, but not necessary.

**Damion Beth**, Baraboo School District, Baraboo, WI
djbeth@barabooschools.net

Building Statistical Thinkers in the Middle Grades

In this presentation, I will describe the importance of statistical thinking and reasoning as developed by middle school students. Utilizing two school activities/lesson plans, the Tootsie Pop problem and the M&M problem, I will show how students can develop and push their statistical thinking while participating in these class assignments.

**Angela Walmsley**, Concordia University Wisconsin, Mequon, WI
angela.walmsley@cuw.edu

Standards Based Learning: Moving Students from Interpreting Tests as Grades to Appreciating Feedback and Striving for Understanding

Standards Based Learning is effective only when educators are able to communicate what a student has learned or needs to learn in their classroom. Students may see assessments as a way to improve/hurt their grade instead of an opportunity to get feedback on what they have learned. By redirecting a student’s focus to learning from feedback, an educator can create an atmosphere where students desire to accumulate knowledge instead of high scores. Accompany this desire with a strong understanding of the Mathematical Practices and a student can develop an appreciation for being a learner of mathematics. Learn tips and strategies for creating a classroom where students desire constructive feedback on the standards and practices.

**John Hayes**, Northland Pines High School, Eagle River, WI
jhayes@npsd.k12.wi.us
1:00-2:00 PM
Thursday, May 5, 2016

220
YC-Ng Jones (42)
Grades 6-16

Being in Two or Three Places at the Same Time Teaching Math!
For the past 4 years I have been teaching math and physics to students at Monticello, Juda, Albany, and Janesville at the same time using a SMART board, Cisco Telepresence unit, and some web-based tools. We will discuss the challenges and the advances in distance learning that makes it possible for it to become one math class in many rooms.

Chris Collins, Monticello High School, Monticello, WI collich@monticello.k12.wi.us

221
RWI-Mahaney (40)
Grades 9-12

Data Literacy in Statistics
The second portion of this session will focus on Talk With Our Kids About Money (TWOKAM) Money Fair! Take time to plan how you can get students selecting an interesting financial or economic topic, undertaking research, and showcasing the outcomes. You will be provided time and resources to develop your own framework for a money fair for your students.

Hannah Guth, Brookfield East High School, Brookfield, WI guthh@elmbrookschools.org

222
RWI-Veranda C (48)
Grades 9-12

Transforming Problems to Emphasize Representations and Discourse
This talk will discuss how we have taken some of our traditional textbook problems and topics and modified them to emphasize representations and mathematical discourse. We will engage the audience by working on these tasks and discussing how they address the Mathematical Practice Standards.

Ashlee LeGear, Hudson High School, Hudson, WI legeearal@hudson.k12.wi.us
Paige Jones, UW-River Falls, River Falls, WI
Erick Hofacker, UW-River Falls, River Falls, WI

223
Bauer-Boddie (50)
Grades 9-12

Using Desmos in Secondary Math Classes
Desmos is a beautiful, free math app. My students all have SmartPhones or ChromeBooks, so it makes sense to use Desmos. It is a very slick graphing platform with sliders, regressions, and it is fast. Come learn how to use this free program.

Michael Tamblyn, Whitewater High School, Whitewater, WI mtamblyn@wwusd.org

224
Bauer-Morehouse B (100)
Grades 9-12

Cassady's Polygon Task: Fostering Mathematical Creativity with GeoGebra
Several years ago, I was introduced to Paul Lockhart’s, “A Mathematician’s Lament.” Taking Lockhart's message to heart, I asked my daughter - then an 8th grader - to construct mathematics tasks that foster creativity. My conversations with Cassady have surprised me and have yielded a number of genuinely interesting mathematics explorations. Both she and Lockhart have encouraged me to reconsider the way that we share math with others.

Michael Todd Edwards, Miami University-Ohio, Oxford, OH

225
Kern-Cary (32)
Grades 9-16

5 Steps to a 5: AP Computer Science A (Java)
Hey, this is crazy, but we got the opportunity to (literally) write the book on AP CS A! Find out about the process, our struggles, and make suggestions for the next edition. Let’s celebrate Wisconsin’s role in in shaping CS across the nation!

Dean Johnson, Fort Atkinson High School, Fort Atkinson, WI djohnson@fortschools.org
Aaron Chamberlain, Fort Atkinson High School, Fort Atkinson, WI
1:00-2:00 PM • 2:30-4:00 PM 
Thursday, May 5, 2016

1:00-2:00 p.m. 60 Minute Sectionals

226
Bauer-Beaty (50)
Grades 9-16

Accelerating Developmental Students to Credit Bearing Courses
This course accelerates students with deficiencies into credit bearing courses at UWM. It is a flipped classroom with a vertical re-design.

Leah Rineck, UW-Milwaukee, Milwaukee, WI
lmrineck@uwm.edu

2:30-4:00 p.m. 90 Minute Workshops

227
RWI-Veranda A (48)
Grades PK-6

Reaching for the Standards and Building the Base of Mathematical Development
How to reach for the standards and teach to the mathematical development of all students? At Frank Allis Elementary in Madison, WI, we are using Common Core Learning Experiences with all students, while at the same time targeting instruction to meet students where they are in their mathematical development. In this session we will share classroom practices from Kindergarten through 5th grade where teachers differentiate for a broad range of students, using Cognitively Guided Instruction and building on the Mathematical Practices.

Sara Cutler, Madison Metropolitan School District, Madison, WI
scutler@madison.k12.wi.us

228
YC-Huber-Evans (64)
Grades PK-6

Math Workshop in Action
In this workshop, Dr. Nicki will focus on helping teachers develop and/or expand their Math Workshop. Based on ideas from her new book Math Workshop in Action, she will discuss:
• Planning for and implementing the first 20 days
• Creating a mathematically rich learning environment
• Creating engaging, standards-based activities for DOK leveled workstations
• Planning meaningful, academically rich, differentiated guided math lessons
• Using formative and summative assessments to guide your instructional decisions throughout the year

Roberta Newton, Newton Education Solutions, Bridgeport, CT
drnicki7@gmail.com

229
RWI-Veranda C (48)
Grades PK-6 Exhibitor

What’s the Problem?
The CCSS in grades K-5 list a variety of problem situations for students to consider as they apply their thinking with operations and algebra. Knowing the nuances of the different situations will assist teachers in providing opportunities for students to engage in the operations.

Rob Nickerson, ORIGO Education, Lakewood, CO
r_nickerson@origomath.com

230
Bauer-Morehouse C (100)
Grades PK-8

Problem Solving: The Path to Success for all Students
Participants will learn the instructional progressions, routines and math talk moves which develop proficient problem solvers. Interview-based assessments aligned to common core problem types are used to determine an entry point for all learners.

Julie Ruck, UW-Oshkosh, Oshkosh, WI
ruckj@uwosh.edu
Stephanie Bernander, UW-Oshkosh, Oshkosh, WI
Rachel Burgan, School District of Waukesha, Waukesha, WI
Sam Shackelford, New London School District, New London, WI
Meghan Brzozowski, Appleton Area School District, Appleton, WI
Brittany Beranek, Green Bay Area School District, Green Bay, WI
Erin Rae, Delavan- Darien School District, Delavan, WI

231
Kraft-Tower Dining Room (50)
Grades PK-12

Increasing Procedural Fluency through Games
Dice, Cards, Dominos, and Apps, oh my! Learn a myriad of games your students can play to increase their fluency and number sense.

Catherine Hunt, CESA 5, Portage, WI
hun@c5.org
Nicole Cooksey, CESA 4, West Salem, WI
Chris Boettcher, CESA 5, Portage, WI
Using Depth of Knowledge (DOK) to Add Rigor to the Mathematics Classroom

A “rigorous” mathematics classroom is one where students are reasoning about mathematics, not just following rules and performing procedures. In this session we will learn how Webb’s Depth of Knowledge framework can be used to ensure our learning activities and assessments are giving students opportunities to reason and make sense out of the mathematics they are learning. Participants will learn the Mathematics DOK Definitions and apply those definitions by analyzing math tasks for DOK level. We will also examine standards to determine the DOK level expected to truly meet the standard.

Paige Richards, Brookhill Institute of Mathematics, Waukesha, WI
paige.richards@brookhillmath.org

Jeff Ziegler, Brookhill Institute of Mathematics, Waukesha, WI

NEARpod - Learn About a Free Interactive App/Website that Can Revolutionize Your Classroom

In this session you will see how NEARpod makes a classroom a comfortable learning environment for students of all learning abilities, by keeping 100% of your classroom on task and wanting to participate. You will observe how NEARpod makes classroom management easy and fun, and you will learn how students’ work is immediately sent and stored for instant feedback during a lesson, as well as long term feedback. NEARpod is an app/website that links your lessons to the internet so the students can follow along individually with any device that connects to the internet as you lead and control the lesson.

Tim Smyth, Luck Elementary School, Luck, WI
tims@lucksd.k12.wi.us

Deepening Mathematical Understanding Using Literacy Tools

The purpose of this session is to provide a meaningful examination of the relevant research, standards, instructional strategies, and assessment ideas related to listening and collaborative conversations/discussions in a mathematics classroom.

Kenneth Davis, WI Department of Public Instruction, Madison, WI
kenneth.davis@dpi.wi.gov

Laura Adams, WI Department of Public Instruction, Madison, WI

Barb Novak, WI Department of Public Instruction, Madison, WI

Marci Glaus, WI Department of Public Instruction, Madison, WI

Promoting Productive Discourse – Making Thinking Public

A number talk is an ongoing daily routine that provides students with meaningful practice with mental computation and promoting productive discourse. Teachers who are successful at facilitating academically productive discussions draw on a toolkit of strategies that guide students to think and talk in new ways. Strategies from Jessica’s Shumways’s, Number Routines – Building Numerical Literacy, will be integrated into the routines. This session will provide teachers with the skills and resources to make this shift in their practice. The practice of number talks is one of the most powerful vehicles for helping students learn to reason with numbers and make teaching mathematics a sense making process.

Karen Reiss, Mathematics Education Consultant, Germantown, WI

Be sure to plan your routes and leave enough time to get a seat.
2:30-4:00 PM
Thursday, May 5, 2016

2:30-4:00 p.m. 90 Minute Workshops

236
YC-Fordham Ballenger (42)
Grades 1-5

Developing Multiplication Concepts
Come learn about some great activities to help students develop multiplicative thinking. In this hands-on workshop, participants will explore the use of visual models of equal groups and arrays to develop conceptual understanding of multiplication. Students in first and second grade as well as students up to fifth grade can benefit from these activities that help develop effective strategies. We will discuss subitizing groups of objects, using mental math strategies, and the importance of students’ explanations of their strategies. These activities will help students in their development of unitizing. Come join me for a fun and informative workshop. You’ll walk away with ideas to use immediately.

Cindy Pray, A Level Above Learning, Thornton, CO
cindy@alevelabovelearning.com

237
YC-Dominguez Cox (42)
Grades 2-8

Get Your Students in on the Action!
See how incorporating the Mathematical Practices and the Teaching Practices, from Principles to Actions, will allow you to become a facilitator of your students’ learning. When students get into the action, true learning happens.

