Wisconsin MATHEMATICS COUNCIL'S
51st Annual Conference

Equity... beyond equality

Engagement  Empowerment

Equity

51st Annual Conference

May 1–3, 2019  Green Lake, WI
Welcome to the 51st Annual Wisconsin Mathematics Council Conference!

President’s Message

Welcome to Green Lake and WMC’s 51st Annual Conference. Our themes this year, **Engagement, Empowerment, & Equity**, have become near and dear to my heart as I have explored my own whiteness, white privilege, unconscious bias, and equity through intentional professional reading this year. The result of that exploration has been observation and data analysis in our district. Some of my findings have caused celebration and fist pumping; others have broken my heart and caused me to question our structures and systems. I have challenged WMC members in each of my newsletter articles to learn and explore along with me. Now I’ll challenge you once again: Take a brave step and attend a session on engagement, empowerment, or equity that might make you a bit uncomfortable or challenge your current beliefs. You will find these sessions marked with EQ before the session number. Let’s work together to make Wisconsin Math classrooms a great learning environment for ALL students.

At the 51st Annual Conference, you will find over 300 sessions focused on high impact teaching and learning practices. In these sessions, you will learn instructional and assessment strategies that are sure to engage and empower your students. Additionally, you will find session that will provide you with the tools to build students’ mathematical identities and sense of agency through a social justice lens.

Starting with Wednesday’s pre-conference workshops and continuing with Thursday’s and Friday’s sessions, we are excited to bring you nationally known keynote speakers including Graham Fletcher, Andrew Stadel, Tracy Zager, Fawn Nguyen, DeAnn Huinker, Ron Lancaster, Jennifer Lempp, and RunningHorse Livingston. As always, you will have multiple opportunities to collaborate during the WMC special events including Wednesday’s IGNITE session from 7:00-9:00 p.m. and Thursday’s Celebrate WMC Reception from 4:30-7:00 p.m. You may even get energized by the annual Pi Run/Walk on Friday morning.

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 wearing the red shirts with “Ask Me About WMC”, please take a moment to thank them for their dedication.

I would also like to thank you for your continued commitment to supporting the mathematical learning of all students in Wisconsin. So, whether this is your first or fifty-first WMC Annual Conference, stop by the WMC Booth in the Kraft Centre Lobby to share your conference experiences and learn more about the Wisconsin Mathematics Council.

Have a great conference!

Lori Williams,
Wisconsin Mathematics Council President
Vision
The Wisconsin Mathematics Council will have organizational structures and communication systems to provide leadership, services, and resources in support of quality mathematics education in Wisconsin.

Mission
The mission of the Wisconsin Mathematics Council is to lead in the development and promotion of quality mathematics education that enhances learning for all students.
Conference Information

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!

- **Use the WMC Conference app, Whova,** to schedule your sessions, find up-to-date changes, and see exciting WMC conference news. The app is available on your phone or tablet.
- **Grade band posters** provide a listing of sessions within each grade band.
- **Lost and Found** is located in the Kraft Centre Lobby at the Registration Table.

Shuttle Bus Service: Bus service to the Youth Center is provided on Thursday and Friday. The bus makes a loop every 15 minutes between the covered entrance of the Kraft Centre and the Youth Center. Shuttle service begins 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.

Conference Breakfast and Lunch Options: Conference attendees can enjoy breakfast from 6:30 – 8:30 a.m. each day in the Kraft Centre Dining Room. There are two lunch options available from 11:00 a.m. until 1 p.m.; you can eat in the Kraft Centre Dining Room or you can grab a quick lunch in the tent, located next to the Kraft Centre. If you plan to attend a session scheduled during the lunch hour, you may wish to pick up your lunch in the tent. Your breakfast and lunch tickets are included in your registration.

Exhibit Hall and Passport: Conference exhibits are located in Pillsbury Hall. The Exhibit Hall is open on Wednesday from 3:30 p.m. until 5 p.m., Thursday from 8:00 a.m. until 4:00 p.m., and Friday from 8:00 a.m. until 1:30 p.m. Be sure to visit the exhibit to find a wealth of information from exhibitors. Take your WMC 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 to the WMC Booth in the Exhibit Hall entrance to be entered in the daily door prize drawings. The Exhibit Passport can be found on in the back of this booklet.

Official Conference Badges: 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.

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.

<table>
<thead>
<tr>
<th>Session Location Key</th>
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<tbody>
<tr>
<td><strong>Session Type and #</strong></td>
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<tr>
<td>EQ 130 Bauer Beaty (50)</td>
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Walking Through a Coaching Experience Using an Equity Lens
Together we will take a walk through a hypothetical coaching experience that includes lesson planning, sample evidence collection and teacher reflection time. We will learn how to listen and watch for equity concerns and then how to address these concerns during different parts of the coaching process.