Jessica Jacobson, Kennedy Elementary School, Grafton, WI
jjacobson@grafton.k12.wi.us

Michelle Butturini, Reedsville Elementary/Middle School, Reedsville, WI

238
YC-Ng Jones (42)
Grades 2-8

Changing Mindsets of Elementary Students: Putting Research into Practice
Come experience how two math coaches implemented a plan to bring the principle of Productive Struggle from Principles to Actions and the research about mindsets to life to change the math mindsets of students. You will engage in the same learning experiences the students did and see the effects these experiences had on this group of young learners.

Nina Overholser, Milwaukee Sign Language School, Milwaukee, WI
overhonk@milwaukee.k12.wi.us

Michelle Douglas-Meyer, Pierce Elementary School, Milwaukee, WI

239
Kern-Stansbury (32)
Grades 4-6 Exhibitor

Understanding Fraction Multiplication and Division with Visual Models
Investigate several visual tools for modeling and solving problems that involve multiplication and division with fractions. Learn how story problems help students make sense of fraction multiplication and division, and examine students’ responses to such problems.

Martha Ruttle, The Math Learning Center, Portland, OR
marthar@mathlearningcenter.org

240
Kern-Cary (32)
Grades 4-8

Math/Science Integration for Earth’s Sake
Engage in innovative activities that illustrate the math behind real-world ecology concepts such as human population growth and natural resource use. Receive lessons on CD-ROM.

Steve Krings, Teacher Emeritus, Green Bay, WI
skrings@new.rr.com

241
Bauer-Lightbody (32)
Grades 4-8

Building Common Core Learning Trajectories for Students and Teachers: Supporting Core and Interventions 6-8
This session supports middle school teachers and coaches as they analyze the major work of their grade level(s). Participants will gain understanding of and experience with building student-centered, asset-based learning trajectories to support and monitor progress toward and beyond grade level proficiencies. Participants are encouraged to bring a laptop.

Kristina Whiting, Madison Metropolitan School District, Madison, WI
kwhiting@madison.k12.wi.us

Kerry Motoviloff, Madison Metropolitan School District, Madison, WI
242
Bauer-Morehouse A (50)
Grades 6-8

Principles to Actions' Effective Mathematics Teaching Practices in the Middle Grades
This session uses a task and video clip from a middle school mathematics classroom to explore the NCTM Principles to Actions Effective Mathematics Teaching Practices. We focus in particular on using and connecting representations, posing purposeful questions, and eliciting and using evidence of student thinking.

Michael Steele, UW-Milwaukee, Milwaukee, WI
steelem@uwm.edu

243
Kern-Brayton Case A (64)
Grades 6-12

Performance Tasks and Rubric-Based Grading
This hands-on session will focus on alternative forms of summative assessment and grading in the math classroom. Come experience deep, content-rich group tasks that give students a unique opportunity to show what they’ve learned!

Sara Kamoske, Homestead High School, Mequon, WI
skamoske@mtsd.k12.wi.us
Charles Matthews, Holmen High School, Holmen, WI
Rick Stuart, Holmen High School, Holmen, WI

244
Bauer-LaDue (24)
Grades 6-12

Create an Android App with MIT App Inventor
Learn the basics that can be used to create an app for your Android phone/device in 90 minutes. Great skills to add to your programming classes or as enrichment for math/computer clubs. Appeals to both new and experienced users.

Brenda Larson, Menomonee Falls School District, Menomonee Falls, WI
LarsBre@sdmfschools.org

2:30-4:00 p.m.  Keynote Speaker

245
Lakeview (300)
Grades 7-12

Giving ALL Students a Voice: Alex’s Story
Students with special needs are often taught exclusively through direct instruction. Learn first-hand from a student with special needs how direct instruction was successfully replaced with teaching for understanding in a discourse-rich environment. Explore extensions to these best practices through a video exploration of important teaching shifts to support increased productive mathematical discourse for ALL students. www.astrokeofluck.net

Juli Dixon, University of Central Florida, Orlando, FL
juli.dixon@ucf.edu
Alex Dixon, Orlando, FL

2:30-4:00 p.m.  90 Minute Workshops

246
Kern-Brayton Case B (64)
Grades 9-12

B.Y.O.D. (Bring Your Own Device!)
Bring your own device to this session! Chromebook, iPad, Smartphone- doesn’t matter- we’ll use them all! We will show you how to implement new and engaging technology in your classroom using a variety of platforms. From daily activities to formative assessment, we’ll give you the tools to excite your students and revolutionize your classroom.

Jennifer Toth, Brookfield East High School, Brookfield, WI
jtothj@elmbrookschools.org
Hannah Guth, Brookfield East High School, Brookfield, WI
Effective Teaching with Mathematica Visualization and Live Interaction
Using manipulatives to create real life applications including but not limited to Calculus, Trigonometry, Geometry, and Algebra. As examples of topics:
1. Length of a ribbon required to decorate a tree (post) at different heights and different number of turns starting at certain base radius.
2. Maximum area in a garage on a side of a garage in terms of the roofing angle.
3. Creating projects such as:
   a. Constructing a square in a triangle such that two corners lie on the base of triangle and the two others lie on the two other sides of the triangle
   b. Constructing the largest rectangle in the interior of a triangle.
   c. Constructing the largest equilateral triangle in a square.
4. Creating the old and the new YMCA symbols.

Abraham Gadalla, Breck School, Maple Grove, MN a_gadalla@comcast.net
251
Kern-Boehr (50)
Grades 6-12

**What I Learned about Blended Learning in a High School Mathematics Classroom**

With a constant shift towards the use of technology in our daily lives I often considered ways to implement more technology in my classroom. After strong consideration of flipping my classroom I finally found a fit for me.

**Jesse Gleason**, Cuba City High School, Cuba City, WI
jesse.gleason@cubacity.k12.wi.us

252
RWI-Mahaney (40)
Grades 9-12

**STEM Careers- Helping Students Understand the Possibilities in STEM Careers**

Educators have the ability to spark an interest in the sciences, however sometimes students don’t know where their interests in STEM can take them. Working in higher education we get that question a lot. We also see many students who come in with a very limited view of careers in STEM fields. We hear they want to be a doctor or an engineer or they have been told that is what they should do because they are good at math and science. This presentation will provide conversation and an opportunity to learn about resources such as professional organizations, websites, and local resources that can help students learn about the vast number of opportunities with STEM fields. Using tools from Career Services, professional organizations and wisdom from faculty and staff at UW-Eau Claire, I will outline how students can start to search career paths, educational paths, and find ways to gain experiences to test out fields. Presentation will include involvement from teachers about what they hear from their students and ways they can engage students to explore interests both in and out of the classroom. A list of links and the presentation will be available via e-mail if interested.

**Creanna Cote**, UW-Eau Claire, Eau Claire, WI
cotecm@uwec.edu

253
Bauer-Beaty (50)
Grades 9-12

**AP Stats FRQs: Hypothesis Tests and the 4 Step Process**

Participants will have the opportunity to work with rubrics from previous AP Statistics exam questions focusing on hypothesis testing. We will work through a hypothesis test question from the 2015 exam. The session will highlight the components your students should be using as they answer a hypothesis test question.

**Jason Dahl**, Oconomowoc High School, Oconomowoc, WI
**Bill Fehrenbach**, Lincoln High School, Wisconsin Rapids, WI
**Todd Brahm**, East High School, West Bend, WI
**Mike Hendricks**, Cedarburg High School, Cedarburg, WI
**Allison Hopkins**, Oconomowoc High School, Oconomowoc, WI

**CPM EDUCATIONAL PROGRAM**

**SUPPORTING EDUCATORS, ENGAGING STUDENTS**

For over 25 years CPM EDUCATIONAL PROGRAM has been writing problem-based student-centered course materials. We support and empower the mathematics education community through exemplary curriculum for grade six through calculus, comprehensive professional development, and leadership.

We are pleased to support the Wisconsin Mathematics Council. Stop by our booth to meet with a CPM mentor teacher, see our materials, request a preview, and learn more about our summer program for new teachers.

**MORE MATH FOR MORE PEOPLE**

Visit us at CPM.ORG/cpminfo
Meetings & Event Overview
Friday, May 6, 2016

FIFTH ANNUAL PI RUN
6:28 a.m. Meet outside of the Kern Lodge parking lot
Get out your running shoes and participate in the Fifth Annual Pi Run, with proceeds benefiting the Wisconsin Mathematics Education Foundation. The 3.14 kilometer fun run/walk around the Green Lake Conference Center wooded grounds starts and finishes on Hillside Road. You can sign up at the Wisconsin Mathematics Education Foundation exhibit located in the Kraft Centre Lobby.

FIRST TIMERS WELCOME/ORIENTATION
7:00-7:45 a.m. Kraft Centre Mitchell Dining Room
Meet new friends and get acquainted with the conference ins and outs. The Membership Committee will provide an overview of the conference program, answer questions and help you select appropriate sessions. Bring your breakfast or just drop in for valuable information to make the most of your first Annual Conference experience. Look for the red, yellow and blue balloons.

AUTHOR BOOK SIGNINGS
Mathematics authors, Greg Tang, Jennifer Kosiak and Jenni McCool, will be signing copies of their books today as follows:
Jennifer Kosiak and Jenni McCool will be signing copies of their books on Friday morning from 9:15-9:45 a.m. in the Pillsbury Lobby.
Greg Tang will be signing copies of his books immediately following his keynote address on Friday morning from 11:15-11:45 a.m. in the Pillsbury Lobby.

UW-LA CROSSE ALUMNI REUNION
11:30 a.m.-1:00 p.m. Kraft Centre Mitchell Dining Room
Bring your lunch and meet old friends at this all UW-La Crosse Reunion! Drop in for a few minutes or stay for a while when you reconnect with colleagues.

A note about reading the room locations:
Throughout the book, the first name indicates the building; the name after the dash indicates the room.
When planning your session choices, write down the session number, building and room. Also select a nearby alternative in the event that your first choice is full.

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<tr>
<th>Time</th>
<th>Activity</th>
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<td>6:28 a.m.</td>
<td>Fifth Annual Pi Run (meet outside of the Kern Lodge parking lot)</td>
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<td>6:30 a.m.</td>
<td>Breakfast served from 6:30-8:30 a.m.</td>
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<td>7:00 a.m.</td>
<td>First Timers Orientation</td>
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<td>Exhibit Hall opens</td>
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<td>Lunch served until 1:00 p.m.</td>
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<td>11:30 a.m.</td>
<td>UW-La Crosse Alumni Reunion (Mitchell Dining Room)</td>
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Friday, May 6, 2016
Grades 9-12

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<tr>
<td>YC-Huber-Evans</td>
<td>8:00-9:00 a.m.</td>
<td>Do-It-Yourself 3-D Models</td>
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<td>YC-Cummings</td>
<td>8:00-9:00 a.m.</td>
<td>Have FUN and get FREE Math Products!</td>
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<td>Bauer-Lightbody</td>
<td>8:00-9:00 a.m.</td>
<td>Thinking Mathematically through Daily Warm-Ups</td>
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<td>YC-Dominguez Cox</td>
<td>8:00-9:00 a.m.</td>
<td>Writing Lesson Plans: Your Blueprint for Success</td>
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<td>Bauer-Morehouse C</td>
<td>8:00-9:00 a.m.</td>
<td>Paint Bucket Polygons: Fostering Mathematical Conversations with Photoediting Software</td>
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<td>YC-Fordham Ballenger</td>
<td>8:00-9:00 a.m.</td>
<td>Reviewing the 2015 AP Stats Exam</td>
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<td>Bauer-Boddie</td>
<td>8:00-9:00 a.m.</td>
<td>Using Desmos.com to Engage Students in Discovery Learning</td>
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<td>Kern-Boehr</td>
<td>8:00-9:00 a.m.</td>
<td>Exploring Computer Science</td>
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<td>RWI-Crystal</td>
<td>8:00-9:00 a.m.</td>
<td>Building a Classroom Culture of Confident Problem Solvers</td>
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<td>RWI-Mahaney</td>
<td>8:00-9:00 a.m.</td>
<td>The Binomial Theorem and Extensions of a Combinatorial Setting</td>
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<td>8:00-9:00 a.m.</td>
<td>Mastering the AP Calculus Exam: Guide Assist Teachers/Maximizing their Student Scores</td>
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<td>Kern-Hanson</td>
<td>8:00-9:00 a.m.</td>
<td>The UW Mathematics Placement Test: What is the Test and How is it Used?</td>
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<td>Bauer-Morehouse A</td>
<td>8:00-9:00 a.m.</td>
<td>Building Concepts: Ratios, Proportions and Algebra</td>
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<td>Kern-Stansbury</td>
<td>9:30-11:00 a.m.</td>
<td>Assessments - We Aren't Doing them Wrong, But are We Doing Them Right?</td>
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<td>YC-Ng Jones</td>
<td>9:30-11:00 a.m.</td>
<td>Increasing Student Power in the Math Class</td>
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<td>RWI-Veranda C</td>
<td>9:30-11:00 a.m.</td>
<td>Making Statistics Come Alive with the TI-Nspire Handheld</td>
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<td>Kern-Cary</td>
<td>9:30-11:00 a.m.</td>
<td>4, 2, 3, 1 ... A Countdown to Standards Based Grading</td>
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<tr>
<td>Bauer-Boddie</td>
<td>9:30-11:00 a.m.</td>
<td>Lego Mindstorms and STEM: A Perfect Pair</td>
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<td>Bauer-LaDue</td>
<td>9:30-11:00 a.m.</td>
<td>Using Virtual Manipulatives to Enhance Student Learning and Engagement</td>
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<td>9:30-11:00 a.m.</td>
<td>Revamp Your Review Day</td>
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<td>RWI-McGarvey</td>
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<td>CCSS, Transformational Geometry, and the Pythagorean Theorem</td>
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<td>9:30-11:00 a.m.</td>
<td>Investigating WISELearn's Open Educational Resources</td>
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<td>9:30-11:00 a.m.</td>
<td>Principles to Actions' Effective Mathematics Teaching Practices in High School</td>
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<td>RWI-Mahaney</td>
<td>9:30-11:00 a.m.</td>
<td>Tips and Tricks for Teaching Calculus, Part 2</td>
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<tr>
<td>Kern-Boehr</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>State of Computer Science in Wisconsin</td>
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<td>Kern-Cary</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Breakout EDU - The Power of Practice</td>
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<td>11:30 a.m.-12:30 p.m.</td>
<td>Global Math Collaboration with Italy, Spain, and the Czech Republic</td>
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<td>11:30 a.m.-12:30 p.m.</td>
<td>P3 (Partnership, Personalized, Practical)</td>
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<td>Implementing Rich Mathematical Tasks at Multiple Grade Levels</td>
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<td>Higher Level Thinking Tasks in the Math Classroom</td>
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<td>11:30 a.m.-12:30 p.m.</td>
<td>My Favorite Math iPad App and 1000 Free Interactive Lessons for Grades 7-12</td>
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<td>11:30 a.m.-12:30 p.m.</td>
<td>Standards Based Grading in the Common Core Secondary Classroom</td>
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<td>Kern-Hanson</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>It is Not Elementary, My Dear Watson. It is Secondary.</td>
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<tr>
<td>RWI-Mahaney</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>The Traditional and Not-So-Traditional Algebraic Pathway Developmental Courses at UW-Milwaukee</td>
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<td>By Chance or Statistically Significant?</td>
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<td>Using Geogebra to Visual Calculus</td>
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<td>Kern-Brown</td>
<td>1:00-2:00 p.m.</td>
<td>Why Even Veteran Teachers Should Consider Using a PDP for License Renewal</td>
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<td>Bauer-Morehouse B</td>
<td>1:00-2:00 p.m.</td>
<td>My Reflections on the Maturing of Mathematics Education Over the Last 5.5 Decades</td>
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<td>Bauer-Beaty</td>
<td>1:00-2:00 p.m.</td>
<td>Connecting a State Vision of STEM Education to Mathematics Lessons</td>
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<td>Bauer-LaDue</td>
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<td>Code Ninjas: Building Coding Skills and CS Interest in Elementary Schools</td>
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<td>RWI-McGarvey</td>
<td>1:00-2:00 p.m.</td>
<td>Hands On Activities for Middle and High School Students</td>
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<td>Invoking the Math Practice Standards through Algebraic Card Tricks</td>
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<td>Kern-Hanson</td>
<td>1:00-2:00 p.m.</td>
<td>Time for New Traditions (The Sequel)</td>
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<td>Kern-Brayton Case A</td>
<td>1:00-2:00 p.m.</td>
<td>Making Learning Stick</td>
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<td>Bauer-Boddie</td>
<td>1:00-2:00 p.m.</td>
<td>What Does Mathematics Education Look Like in a Middle School in Beijing,China</td>
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<td>Kern-Johnson</td>
<td>1:00-2:00 p.m.</td>
<td>It was Colonel Mustard in the Library with the Candlestick! Or was it YOU?</td>
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<td>Kern-Boehr</td>
<td>1:00-2:00 p.m.</td>
<td>Python, Programming and Flying Drones</td>
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<td>Fact or Crap</td>
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<td>1:00-2:00 p.m.</td>
<td>Rethinking Math for Non-STEM Majors</td>
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<td>2:30-3:30 p.m.</td>
<td>Being Intentional With Formative Assessment Classroom Techniques</td>
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<td>Kern-Brown</td>
<td>2:30-3:30 p.m.</td>
<td>Take Action - It's &quot;Time To Teach&quot;</td>
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<td>Bauer-Lightbody</td>
<td>2:30-3:30 p.m.</td>
<td>Are All Web-Based Platforms Alike? What We Found after Moving into One</td>
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<td>2:30-3:30 p.m.</td>
<td>The Mukwonago IT Academy: Student Learning through Business Partnerships</td>
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<td>Kern-Cary</td>
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<td>Cooperative Learning in the Computer Science Classroom</td>
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<td>311</td>
<td>YC-Huber-Evans</td>
<td>8:00-9:00 a.m.</td>
<td>Do-It-Yourself 3-D Models</td>
</tr>
<tr>
<td>314</td>
<td>YC-Cummings</td>
<td>8:00-9:00 a.m.</td>
<td>Have FUN and get FREE Math Products!</td>
</tr>
<tr>
<td>322</td>
<td>RWI-Mahaney</td>
<td>8:00-9:00 a.m.</td>
<td>The Binomial Theorem and Extensions of a Combinatorial Setting</td>
</tr>
<tr>
<td>323</td>
<td>Kern-Brown</td>
<td>8:00-9:00 a.m.</td>
<td>Mastering the AP Calculus Exam: A Guide to Assist Teachers in</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Maximizing their Student Scores</td>
</tr>
<tr>
<td>324</td>
<td>Kern-Hanson</td>
<td>8:00-9:00 a.m.</td>
<td>The UW Mathematics Placement Test: What is the Test/How is it Used?</td>
</tr>
<tr>
<td>326</td>
<td>Bauer-Morehouse A</td>
<td>8:00-9:00 a.m.</td>
<td>Building Concepts: Ratios, Proportions and Algebra</td>
</tr>
<tr>
<td>351</td>
<td>RWI-Mahaney</td>
<td>9:30-11:00 a.m.</td>
<td>Tips and Tricks for Teaching Calculus, Part 2</td>
</tr>
<tr>
<td>358</td>
<td>Kern-Boehr</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>State of Computer Science in Wisconsin</td>
</tr>
<tr>
<td>360</td>
<td>Kern-Cary</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Breakout EDU - The Power of Practice</td>
</tr>
<tr>
<td>368</td>
<td>Bauer-Morehouse B</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>My Favorite Math iPad App and 1000 Free Interactive Lessons</td>
</tr>
<tr>
<td>371</td>
<td>RWI-Mahaney</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>The Traditional and Not-So-Traditional Algebraic Pathway</td>
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<tr>
<td></td>
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<td></td>
<td>Developmental Courses at UW-Milwaukee</td>
</tr>
<tr>
<td>372</td>
<td>Bauer-LaDue</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>By Chance or Statistically Significant?</td>
</tr>
<tr>
<td>373</td>
<td>Bauer-Boddie</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Using Geogebra to Visual Calculus</td>
</tr>
<tr>
<td>374</td>
<td>Kern-Johnson</td>
<td>11:30 a.m.-12:30 p.m.</td>
<td>Using Culturally Relevant Pedagogy in a Mathematics Methods Course</td>
</tr>
<tr>
<td>405</td>
<td>Bauer-Morehouse B</td>
<td>1:00-2:00 p.m.</td>
<td>My Reflections on the Maturing of Mathematics Education Over the Last 5.5 Decades</td>
</tr>
<tr>
<td>408</td>
<td>Bauer-Beaty</td>
<td>1:00-2:00 p.m.</td>
<td>Connecting a State Vision of STEM Education to Mathematics Lessons</td>
</tr>
<tr>
<td>415</td>
<td>Kern-Bratyon Case A</td>
<td>1:00-2:00 p.m.</td>
<td>Making Learning Stick</td>
</tr>
<tr>
<td>420</td>
<td>Kern-Bratyon Case B</td>
<td>1:00-2:00 p.m.</td>
<td>Rethinking Math for Non-STEM Majors</td>
</tr>
<tr>
<td>426</td>
<td>Kern-Brown</td>
<td>2:30-3:30 p.m.</td>
<td>Take Action - It’s “Time To Teach”</td>
</tr>
<tr>
<td>431</td>
<td>Kern-Cary</td>
<td>2:30-3:30 p.m.</td>
<td>Cooperative Learning in the Computer Science Classroom</td>
</tr>
</tbody>
</table>

**Friday, May 6, 2016**

**Grades 13-16**

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**May 3-5, 2017 | SAVE THE DATE**

**Make plans to attend the 49th WMC Annual Conference**

**Empowering**

**Mathematical Learning through Assessment**

Green Lake Conference Center, Green Lake, WI | www.wismath.org
### 8:00-9:00 AM  
**Friday, May 6, 2016**