Melissa Thomley, Instructional Math Coach
Tracy Frank

Lead Speaker
Co-Speaker

Green Lake Conference Center Information
- **Check-out Time:** 10 a.m.
- **Emergency Contact Number:** (920) 294-3323
- **First Aid:** Go to the nearest landline 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.
# 2018 Annual Conference Committees

**Conference Co-Chairs**  
Maggie McHugh, *School District of La Crosse*  
Heather Siedschlag, *Waunakee Community School District*

**Conference Planning & Program Committee**  
Scott Anderson, *Juda School District*  
Nate Rosin, *Madison Metropolitan School District*  
Joe Schneider, *Marshall High School*  
Sagar Tolani, *Milwaukee Public Schools*  
Rachel Burgan Kozicke, *School District of Waukesha*  
Joanneh Michalski, *Elmbrook Schools*  
Adrianne Burns, *Dupree School District*  
Rose Palmer, *School District of Waukesha*  
Amber Bronsteatter, *D.C. Everest Area School District*  
Anne Kubicki, *Marshall Public Schools*  
Michelle Douglas-Meyer, *Oak Creek Franklin Joint School District*

**Leadership Pre-Conference & Administrator Series**  
Becky Walker, *Howard-Suamico School District*

**Technology and Building Support**  
Mike Tamblyn, *Whitewater High School*  
Mike King, *St. Francis High School, St. Francis*  
Butch Bretzel, *UW-Milwaukee*  
Mary Lee McKenzie, *Clark Street Community School*  
Bob Sliwinski, *Hartford Union School District*

**Exhibits**  
Ahlia Dupree, *Craig High School, Janesville*  
Brooke Hagedorn, *Craig High School, Janesville*

**Pages**  
Carmen Rivers, *UW-Whitewater*  
Matt Chedister, *UW-La Crosse*  
Adam Paape, *Concordia University Wisconsin*

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# 2018–2019 Board of Directors

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<tr>
<th>Lori Williams, President-Elect</th>
<th>Maggie McHugh, Grades 6-8 Teacher/Advisor, School District of La Crosse</th>
<th>Amy Vesperman, Administrator School Superintendent, Albany School District</th>
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<tr>
<td>Mathematics Specialist, Manitowoc Public School District</td>
<td>Tammy Moynihan, Grades 9-12 CIA Associate Director, CESA 8, Gillett</td>
<td>Kevin McLeod, Ex Officio Mathematician, Professor of Mathematics, UW-Milwaukee</td>
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<td>Jennifer Kosiak, Past President</td>
<td>Stephanie Bernander, College/University Assistant Professor, UW Oshkosh</td>
<td>Becky Walker, Ex Officio NCTM Affiliate, Assistant Superintendent of Academics and Innovation, Howard-Suamico School District</td>
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<tr>
<td>Professor of Mathematics, UW La Crosse</td>
<td>Brad Weiss, WTC Representative Mathematics Instructor, Mid-State Technical College</td>
<td>Jennifer Lawler, Ex Officio WI Mathematics Leadership Council, Coordinator of Mathematics, Kenosha Unified School District</td>
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<td>Beth Schefelker, Secretary</td>
<td>Becky Cohen, Statewide Mathematics Teacher, Darlington School District</td>
<td>Melissa Hedges and Mary Mooney, Co-DPI Representatives, Department of Public Instruction</td>
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| K-6 Math Coach, School District of South Milwaukee | Nate Rosin, Statewide Math Teacher, Madison Metropolitan School District | **2018 Annual Conference Committees**  
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K-6 Math Coach, School District of South Milwaukee  
Rebecca Brink, Treasurer  
Mathematics Teacher, Marinette School District  
Mark Bussian, Grades PK-2 Elementary Teacher, Sun Prairie School District  
Michelle Butturini Grades 3-5 Math Teacher, Reedsville School District  
Maggie McHugh, Grades 6-8 Teacher/Advisor, School District of La Crosse  
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Conference Highlights

High Quality Sessions: You will find over 190 sessions that will provide you with high impact teaching and assessment practices designed to enhance learning. **Be sure to attend at least one keynote presentation.**

Equity Sessions: This strand will focus on practices that support access to high quality mathematics teaching and learning. These sessions are denoted in the booklet with an EQ. **Use your Equity sticker card found in the back of this booklet to track your journey on equity, access, and empowerment.** Attend three equity sessions and you will receive a free gift from WMC. Turn in your sticker card at the WMC Registration Area in the Kraft Main Lobby.