**8:00-9:00 a.m.  60 Minute Sectionals**

<table>
<thead>
<tr>
<th>Sectional</th>
<th>Title</th>
<th>Grade Levels</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>301</td>
<td>Co-Preparing a Math Class Benefits Both Teachers and Students</td>
<td>PK-1</td>
<td>Lili Zhou, Zuo’amen Middle School, Beijing, China  <a href="mailto:zhoulili@emails.bjut.edu.cn">zhoulili@emails.bjut.edu.cn</a></td>
</tr>
<tr>
<td>302</td>
<td>Tools to Engage, Promote Active Learning, and Build Number Sense</td>
<td>PK-3</td>
<td>Nicole Kirksey, Math Solutions, Muskegon, MI  <a href="mailto:nicole.kirksey@hmhco.com">nicole.kirksey@hmhco.com</a></td>
</tr>
<tr>
<td>303</td>
<td>Elementary Mathematics Instruction, Intervention, and Continuous Improvement in Menomonee Falls</td>
<td>PK-6</td>
<td>Aaron White, Riverside Elementary School, Menomonee Falls, WI  <a href="mailto:whitaar@sdmfschools.org">whitaar@sdmfschools.org</a>  Rebecca Meyer, Riverside Elementary School, Menomonee Falls, WI  Jenni Block, Riverside Elementary School, Menomonee Falls, WI  Dan Johnstone, Riverside Elementary School, Menomonee Falls, WI</td>
</tr>
</tbody>
</table>

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**8:00-9:00 a.m.  Keynote Speaker**

<table>
<thead>
<tr>
<th>Keynote</th>
<th>Title</th>
<th>Grade Levels</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>304</td>
<td>Critical Connections (K-8)</td>
<td>PK-8 Keynote</td>
<td>Greg Tang, Greg Tang Math, Belmont, MA</td>
</tr>
<tr>
<td>305</td>
<td>Assessing Mathematical Understanding in Grades K-1</td>
<td>K-1</td>
<td>Lori Williams, Manitowoc Public School District, Manitowoc, WI  <a href="mailto:williamsl@mpsd.k12.wi.us">williamsl@mpsd.k12.wi.us</a></td>
</tr>
</tbody>
</table>

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Because weather can range from snow and rain to beautiful and sunny, dressing in layers and carrying an umbrella works best.
306
RWI-Veranda A (48)
Grades K-2

Do Your Students REALLY Know What the Equal Sign Means?
Are your students understanding this crucial symbol that as Robert M. Capraro says “is pervasive and fundamentally linked to mathematics from kindergarten through upper-level calculus.” You might be surprised. Participants will look at the shocking data dealing with student knowledge of the equal sign. Participants will be introduced to a way to check the knowledge of their students. Participants will engage in activities for their students that will make improvements and/or prevent the misunderstanding the equal sign for their students.

Mary Ann Modrak, CESA 10, Chippewa Falls, WI

307
Kern-Stansbury (32)
Grades K-8

Principles to Actions Book Analysis
The recent NCTM publication, Principles to Actions: Ensuring Mathematical Success for All, delineates effective teaching practices that promote high levels of learning for all students. To assist you in putting these practices into action at the elementary and middle school levels, participate in an innovative discussion focused on unpacking the eight essential Mathematics Teaching Practices outlined in this publication. Tasks, videos, and materials will be shared to participants to become more effective mathematics teachers.

Alicia Korth, New London School District, New London, WI
akorth@newlondon.k12.wi.us
Lynn Schaal, New London School District, New London, WI

308
Kern-Cary (32)
Grades 2-6

Engaging in Algebraic Reasoning through Properties of Number and Operation
Our aim is to show how fundamental properties can be a springboard for algebra in the early grades. We will provide teachers with tasks and videos from our early algebra intervention to encourage students’ algebraic reasoning.

Susanne Strachota, UW-Madison, Madison, WI
sstrachota@wisc.edu
Hannah Kang, UW-Madison, Madison, WI
Isil Isler, UW-Madison, Madison, WI

309
Kern-Johnson (50)
Grades 2-6

Moving Beyond Show and Tell Math Discourse
How do you move math discourse to higher levels? Are there ways to structure conversations that go deeper than a share out of a range of possible ways used to solve one problem? This session will focus on how to use targeted discussions in your classroom to orchestrate meaningful discourse among students.

Rose Palmer, School District of Waukesha, Waukesha, WI
rpalmer@waukesha.k12.wi.us

310
Bauer-Beaty (50)
Grades 2-8

If a Picture Is Worth a Thousand Words, a Simulation Is Worth a Million!
Experience a math classroom that resembles a laboratory where math topics come to life, and student depth of understanding soars when using online simulations to introduce, develop and expand conceptual understanding.

Jane Owen, ExploreLearning, Jacksonville, FL
jowen@explorelearning.com

311
YC-Cummings (64)
Grades 2-16 Exhibitor

Have FUN and get FREE Math Products!
Check out and play with the new and free products from EasyWorksheet.com. Participants will be introduced to and given the #1 rated customized test generator for free. This will save you a lot of time and get better results. You will also be introduced to our new lines of hands-on class products, games and learning tools and have fun playing with them. Participants will also receive discount vouchers for items at the EasyWorksheet.com vendor booth including the games and class products that you just tried out.

Amy Galitzer, Easy Worksheet.com, Alexandria, VA
Do-It-Yourself 3-D Models
The student’s desktop will become alive with a wealth of interesting 3-D models produced by simple paper folding. This will be fun and suitable for all grades. We will count, measure, solve puzzles, discover relationships, and form conjectures. We will explore fascinating figures. Some old (like the great pyramid of Egypt), and some new (like the antiprism – the shape of the New World Trade Center in New York).

George Marino, Aurora Central Catholic Schools, Naperville, IL
georgejmarino@aol.com

Problem Solving Circles: Independent Mathematical Literacy for ALL Students
Word problems! *shudders* Fear no more! Problem Solving Circles create independent, engaged students who can participate in rich discourse. You will leave with all the tools needed to implement this process immediately.

Nicole Hawkins, College Park Elementary School, Greendale, WI
nicole.hawkins@greendale.k12.wi.us

Motivating Middle Level Mathematics Using Minecraft
This session will examine how the game Minecraft can be used to engage students in meaningful exploration of middle school mathematics content. We will examine how ratios and proportions are embedded within a variety of settings in-game. Several ideas for activities and projects will be discussed.

Josh Hertel, UW-La Crosse, La Crosse, WI
jhertel@uwlax.edu

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jhertel@uwlax.edu

Thinking Mathematically through Daily Warm-Ups
In place of the typical review/preview warm up routine, engage students in the first five minutes of your class with activities that push them to think mathematically about everyday situations. All activities encase the Math Practice Standards, use technology, promote student ownership, and can be applied to your classroom tomorrow!

Jessica Bogie, Fischer Middle School, Plainfield, IL
jessica_bogie@ipsd.org

Writing Lesson Plans: Your Blueprint for Success
Writing lesson plans or even having lesson plans available for a substitute teacher can make the difference between an accomplished teacher and a mediocre teacher. Do my lesson plans have an anticipatory set, success criteria, Common Core Standards, Charlotte Daniels Four Domains, homework expectations, accommodations for students with special needs and a ticket out? Do my students know what is expected of them for today’s lesson and/or the unit?

Anita Harrison, Vincent High School, Milwaukee, WI
harrisonar@reagan.com

Paint Bucket Polygons: Fostering Mathematical Conversations with Photoediting Software
In this interactive presentation, we explore the development of a teaching module that recasts “paint bucket” features of photo editing software as a teaching tool to foster discussion, debate, and heightened understanding of polygons with middle grades geometry students. As students fill geometric shapes with the “paint bucket,” they explore nuances of “polygon” too often overlooked by contemporary textbooks. The “paint bucket” metaphor allows students to build sophisticated notions of “polygon” in ways that are developmentally appropriate for learners in grades 5-12.

Michael Todd Edwards, Miami University-Ohio, Oxford, OH
Using Desmos.com to Engage Students in Discovery Learning

Do you want your high school students to use smartphones for more than games and Snapchat? Desmos.com is a powerful and free online, or downloadable, graphing calculator app that helps students make sense of any math curriculum on technology they most likely already own. In this session, using a smartphone or laptop, you will create sliders to explore transformations of any function, discover the relationship of a quadratic in factored form to its graph, investigate the different types of asymptotes on rational functions, and fit equations to model real world data. Empower your students to make meaning and connections on their own or in groups. You will leave this session with a plethora of hands-on activities and lessons from Algebra to Precalculus that you can use in your own classroom immediately. Teachers and students will be hooked.

John Herman, Lake Mills High School, Lake Mills, WI
john.herman@lakemills.k12.wi.us

Andrew Carroll, Lake Mills High School, Lake Mills, WI

Exploring Computer Science

This panel discussion features Exploring Computer Science (ECS) teachers reflecting upon their experiences with the rollout of this inquiry- and project-based curriculum over the past two years. ECS is a substantial change for both students and teachers, with a deep focus on the three pillars: Inquiry, Equity, and Computer Science Content.

Linnea Logan, Whitefish Bay High School, Whitefish Bay, WI
linnea.logan@wfbschools.com

Dennis Brylow, Marquette University, Milwaukee, WI

Dan Rhode, Baraboo High School, Baraboo, WI

Kasi Stiedaman, Eisenhower High School, New Berlin, WI

Kristina Bloomquist, Pewaukee High School, Pewaukee, WI

Building a Classroom Culture of Confident Problem Solvers

Learn how to build your students’ confidence, dispositions, and skills as capable problem solvers through an interactive session that investigates the big question of whether bees build their honeycombs in a way that is mathematically optimal.

James Lynn, University of Illinois at Chicago, Chicago, IL
jlynn@uic.edu

Exploring Computer Science

This panel discussion features Exploring Computer Science (ECS) teachers reflecting upon their experiences with the rollout of this inquiry- and project-based curriculum over the past two years. ECS is a substantial change for both students and teachers, with a deep focus on the three pillars: Inquiry, Equity, and Computer Science Content.
8:00-9:00 A.M. • 9:30-11:00 A.M
Friday, May 6, 2016

8:00 - 9:00 a.m.  60 Minute Sectionals

323
Kern-Brown (32)
Grades 9-16

Mastering the AP Calculus Exam: A Guide to Assist Teachers in Maximizing their Student Scores
The AP Calculus exam is this week! This session examines the types of problems that have dominated the exam and how teachers can guide students to maximize their scores. The presentation is from the perspective of a 10 year veteran exam reader - we’ll discuss how these questions are scored, how the questions have evolved over the last ten years and how students can use the scoring guides to their best advantage.

Eric Losin, Golda Meir High School, Milwaukee, WI
losineb@milwaukee.k12.wi.us

324
Kern-Hanson (50)
Grades 9-16

The UW Mathematics Placement Test: What is the Test and How is it Used?
Come learn about the UW Mathematics Placement Exam. This session will provide a brief overview of the test, including its purpose and content, validation processes, and how it is used for placement into mathematics courses by the UW campuses. There will also be time for questions.

Sonya Sedivy, UW Center for Placement Testing, Madison, WI
ssedivy@wisc.edu
Julia McDonald, UW-Platteville, Platteville, WI

325
Kern-Brayton Case A (64)
Grades PK-4

Scaffolding Thinking: Putting Students’ Visual Representations to Work
“Use a drawing to show your thinking.” What does that mean to young learners? While many students get to work, there are those that don’t know what “they are thinking”. Using student work is an optimal way to help young learners translate from physical to visual representations that allow discussions to focus on important mathematical ideas. Venture into a primary classroom with us as we explore high-leverage teaching practice: Use and connect mathematical representations.

Beth Schefelker, School District of South Milwaukee, South Milwaukee, WI
bschefelker@sdsm.k12.wi.us
Melissa Hedges, UW-Milwaukee, Milwaukee, WI

8:00-9:00 a.m.  Featured Speaker

326
Bauer-Morehouse A (50)
Grades 9-16

Building Concepts: Ratios, Proportions and Algebra
The CCSS-M describe a ratio as associating two or more quantities. What about fractions? How does this perspective relate to ratios in algebra? Interactive dynamic technology can support a shift in thinking about the fundamental ideas involved in proportional reasoning and help students make the connection to algebra.

Gail Burrill, Michigan State University, East Lansing, MI

9:30-11:00 a.m.  Featured Speaker

327
Kern-Hanson (50)
Grades PK-1 Featured

Mathematical Language- Do You Know the Words?
Mathematical learning begins naturally in each child’s interactions and explorations of daily life. Books and stories are part of the rich early childhood learning environment. This session will examine appropriate language to support mathematics and how to develop and model that language. Ideas for supporting mathematical concepts through stories and activities using language stages of child language, materials language and specific mathematical language will be presented. Concepts from the strands of number, geometry, measurement and data collection and interpretation will be used for suggesting practical learning experiences.

Rosemary Irons, ORIGO Education, Mathematics Education Consultant, Whiteside, Queensland Australia
From Books to Bucks: Linking Literature and Money for Young Earners
From Books to Bucks demonstrates strategies to integrate financial literacy standards into reading, writing, listening, and speaking through the use of developmentally appropriate children’s literature. Learn how to weave concepts such as coin and bill identification and counting, earning, spending, saving, donating and other early finance and economics themes into your language arts block. The star of the presentation, Maggie Lou the Money-Smart Marsupial, promotes the integration of these concepts and others into Reader’s and Writer’s Workshop. Leave with a self-created lesson designed just for your classroom that you can use when you return!

Jennifer Guenther, Economics Wisconsin, Hartford, WI
guenther@economicswisconsin.org

Math Running Records in Action
In this workshop, Dr. Nicki Newton will help you learn everything you need to know about effectively implementing Math Running Records. Through demonstration and hands-on practice, this institute explains what running records are, how to administer and analyze them, and how to use them for ongoing classroom assessment to focus your teaching of small groups and individual students. Come learn how to personalize math instruction!

Roberta Newton, Newton Education Solutions, Bridgeport, CT
drnicki7@gmail.com

A Deeper Look at the “Core” of Effective Mathematics Teaching: Empowering Students
One of the writers of Principles to Actions reflects upon and examines how the teaching practices empower students as mathematical learners. Selected practices (e.g., representations, discourse) are highlighted and viewed through the actions of students.

DeAnn Huinker, UW-Milwaukee, Milwaukee, WI
huinker@uwm.edu
9:30-11:00 AM
Friday, May 6, 2016

9:30-11:00 a.m.  90 Minute Workshops

333
Bauer-Lightbody (32)
Grades PK-8

How to Get the Parents of Your Students to See Mathematics in Action!
This session will give you ideas on how to get parents on board in relation to CCSSM. I will share information with you regarding the Parent Night I host at the beginning of the year and the Math Night I host in the spring. Both events have made a huge impact on the support that I receive from parents! Participants will be engaging in some of the activities that I use at the Math Night. My activities will be geared toward fifth grade, but both events can be adapted to any grade level.

Michelle Butturini, Reedsville Elementary/Middle School, Reedsville, WI butturin@reedsville.k12.wi.us

335
Kern-Stansbury (32)
Grades PK-12

Assessments - We Aren’t Doing them Wrong, But are We Doing Them Right?
Whether you are standards based or not we all give assessments. However, what do we really want our students to show proficiency on and how do we get to that. Lets have a rather open discussion/presentation about assessing students for what we want them to know and be able to do.

Mark Schommer, DC Everest School District, Weston, WI mschommer@dce.k12.wi.us
Sarah Trimner, DC Everest School District, Weston, WI

337
RWI-Veranda A (48)
Grades 2-6

Make Math STICK OUT!
This is a “make and take” type of session showing the use of 3-D graphic organizers in the math classroom. If you’re needing a way for students to use the math vocabulary, visualize concepts and have a more hands-on approach to acquiring or showing knowledge, then join in!

Michelle Bittick, School District of Mauston, Mauston, WI mbittick@maustonschools.org

9:30-11:00 a.m.  Keynote Speaker

334
Lakeview (300)
Grades PK-8 Keynote

A Model Approach to Word Problems and Arithmetic (K-8)
Visual models are the key to making challenging arithmetic and word problems easier to solve. We will explore a strategic progression of models that develops the algebraic thinking skills kids need for higher math. The goal isn’t to make math easy - it is to give students the tools they need when math gets hard.

Greg Tang, Greg Tang Math, Belmont, MA

It is wise to select alternative sessions in advance so that you can quickly move to another session. Popular sessions often fill up 20 minutes before the starting time. All sessions fill on a first-come, first-served basis.

Each day’s addendum will list session cancellations that we are made aware of in advance.
Technology Enhanced Rich Math Tasks
What is a “rich math task”? How and when can technology be a part of a math lesson? What are the keys to successful technology integration? Explore these questions and have time to try some apps and web tools in this interactive, hands-on session. Bring a device for maximum engagement!

Ashley Bingenheimer, School District of River Falls, River Falls, WI
ashley.bingenheimer@rfsd.k12.wi.us
Cory Klinge, School District of River Falls, River Falls, WI

Using Unit Fraction Reasoning to Apply and Extend Understanding of Operations with Fractions
In Grade 3, students build a critical understanding of unit fractions as the basic building blocks of fractions. This session will explore how using a unit fraction approach along with meaningful visual models and real-world contexts can support students in operating with fractions.

Eric Kanters, Maple Grove Elementary School, Greenfield, WI
ekanters@greenfield.k12.wi.us
Elizabeth Cutter, Maple Grove Elementary School, Greenfield, WI

Use Origami to Engage, Promote Geometry Understanding and a Growth Mindset
Create modular origami. Use folding to enhance geometric understanding. Help learners make connections to geometry in context. Return with models of a cube, stellated octahedron, and more. Gain ideas to promote a growth mindset. Note: bring a device to access videos and documents via Google.

Shelly Grothaus, Nature Hill Intermediate School, Oconomowoc, WI
grothaus@oasd.org

Increasing Student Power in the Math Class
As a part of a project started in 2011, a group of teachers piloted the use of democracy in the classroom. The findings our first year were astounding. In subsequent years, this model has been changed and many lessons have been learned. Over the course of these four years, it is clear that this is a powerful tool for student engagement and self-efficacy.

Karie Brown-Tess, University of Illinois, Champaign, IL
kcbrown3@illinois.edu

Struggles and Triumphs of Teaching Middle School Students to Work in Groups
This workshop will focus on the strategies that four teachers developed over the course of two school years to help students collaborate effectively and increase the amount of student discourse in a middle school math classroom. As part of the presenters’ professional development and in partnership with the UW-Madison, the presenters have met together weekly to reflect on their practice and to analyze video recordings of their teaching. You are invited to hear real-world experiences of teachers in an urban mathematics classroom.

Christine Jensen, Cherokee Heights Middle School, Madison, WI
cajensen@madison.k12.wi.us
Gerardo Mancilla, Cherokee Heights Middle School, Madison, WI
Jill Wood, Cherokee Heights Middle School, Madison, WI
Erica Gottschalk, Cherokee Heights Middle School, Madison, WI
Hala Ghousseini, UW-Madison, Madison, WI
Heather Beasley, UW-Madison, Madison, WI
9:30-11:00 AM
Friday, May 6, 2016

9:30-11:00 a.m.  90 Minute Workshops

343
RWI-Veranda C (48)
Grades 6-12

Making Statistics Come Alive with the TI-Nspire Handheld
As the famous saying goes: “A picture is worth a thousand words,” and in statistics courses, visualizing our data is of utmost importance. We will be working together using the TI-Nspire handheld to create appropriate graphs, analyze and describe our graphs, and use the Navigator system to help us aggregate simulated data.

Damion Beth, Baraboo School District, Baraboo, WI
djbeth@barabooschools.net

344
Kern-Cary (32)
Grades 6-12

4, 2, 3, 1 ... A Countdown to Standards Based Grading
This session will allow you to think through the process of how and what a grade is expected to mean in your classroom. We will also be talking about how to use a 4, 3, 2, 1 scale and convert it into a meaningful A, B, C grade.

Jeff Harding, Mundelein High School, Mundelein, IL
jharding@d120.org

345
Bauer-Boddie (32)
Grades 6-12

Lego Mindstorms and STEM: A Perfect Pair
In this session we will discuss the basics of Lego Mindstorms EV3 robotics kits. Attendees will gain hands-on experience using with the robots, consider potential classroom uses, and engage in an activity focusing on proportional reasoning, measurement, programming, and engineering.

Josh Hertel, UW-La Crosse, La Crosse, WI
jhertel@uwlnx.edu

346
Bauer-LaDue (24)
Grades 6-12

Using Virtual Manipulatives to Enhance Student Learning and Engagement
Teachers will explore virtual manipulative activities and evaluate the activities based on their affordances for promoting student learning. Discussion will focus on how to evaluate, modify, and use the activities with students.

Lindsay Reiten, UW-Madison, Madison, WI
reiten@wisc.edu

347
Kraft-Mitchell Dining Room (50)
Grades 6-12

Revamp Your Review Day
Throw out those old, dull review worksheets. Our session will explain alternative protocols to shift how review of content is structured in your class. Using formative assessments in conjunction with high-interest activities will make review day a personalized learning experience for your students.

Kelly Rooney, Evanston/Skokie School District 65, Evanston, IL
rooneyk@district65.net
Tyrone Martinez-Black, Cicero School District 99, Cicero, IL

348
RWI-McGarvey (24)
Grades 9-12

CCSS, Transformational Geometry, and the Pythagorean Theorem
The Pythagorean Theorem is often misunderstood by many high school students. Approaching this theorem from the original geometric interpretation can help alleviate this problem. We will use the TI-Nspire’s dynamic geometry package to discover various results of this theorem. We will use a transformational geometry approach to extend this theorem to results not often studied in a traditional secondary geometry curriculum.

Ray Klein, Teachers Teaching with Technology, Glen Ellyn, IL
rklein9019@aol.com
Investigating WISELearn’s Open Educational Resources
Recently, DPI has launched the WISELearn database, the product of the Wisconsin Mathematical Tasks for High School Initiative. This portal provides educators with a searchable database of lessons that were designed to help teachers build a solid high school mathematics curriculum fully aligned to the Wisconsin Standards for Mathematics and the Standards for Mathematical Practice. Join us as we try out some of these rich tasks, and learn how this new resource can help challenge all of the learners in your classroom.

Bill Kujawa, Brookfield East High School, Oak Creek, WI
kujawab@elmbrookschools.org

Principles to Actions’ Effective Mathematics Teaching Practices in High School
This session uses a task and video clip from a high school mathematics classroom to explore the NCTM Principles to Actions Effective Mathematics Teaching Practices. We focus in particular on facilitation meaningful mathematics discourse and posing purposeful questions.