Computer Science Sessions: Throughout the conference, you will find sessions focused on engaging elementary, middle, and high school students in computer science. These sessions are denoted in the booklet with a CS.

Effective Leaders, Effective Educators Administrator Series: On Thursday, May 2, administrators are invited to participate in a series of sessions designed for school leaders, featuring national keynote speakers. See Thursday’s **Event Overview** for more details.

WMC’s IGNITE: WMC will host the 8th Annual IGNITE in the Kraft Centre Dining Hall on Wednesday, May 1. IGNITE sessions are fast-paced and thought provoking as speakers have 5-minutes to present a key idea. Speakers will include Ron Lancaster, Lori Williams, Dave Ebert, Eric Anderson, Adrienne Burns, Erick Hofacker, and Maggie McHugh. The event will begin with a Welcome Reception at 7 p.m. with a cash bar, followed by the IGNITE sessions at 8 p.m.

Tweet to Win: WMC wants you to share your highlights, so Tweet your favorite Annual Conference moments using #wismath19. We will randomly select two people each day to receive a WMC prize.

Celebrate WMC Event: Join us for the Celebrate WMC Reception in the Kraft Centre Dining Hall on Thursday evening. Plan to spend time with your colleagues, meet WMC leadership, and visit with friends while you enjoy hors d’oeuvres and a cash bar. A short awards and recognition program will be part of the reception as well as the WMEF events.

WI AMTE Sessions: On Friday, May 3, WI-AMTE will provide a series of sessions aimed at teacher leaders, coaches and mathematics teacher educators. Look for the **Organized by WI AMTE** tag on a selection of Friday’s sessions.

WI-AMTE Poster Session: In this poster session, pre-service and early career teachers share their teaching projects, such as classroom action research, a teaching strategy, math tasks, and more. The poster session will be held Thursday afternoon, 3:30 – 4:15 p.m. in the Tower Dining Hall prior to the Celebrate WMC event.

Wisconsin Mathematics Education Foundation: Throughout the conference, you can support the WMC foundation, WMEF. Proceeds from WMEF events will go towards scholarships and grants. Stop by the WMEF booth located in the entrance of the Exhibit Hall to learn more about the following activities.

- The **Annual Heads & Tails event** will be held at the Celebrate WMC event on Thursday evening. Enter to win one of three $100 gift cards! Houghton Mifflin Harcourt Publishing Company has graciously donated funding for the prizes.
- **New this Year:** Try the **WMEF 50/50 Fundraising Raffle** in which the prize is 50% of the money taken in by the raffle ticket sales. You can purchase tickets throughout the Celebrate WMC Event.
- The **8th Annual Pi Walk/Run**, a 3.14-kilometer loop around the GLCC grounds will take place on Friday morning at 6:15 a.m. Winners will receive a pie, sponsored from the Hubbard Avenue Diner!
Graham Fletcher has worked in education for over ten years as a classroom teacher, math coach, and currently as a district math specialist. Graham’s passion for conceptual understanding through problem-based lessons has led him to present internationally and throughout the United States. He is the author of many elementary 3-act tasks, which can be found at gfletchy.com. It’s in this space and beyond that Graham continues to be an advocate for best practice and a change agent for K-5 mathematics.

Andrew Stadel has been a Math Instruction and Digital Learning Coach for Tustin Unified School District in California since 2014. Having taught secondary math for over ten years, he believes estimation is key to building number sense. On his widely-acclaimed website, Estimation 180, Andrew offers teachers free estimation challenges, lessons, and ready-made resources. Andrew also shares his passion for student thinking and mathematical exploration by presenting at conferences and as a consultant for school districts, supporting teachers by strengthening their instructional tool belts.

Dr. Ron Lancaster is an Associate Professor, Teaching Stream at the University of Toronto where he teaches mathematics methods courses for future middle and high school teachers. He has over 20 years of experience teaching grades 7-12 mathematics. Ron’s professional activities include consultations and conference presentations across the world. Ron is an author for the NCTM’s The Mathematical Lens and member of the Advisory Board for the Museum of Mathematics in New York City. He is the recipient of the 2015 Margaret Sinclair Memorial Award Recognizing Innovation and Excellence in Mathematics Education awarded by the Fields Institute.