Michael Steele, UW-Milwaukee, Milwaukee, WI
steelem@uwm.edu

Tips and Tricks for Teaching Calculus, Part 2
Liven up your calculus class by singing the “Quotient Rule Song”, going calculus caroling, and sharing the “I Love Math Virus”. We started at the 2014 Annual Conference; whether you were there or not, you are welcome to join us!

Mike Weidner, Nicolet High School, Glendale, WI
mike.weidner@nicolet.us

Vocabulary in Math? Yes, it is Important
Participants will learn specific, differentiated vocabulary strategies that will facilitate comprehension and encourage the use of the academic language of mathematics. Take away classroom activities that you can use in your classroom next week.

Sheryll Richert, La Causa Charter School, Milwaukee, WI
sherylhr@lacausa.org
Kari Andrews, La Causa Charter School, Milwaukee, WI

Effective Strategies for Efficient Classrooms
The time we have in our classrooms is valuable. In order to make the most out of our time, our students need to know our routines and expectations. This session will provide CPM strategies to take back to the classrooms and use immediately.

Jim Vento, North Shore Middle School, Hartland, WI
jvento@hartlake.org
Amy Zemlo, Hartland/Lakeside School District, Hartland, WI
11:30 AM-12:30 PM
Friday, May 6, 2016

11:30 a.m. - 12:30 p.m. 60 Minute Sectionals

354
Kern-Brown (32)
Grades PK-3 Exhibitor

LEGO Education: MoretoMath
Want students to be excited about your next math lesson? MoreToMath is the tool you need! Join us to see LEGO Education’s hands-on way to teach math in the first and second grades. Using the familiar LEGO brick, MoreToMath provides practice in core mathematical competencies such as reasoning, perseverance, precision, modeling, and representation. MoreToMath was built around national curriculum standards to challenge students to think critically, solve problems, and apply their knowledge to real world issues. This workshop will include hands-on experience using MoreToMath so you can see how it will bring math to life for your students so they will know there is more to math than just procedures.

Kathy Grotta, LEGO Education, Savage, MN
kathy.grotta@lego.com

355
Bauer-Morehouse A (50)
Grades PK-3

Bridging the Gap from Counting to Operations: Numeracy in Young Learners
Fluency doesn’t have to be a bad word! Look closely at using the Four Number Relationships to build numeracy. Leave with an understanding of their development and ready-to-use strategies and games for your classroom.

Nicole Hawkins, College Park Elementary School, Greendale, WI
nicole.hawkins@greendale.k12.wi.us
Robin Swartz, Highland View, Greendale School District,
Greendale, WI
Margaret Kinateder, Canterbury Elementary, Greendale School
District, Greendale, WI

356
Kern-Brayton Case A (64)
Grades PK-6

Getting Started with Math Workshop
Come learn how to get Math Workshop up and running while building in important routines and activities that emphasize and support the Standards for Mathematical Practices. We will discuss specific activities and anchor charts for the first month of school that will get kids talking and doing math in a flash.

Sarah Trimner, DC Everest School District, Weston, WI
strimner@dce.k12.wi.us

357
RWI-McGarvey (24)
Grades PK-6

212 Degrees Mathematics: How Small Shifts Have Had BIG Impact!
Inspired by the book, 212 Degrees: The 10 Rules for Creating a Service Culture, two math leaders from the Oak Creek-Franklin School District will share stories about how they have pushed their district’s mathematicians and teachers that one extra degree in order to strive to be mathematically excellent. From working with data to balancing intuition (teacher gut) to understanding best practice, come ready to dialogue with us about what really matters: students and their achievement in mathematics!

Jackie Cebertowicz, Oak Creek-Franklin School District, Oak Creek, WI
Sue DeLay, Cedar Hills/Oak Creek-Franklin School District, Oak Creek, WI

358
Kern-Boehr (50)
Grades PK-16

State of Computer Science in Wisconsin
You could call this a “state of the state” speech. There’s lots of CS and IT action these days. For example, we’ll talk about our CSTA-WI Dairyland Chapter activities, our PUMP-CS and our Google CS4HS grants, Code.org activities including continued free K-5 CS Curriculum workshops and their APCS Principles curriculum, briefly review what’s what with WI DPI, review the NCWIT-WI Award for Aspirations in Computing, a newsletter from the ISTE Computing Teachers Network, CS Ed Week in Wisconsin and whatever else I can find of interest.

Joseph Kmoch, Washington High School of IT, Milwaukee, WI
joe@jkmoch.com

FRIDAY
359
Lakeview (300)
Grades K-3 Keynote

Extreme Equality: Using Evidence Based Methods to Close the Achievement Gap in Math

New research in cognitive science suggests that almost all children have the ability to learn and love learning math. Research also suggests that while children benefit from exploring concepts and making discoveries on their own, they also need to receive a good deal of rigorous guidance from the teacher. In this talk I will give examples of evidence-based methods of teaching (such as scaffolding, continuous assessment, incremental variations and elicited explanations) that foster resilience and curiosity in all students and that have helped many teachers dramatically close the achievement gap in math.

John Mighton, University of Toronto, Toronto, Ontario, Canada

360
Kern-Cary (32)
Grades K-16

Breakout EDU - The Power of Practice

Experience the excitement and energy of an escape room as you work with others to solve a series of mathematical puzzles and problems. Will you breakout? Only time will tell. Session will be limited to 12 Breakout collaborators and up to 12 additional practice observers who will silently collect evidence of mathematical practices in the work of the team. Collaborators and observers will participate in the debrief after this time-limited exercise. Learn how to connect with a nationwide cadre of Breakout EDU educators though Facebook and Pinterest and bring the power of this collaborative experience to your organization. Bring your own device and be on time. The Breakout orientation will begin precisely at the appointed hour with the timer beginning three minutes later!

Kari Augustine, Mathematics Education Consultant, Marshall, WI

361
Bauer-Lightbody (32)
Grades 2-6

Engaging Students in Justification and Proof in Elementary Classrooms

This talk will focus on the Common Core Mathematical Practice 3. The audience will be provided with tasks that foster proof in elementary classrooms and will be probed about the goals of the tasks, the expected student responses, and the types of justifications students use.

Isil Isler, UW-Madison, Madison, WI
isler@wisc.edu

362
Bauer-Morehouse C (100)
Grades 2-6

Personalization of Academics: Meeting Student Needs at their Academic Readiness in Mathematics!

Come see how one school district is meeting all students at their academic readiness level and pushing them to the next academic readiness level! The Johnson Creek School District meaningfully integrates universal screening data, state standards, Depth of Knowledge assessments, technology, workshop model, multi-age academic readiness groups for Mathematics, Student Proficiency Profiles and Learning continuums to create a personalized approach for students at any readiness level. Come see how all this together has allowed JC to meet the needs of ALL students.

Lisa Krohn, Johnson Creek School District, Johnson Creek, WI
krohnl@johnsoncreekschools.org
Sam Hett, Johnson Creek School District, Johnson Creek, WI
Melissa Sweger, Johnson Creek School District, Johnson Creek, WI
Lyssa Lauersdorf, Johnson Creek School District, Johnson Creek, WI

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Isil Isler, UW-Madison, Madison, WI
isler@wisc.edu

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Lisa Krohn, Johnson Creek School District, Johnson Creek, WI
krohnl@johnsoncreekschools.org
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Melissa Sweger, Johnson Creek School District, Johnson Creek, WI
Lyssa Lauersdorf, Johnson Creek School District, Johnson Creek, WI
11:30 AM - 12:30 PM
Friday, May 6, 2016

11:30 a.m. - 12:30 p.m. 60 Minute Sectionals

363
Kern-Brayton Case B (64)
Grades 2-8

STEM(ath) in ACTION!
By presenting students with real-world problems, STEM integrates MATH, science and literacy learning objectives into hands-on, problem-based activities. Come learn about and actively participate in STEM activities currently implemented district-wide in classrooms, during family nights and in the larger Reedsburg community.

Jodi Beyer, Pineview School, Reedsburg, WI
jbeyer@rsd.k12.wi.us
Amy Bass, Pineview School, Reedsburg, WI

364
Bauer-Beaty (50)
Grades 6-12

Global Math Collaboration with Italy, Spain, and the Czech Republic
Monticello High School students share how they solve math problems with Italian, Spanish, and Czech Republic students by connecting SMART boards. Students have been gaining a great appreciation of cultural differences in solving math problems.

Chris Collins, Monticello School District, Monticello, WI
collich@monticello.k12.wi.us

365
Kern-Stansbury (32)
Grades 6-12

P3 (Partnership, Personalized, Practical)
Learn about forming a successful partnership between math coach/interventionist and math teacher. From the initial conversation about a single student to the personalized learning activities that follow, come and see how it all fits together. With a focus on Algebra 1, we will provide many examples of practical activities that bridge the gap between classroom content and intervention focus.

Kristen Helms, Hartford Union High School, Hartford, WI
kristen.helms@huhs.org
Sarah Kraus, Hartford Union High School, Hartford, WI

366
RWI-Crystal (64)
Grades 6-12

Implementing Rich Mathematical Tasks at Multiple Grade Levels
We will explore rich mathematical tasks that you can use with students at multiple grade levels. We will examine how these tasks immerse students in the Mathematical Practice Standards. All of the tasks we engage you in are based on the work our cohort group has done as part of the Math Partnership project: Mathematical Progressions through Habits of Mind.

Erick Hofacker, UW-River Falls, River Falls, WI
erick.b.hofacker@uwrf.edu
Kayla Kinneman, UW-River Falls, River Falls, WI
Kristina O’Brien, UW-River Falls, River Falls, WI
Courtney Strub, UW-River Falls, River Falls, WI
Chelsea Nelson, UW-River Falls, River Falls, WI
Katrina Barrett, UW-River Falls, River Falls, WI
Nick Liebelt, UW-River Falls, River Falls, WI

367
RWI-Veranda A (48)
Grades 6-12 Exhibitor

Higher Level Thinking Tasks in the Math Classroom
Are you looking for tasks that will create thinking in your mathematics classroom? Do you often spend hours looking for good resources? Are you struggling with facilitating productive discourse in your classroom? This session will focus on a lesson to engage students in higher level thinking while learning mathematics. The facilitator will engage participants in a math lesson on functions and then debrief the key parts to a higher level thinking task. He will provide participants the opportunity to reflect their own teaching practices while also providing participants with strategies to facilitate higher order thinking in their classrooms. Our goal in education is to provide students with a strong knowledge of mathematics and the key is using higher order thinking tasks.

Brian Peters, Carnegie Learning, Pittsburgh, PA
bpeters@carnegielearning.com
My Favorite Math iPad App and 1000 Free Interactive Lessons for Grades 7-12
Activities on the TI-Nspire App for iPad include: Function or Not, Domain and Range, Transformation Graphing, Area Circumference Modeling, Transformational Geometry, Equation That Graph with Photos, Tutorials, and much more!

Tom Reardon, Fitch High School/Youngstown State University, Poland, OH
tom@tomreardon.com

Standards Based Grading in the Common Core Secondary Classroom
Standards based grading reduces test anxiety, encourages intrinsic motivation, and improves retention. It encourages students to reflect on their work and adopt a growth mindset. This session will cover the basics of SBG and provide attendees with a set of CCSS-aligned standards.

Sara Phillips, Menominee Indian High School, Keshena, WI
sphillips@misd.k12.wi.us

It is Not Elementary, My Dear Watson. It is Secondary.
Call in Sherlock Holmes. There has been a murder at Green Lake and the killer is on the loose. The only way to solve this mystery is to solve the algebra inside the clues. Was it YOU?

Karen Scarseth, Lincoln High School, Wisconsin Rapids, WI
karen.scarseth@wrps.net
Anne Barber, Lincoln High School, Wisconsin Rapids, WI

By Chance or Statistically Significant?
Engage in problem-based, student-centered tasks that exemplify Common Core State Standards. Using participant-collected data, we will use simulations and graphical displays to help decide whether differences between treatment means are significant. We will use the free java apps in Core Math Tools, available at the NCTM website.

Mary Walz, Sauk Prairie High School, Prairie du Sac, WI
mary.walz@saukprairieschools.org

Using Geogebra to Visual Calculus
We will progress through a typical calculus sequence using examples and applets created with Geogebra. These examples are easily accessible and require little prior knowledge of Geogebra. The examples can also be used in a variety of other classes besides calculus. We will use 2 dimensional and 3 dimensional graphs and examine many of the features available in each setting.

Whitney George, UW-La Crosse, La Crosse, WI
Using Culturally Relevant Pedagogy in a Mathematics Methods Course

Gloria Ladson-Billings’ work involving Culturally Relevant Pedagogy is often studied in post secondary classrooms but rarely implemented. Come learn how two instructors have successfully used Culturally Relevant Pedagogy in their Mathematics Methods courses along with a focus on Social Justice in Mathematics.

Natalia Bailey, UW-Madison, Madison, WI
nbailey3@wisc.edu
Alisa Belliston, UW-Madison, Madison, WI

Developing Linear Thinking: A Progression from PreK-Gr 2

Students are exposed to number lines very early in their school experiences. Although students can use a number line to count, do they really understand the linear relationships? Come and learn a way to scaffold instructional experiences to naturally lead students to a deeper understanding of the number line.

Melissa Hedges, UW-Milwaukee, Milwaukee, WI
melissahedges@sbcglobal.net
Beth Schefelker, South Milwaukee School District, South Milwaukee, WI

Subitize! Help Students Develop their Mathematical Power

This session will allow participants to experience the power of subitizing to elicit flexible thinking and take away activities they can add to their classroom immediately. A brief history of this long time concept will also be explored.

Stephanie Bernander, UW-Oshkosh, Oshkosh, WI
bernands@uwosh.edu

Julie Ruck, Oshkosh Area School District, Oshkosh, WI
Erin Rae, Delavan-Darien School District, Delavan, WI

Why Even Veteran Teachers Should Consider Using a PDP for License Renewal

Even if you don’t have to use a Professional Development Plan (PDP) to renew your teaching licenses, you might want to! Come and get an overview of the process and advantages of using a PDP for license renewal.

Mike Weidner, Nicolet High School, Glendale, WI
Beth Ludeman, WEAC Region 7, Brookfield, WI

My Reflections on the Maturing of Mathematics Education Over the Last 5.5 Decades

Join me in reflecting on how mathematics teaching and learning have matured – in the midst of the political environment called US education. We’ll explore the cyclical forces I’ve experienced, and which many of you experienced with me. From before the “New Math,” to back-to-basics (repeated frequently), to the NCTM Standards, the Math Wars, the National Math Panel, the current CCSSM, through my Star Wars conjectures - the Math Force.

Hank Kepner, Past President, National Council of Teachers of Mathematics, UW-Milwaukee, Milwaukee, WI
Using Number Routines to Build Numerical Literacy
Jessica Shumway has developed a series of routines designed to help young students internalize and deepen their facility with numbers. Add to your toolkit of “Number Talk” routines with a variety of classroom examples to engage students in number sense routines. Learn how the routines work with an understanding of the research of how children’s number sense develops, and how to implement responsive routines. Teachers will also gain an understanding of the mathematics and the big ideas, skills, and strategies children learn as they develop numerical literacy.

Karen Reiss, Mathematics Education Consultant, Germantown, WI

Productive Struggle, Engagement, and Discourse
Math has been a “drill and kill” subject for far too long! As teachers we need to empower students to be active learners in the math classroom. In this session we will explore the benefits of productive struggle and how to best implement the strategy with your students. Learn how to increase engagement and meaningful discourse with powerful instructional strategies!

Ashley Bingenheimer, School District of River Falls, River Falls, WI
ashley.bingenheimer@rfsd.k12.wi.us

Connecting a State Vision of STEM Education to Mathematics Lessons
Building on the Wisconsin vision for STEM education, we will dig into two examples of STEM lessons (one upper elementary and one secondary) that authentically link to mathematics concepts and practices. We will then create and discuss guidelines for quality STEM lessons.

Kevin Anderson, WI Department of Public Instruction, Madison, WI
kevin.anderson@dpi.wi.gov

Do Your Students REALLY Know What the Equal Sign Means?
Are your students understanding this crucial symbol that as Robert M. Capraro says “is pervasive and fundamentally linked to mathematics from kindergarten through upper-level calculus.” You might be surprised. Participants will look at the shocking data dealing with student knowledge of the equal sign. Participants will be introduced to a way to check the knowledge of their students. Participants will engage in activities for their students that will make improvements and/or prevent the misunderstanding the equal sign for their students.

Mary Ann Modrak, CESA 10, Chippewa Falls, WI

Judo Math: Relationship Based Learning
In martial arts, students get to learn at their own pace. So why don’t we teach math that way? With Judo Math you can! Students work through a series of belts to achieve mastery in math at their own pace. By explaining and collaborating, students gain a deeper understanding as they work with each other to become a black belt. Learn how to create this positive culture in your class. Participants will earn their own belts through activities to experience how the students feel. They’ll also get step-by-step instructions in the form of a teacher’s guide. See how relationship based learning can revolutionize your classroom with Judo Math!

Dan Thoene, Judo Math

Code Ninjas: Building Coding Skills and CS Interest in Elementary Schools
To build a CS program, students must be exposed to coding at an early age. Session participants will learn how Mukwonago is using an after school program to help foster interest in elementary students to pursue further CS study.

Jim Ferwerda, Mukwonago High School, Mukwonago, WI
ferweja@masd.k12.wi.us
Scott Pratt, Mukwonago High School, Mukwonago WI
Sarah Wardecke, Mukwonago High School, Mukwonago WI
Jennifer Wolf, Mukwonago High School, Mukwonago WI
1:00-2:00 PM
Friday, May 6, 2016

1:00-2:00 p.m.  60 Minute Sectionals

412
RWI-McGarvey (24)
Grades 2-8

Hands-on Activities for Middle and High School Students
We will explore hands-on activities that address the Common Core standards of Algebra, Geometry, Functions, Numbers and Quantity, and Probability/Statistics. These activities would be appropriate for middle/high school students. They were used as a part of past teacher workshops. This presentation is a repeat from the 2015 conference but some new investigations will be implemented.

Timothy Deis, UW-Platteville, Platteville
Jodean Grunow, UW-Platteville, Platteville

413
Kern-Cary (32)
Grades 6-12

Invoking the Math Practice Standards through Algebraic Card Tricks
Using investigative design, discover tangible evidence for algebraic expressions and equations. Analyze and create card tricks using algebraic models while empowering each other to justify reasoning in verbal and written forms.

Peg Hartwig, Discovery Education, Marshfield, WI
peggy_hartwig@discovery.com

414
Kern-Hanson (50)
Grades 6-12

Time for New Traditions (The Sequel)
Rethinking math instruction in light of the new CCSS math practice standards. How and when do you use contextual problems in your math instruction? What ownership do your students take in their learning? How do your assignments and instructional tasks value quality over quantity? Join us as we discuss how the math practice standards are changing expectations of teachers and students.

Erin Schroeder, Waunakee High School, Waunakee, WI
eschroeder@waunakee.k12.wi.us
Tina Bollig, Middleton/Cross Plains High School, Middleton, WI

415
Kern-Brayton Case A (64)
Grades 6-16

Making Learning Stick
How often have you taught something and believed students had learned only to find that a short time later, students are not able to recall previous learning in order to apply it to new concepts? In Make It Stick, authors Brown, Roedinger and McDaniel describe strategies based on recent cognitive science research that both teachers and students can use to make learning stick. This session will review these strategies and their application to mathematics classrooms.

Jennifer Lawler, Kenosha Unified School District, Kenosha, WI
jlawler@kusd.edu

416
Bauer-Boddie (32)
Grades 7-9

What Does Mathematics Education Look Like in a Middle School in Beijing, China
Chinese students score highest in mathematics for international education assessments (PISA, 2009, 2012). However Chinese mathematics education largely remains a myth to many mathematics educators in the United States. In this talk, we will introduce the mathematics education in a middle school in Beijing, China. The topics will include mathematics teachers’ professional experience, cooperation among colleagues, classroom settings, curriculum standards, textbook usage, examples of mathematics content, and the content and management of tests. We will also discuss the challenges and disadvantages of the mathematics education of the schools.

Lili Zhou, Zuo’anmen Middle School, Beijing, China
zlilycool@163.com
Senfeng Liang, UW-Madison, Madison, WI
Tongtong Zhang, UW-Stevens Point, Stevens Point, WI

Be sure to plan your routes and leave enough time to get a seat.
417
Kern-Johnson (50)
Grades 9-12

It was Colonel Mustard in the Library with the Candlestick! Or was it YOU?
There’s been a murder at Green Lake and someone in this session is the guilty person. It could even be you! The only way to solve this mystery is to piece together the clues coded in several calculus review problems. Bring a friend and see if you can catch the killer.

Anne Barber, Lincoln High School, Wisconsin Rapids, WI
anne.barber@wrps.net
Karen Scarseth, Lincoln High School, Wisconsin Rapids, WI

418
Kern-Boehr (50)
Grades 9-12

Python, Programming and Flying Drones
Using Python and the latest AR Drone 2.0 technology teachers will learn how to connect abstract math concepts to real world programming. Topics covered include Order of Operations, Boolean Logic, and Metric Measurement. Programming drones is a fun way to help students make the connection between abstract mathematical concepts and real world applications.

Angela Miceli, Holy Trinity High School, Chicago, IL
amiceli@holytrinity-hs.org
Patrick Kelly, Holy Trinity High School, Chicago, IL

419
RWI-Mahaney (40)
Grades 9-12

Fact or Crap
In this session, I’ll show some math arguments. Some are valid, others are not. See if you can spot the good, the bad, and the ugly.

Jason Thrun, UW-Platteville, Platteville WI

420
Kern-Brayton Case B (64)
Grades 9-16

Rethinking Math for Non-STEM Majors
Developmental mathematics students can appreciate the usefulness of mathematics and achieve success. Using a discussion format with group work and real-life situations to motivate the math needed, we have seen great success.

Kelly Kohlmetz, UW-Milwaukee, Milwaukee, WI
kellyk2@uwm.edu

2:30-4:00 p.m. 90 Minute Workshops

421
Kern-Brayton Case A (64)
Grades PK-3

Teaching Student Centered Mathematics
Are you looking to develop students that see the value of mathematics and feel empowered to use it? Using a student-centered approach to teaching mathematics can increase student understanding of key concepts. In this session participants will explore various ways to engage students by allowing them to interact with, struggle and persevere with mathematics using their ideas and strategies.

Melissa Holland, Horace Mann Elementary School, West Allis, WI
hollandm@wawm.k12.wi.us

422
Kern-Brayton Case B (64)
Grades 2-6

Kid’s Math Talk - Creating a Structure that Fosters Vocabulary Development
Our students have a lot to say, but sometimes it’s hard to get the conversation started! Come to this session to learn quick and easy tips for incorporating more “math talk” in your workshop routine. The Kid’s Math Talk structure for math workshop will also be discussed to help you foster vocabulary development in your own classroom.

Desiree Harrison, Lanigan Elementary School, Southfield, MI
kidsmathtalk@gmail.com
### 2:30-4:00 PM • 2:30-3:30 PM
**Friday, May 6, 2016**

<table>
<thead>
<tr>
<th>2:30-4:00 p.m.</th>
<th>90 Minute Workshops</th>
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<td><strong>423</strong></td>
<td>Bauer-Morehouse A (50)</td>
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<tr>
<td>Grades 4-8</td>
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<tr>
<td><strong>Divide and Conquer: Division of Fractions</strong></td>
<td>In this workshop we will work with word problems involving fractions and using two different interpretations of division. Come learn how the fraction division algorithm works and how students can model division of fractions through visual representations.</td>
</tr>
<tr>
<td>Natalia Bailey, UW-Madison, Madison, WI <a href="mailto:nbailey3@wisc.edu">nbailey3@wisc.edu</a></td>
<td>Karen Thomas, Edgewood College, Madison, WI</td>
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<tr>
<th>2:30-3:30 p.m.</th>
<th>60 Minute Sectionals</th>
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<tbody>
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<td><strong>425</strong></td>
<td>Kern-Stansbury (32)</td>
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<tr>
<td>Grades PK-12</td>
<td></td>
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<tr>
<td><strong>Being Intentional With Formative Assessment Classroom Techniques</strong></td>
<td>Everyone uses formative assessment techniques in their classroom. Come to our presentation to learn how to be intentional with using the results. Participants will be encouraged to engage in the assessments as we describe them.</td>
</tr>
<tr>
<td>Crystal Vesperman, The Prairie School, Racine, WI <a href="mailto:cvesperman@prairieschool.com">cvesperman@prairieschool.com</a></td>
<td>T. Michael Brown, The Prairie School, Racine, WI</td>
</tr>
</tbody>
</table>

| 424 | Kern-Johnson (50) |
| Grades 6-8 | |
| **Talk With Our Kids About Money and the Money Fair** | During this session you will learn how to use Talk With Our Kids About Money (TWOKAM) online resources which are ideal for middle school teachers and students. The lesson plans are linked to the state common core and integrate financial literacy into a variety of academics. You will have time to explore lessons developed for Wisconsin as well as have access to the lesson plans developed for other states as reference and for further ideas. Lesson plans are developed with the aim that they will not require much preparation, and will be fun, engaging, and educational for students and teachers. You will also receive online access to additional information, ideas, resources, and tools related to financial literacy. |
| Jennifer Guenther, Canadian Center for Economic Education, Hartford, WI | |

| 426 | Kern-Brown (32) |
| Grades PK-16 | |
| **Take Action - It’s “Time To Teach”** | Are student behaviors stopping you from delivering your curriculum? Well, it’s time to take action and it’s Time to Teach. In this session you will be learning how low level behaviors impact learning, stop the delivery of curriculum and disrupt the classroom learning environment. Secondly, use our research based REFOCUS tool to curb low level behaviors by prompt attention and good timing. Time to Teach contains both theory and techniques that can help you manage a wide range of behavioral challenges. Classroom discipline has robbed you of precious time that you need to deliver your curriculum. Restore that loss of time in your classroom by using our simple, fair and mutually respectful Time to Teach, REFOCUS tool. |
| Clint Brown, Center for Teacher Effectiveness, Pekin, Il clintbrown@timetoteach.com | |

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Fantastic Math Circles and Where to Find Them – A Talk by Simran Khunger
You’ve heard of a math club, maybe even a math camp, but have you heard of a Math Circle? Founded in Europe, Math Circles would unite mathematicians and students for fascinating, out-of-the-box mathematics. However, the creative part of a math circle is the presentation. But exactly how can math be presented in a different way from, say, math class? And how do they cultivate the lifelong problem solving skills in students that so many praise? Most importantly, how do they make math fun for exceptionally gifted math students, as well as mildly interested ones? Join the founder of Brookfield Math Circle to learn exactly what makes the Circles unique: the math they explore, the students they recruit, and the excitement they evoke. We’ll look at some sample math presentations, and you’ll learn how to form your own Math Circle.

Simran Khunger, Brookfield East High School, Brookfield, WI

Change Your Outcomes by Changing Your Approach!
Oak Creek Franklin Joint School District is using a workshop approach in extended math classes along with adaptive technology (ALEKS) to help reach students where they are and guide them to greater levels of achievement. In our second year of implementation, we have seen increased levels of engagement, independence, and perseverance in our students while our data outcomes have improved substantially. We have personalized learning goals and expectations for all of our middle school students, which encourage growth while respecting individual levels of mathematical ability. We make extensive use of data to drive instructional decisions and monitor student progress. This presentation will focus on how the changes we’ve made in math class are positively impacting student learning on a system-wide level and how the results have energized our math department!

John Marzion, East Middle School, Oak Creek, WI j.marzion@ocfsd.org

Are All Web-Based Platforms Alike? What We Found after Moving into One
As I write this I have no idea what this will be about. My goal is to talk about what we chose, why we chose it and the results (which, since it is August I don’t know yet). The pitfalls, the success, and the preparation leading up to it.

Mark Schommer, DC Everest School District, Weston, WI mschommer@dce.k12.wi.us

The Mukwonago IT Academy: Student Learning through Business Partnerships
The MHS IT Academy is a unique blend of focused curriculum and practical work-related experiences. Session participants will learn how to build student CS capacity by developing mentoring partnerships with local business partners.

Jim Ferwerda, Mukwonago High School, Mukwonago, WI jferweja@masd.k12.wi.us
Scott Pratt, Mukwonago High School, Mukwonago WI
Sarah Wardecke, Mukwonago High School, Mukwonago WI
Jennifer Wolf, Mukwonago High School, Mukwonago WI

Cooperative Learning in the Computer Science Classroom
Come to this sessions for ideas regarding cooperative learning strategies. Cooperative learning activities for AP-CSP, AP-CSA, and Introductory Computer Science will be available in the form of solid examples and ready to go activity sheets!

Lori Hunt, Middleton High School, Middleton, WI lhunt@mcpasd.k12.wi.us
For Your Professional Development Portfolio

3. Teachers understand that children learn differently.

The teacher understands how pupils differ in their approaches to learning and the barriers that impede learning and can adapt instruction to meet the diverse needs of pupils, including those with disabilities and exceptionalities.

4. Teachers know how to teach.

The teacher understands and uses a variety of instructional strategies, including the use of technology, to encourage children’s development of critical thinking, problem solving, and performance skills.

5. Teachers know how to manage a classroom.

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

6. Teachers communicate well.

The teacher uses effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

7. Teachers are able to plan different kinds of lessons.

The teacher organizes and plans systematic instruction based upon knowledge of subject matter, pupils, the community, and curriculum goals.

8. Teachers know how to test for student progress.

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the pupil.

9. Teachers are able to evaluate themselves.

The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on pupils, parents, professionals in the learning community and others and who actively seeks out opportunities to grow professionally.

10. Teachers are connected with other teachers and the community.

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support pupil learning and well-being and acts with integrity, fairness and in an ethical manner.

For more information regarding the Wisconsin Educator Standards, go to www.dpi.wi.gov/tepdl/stand10.html
The Wisconsin Mathematics Council is proud to host a comprehensive mathematics education Exhibit Hall located in the Pillsbury building. Exhibits by commercial producers of instructional materials are an integral part of the WMC Annual Conference. Textbooks, teaching aids, hardware, software and more are on display. Come explore the wide variety of new materials available and to speak with exhibit representatives.

Exhibit Hall Hours
Thursday 8:00 a.m.–4:00 p.m.
Friday 8:00 a.m.–1:30 p.m.

2016 Conference Exhibitors (as of April 18, 2016)

Acceptance as an exhibitor at Wisconsin Mathematics Council Conference should not be construed as an endorsement of textbooks, programs or products exhibited or sold by companies exhibiting.

Special Thanks to Our...
The Wisconsin Mathematics Council 2017 Annual Conference will bring together state and national educators to participate in a dynamic professional development experience. The 49th Annual Conference, Empowering Mathematical Learning through Assessment, will highlight best practices in mathematics education. We are looking for you to become an integral part of the conference by sharing your own experiences that have empowered your mathematical classroom. Topics for presentations may include:

- Setting mathematics learning goals to guide instruction and focus learning
- Designing and implementing tasks that engage students in mathematical reasoning and problem solving.
- Supporting students as they actively connect mathematical ideas and representations
- Orchestrating meaningful mathematical discourse among students
- Posing purposeful questions to measure and extend students’ thinking related to mathematical concepts
- Constructing procedural fluency and conceptual understanding through active learning
- Supporting students’ productive struggle in doing mathematics
- Eliciting student thinking to assess mathematical understanding through formative and summative assessment practices

Consider submitting a proposal for either a 60-minute sectional or a 90-minute interactive workshop. Go to http://wismath.org/Annual Conference to submit your proposal online. The proposal deadline is October 1, 2016.
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Featuring nationally recognized keynote speakers:

Dr. Robert Berry is an Associate Professor of Mathematics Education at the University of Virginia in the Curry School of Education with an appointment in Curriculum Instruction and the Special Education departments, where he serves as the coordinator of the Elementary Education program. His research focuses on equity issues in mathematics education.

Dr. Elizabeth Hughes is an Associate Professor of Mathematics at the University of Northern Iowa. Her research interests include designing practice-based learning experiences for teachers and examining the development of teachers’ mathematical knowledge for teaching.

Dr. Nancy C. Anderson is the K-8 Mathematics Coordinator and a Grade 8 Mathematics Teacher at Milton Academy. Nancy is an experienced classroom teacher, curriculum specialist, and professional development leader. She is a frequent speaker at regional and national conferences, and a published author in the field of mathematics education. Nancy’s publications include Classroom Discussions in Math and Good Questions for Math Teaching, Grades 5-8.

More information will be available soon including the preliminary program and how to register! Visit www.wismath.org

Save the Date!
2017 WMC Annual Conference featuring Dylan Wiliam

May 3rd Full Day, Pre-Conference —
Embedding Formative Assessment in the Math Classroom

Dr. Dylan Wiliam is emeritus professor of educational assessment at University College London. One of the United Kingdom’s leading experts on assessment, Dylan is an experienced international presenter who specializes in introducing educators to the principles and practice of assessment for learning.

Dylan Wiliam will be presenting a day-long session on Wednesday, March 3rd (see info on left) and two keynote sessions on Thursday, March 4th.

For more information about the 2017 WMC Annual Conference or if you would like to submit a proposal to speak please visit wismath.org.