Tracy Zager happily taught fourth grade in a public school near Seattle for several years. After many years in adult education in a wide range of grade levels and urban, suburban, and rural schools, Tracy began extensive field research for Becoming the Math Teacher You Wish You’d Had: Ideas and Strategies from Vibrant Classrooms. She now splits her time between editing math and science professional development books for Stenhouse Publishers and working with the teachers and students of Rollinsford Grade School as a K-6 math coach. Tracy has facilitated a dramatic shift in the math teaching and learning over time at Rollinsford, and she finds her work and relationships there tremendously gratifying.

Jennifer Lempp is an experienced elementary teacher who is nationally board certified in mathematics, a math coach, author, and is currently serving as an elementary mathematics resource teacher. She creates and facilitates professional development for resource teachers, instructional coaches, and classroom teachers and has presented on mathematics instruction at the national, state, and local level. She is also the author of the book Math Workshop: Five Steps to Implementing Guided Math, Learning Stations, Reflection, and More. Jennifer’s appearance is sponsored by Houghton Mifflin Harcourt.

Fawn Nguyen is a middle school math teacher at Mesa Union Junior High in southern California. She’s been a teacher since 1990. She was the 2014 Ventura County Teacher of the Year. In 2009, she was awarded the Math Teacher Hero from Raytheon. In 2005, she was awarded the Sarah D. Barder Fellowship from the Johns Hopkins Center for Talented Youth. She blogs about her lessons and classroom teaching at fawnguyen.com. Fawn also authors two websites for teachers: visualpatterns.org and mathtalks.net. She is also one of the editors for mathblogging.org. She is also part of the UC-Santa Barbara Mathematics Project leadership team and presents at workshops and retreats throughout the year. In 2012, she co-founded the Math Teachers’ Circle in Thousand Oaks, California. Fawn is serving a three-year term as a committee member of NCTM’s Professional Development Services Committee during 2015-2018.

RunningHorse Livingston, a member of the Bad River Band of Lake Superior Chippewa, is a nationally recognized teacher trainer and coach. He has provided professional learning for teachers in public, tribal, and charter schools from California to Florida. He is frequently asked to present at national, regional, and state education conferences on mathematics instructional strategies. He has been an active member of the American Indian Science and Engineering Society since 1989. During school months, he travels to various school districts to assist in the implementation of culturally responsive pedagogy. Most recently, RunningHorse contributed his pedagogical insight to an exploratory study by the Mid-continent Research in Education Laboratory into the effectiveness of teaching approaches on student achievement.
Dr. DeAnn Huinker is a member of the Board of Directors for the National Council of Teachers of Mathematics and is the lead author for *Principles to Actions: Ensuring Mathematical Success for All* and *Taking Action: Implementing Effective Mathematics Teaching Practices in Grades K-5*. She is also a professor of mathematics education at UW-Milwaukee, teaching undergraduate and graduate courses in mathematics education. She also directs the Center for Mathematics and Science Education Research and is actively involved supporting school districts with the implementation of effective teaching practices and rigorous content standards. She was the principal investigator for the Strong Start Math Project for K-3 teachers and the Transforming Fraction Instruction Project for 3-5 teachers.

Melissa Hedges was an instructor for the Strong Start Math Project. She currently serves as a Mathematics Consultant Wisconsin’s Department of Public Instruction. She is pursuing a doctoral degree in Urban Education with a specialization in Mathematics Education at University of Wisconsin-Milwaukee. Melissa is an instructor for PK-5 mathematics education at the university level and as an instructor for grant-funded mathematics professional development opportunities for early childhood and elementary teachers. Previously she served as a K-8 Mathematics Teaching Specialist for the Mequon-Thiensville School District and Milwaukee Public Schools and an elementary school teacher in bilingual, immersion, and dual language settings.

Beth Schefelker currently works as an Elementary Mathematics Coach for South Milwaukee School District supporting mathematics instruction in grades PreK-6. Previously, Beth worked for Milwaukee Public Schools as a K-8 Mathematics Teaching Specialist and a classroom teacher. Beth was the 2016 recipient of the WMC’s Distinguished Mathematics Educator, and the 2003 recipient of the President Award for Excellence in Mathematics and Science Teaching. Beth is the current Secretary for WMC.

Michelle Douglas-Meyer is currently a Learning Coach in Oak Creek-Franklin Joint School District. Previously, she was a K3, K4, and K5 teacher, as well as an academic coach and math teacher leader in Milwaukee Public Schools for over ten years. She has been an instructor on several grant-funded professional development opportunities for early childhood and elementary teachers, including the Strong Start Math Project and PK-3 math education at the university level. She recently earned her Master’s Degree in Mathematics Teacher Leadership from UW-Milwaukee.

Jill Westerland teaches AP® Computer Science Principles, AP® Computer Science A, and coordinates cooperative education at Hoover High School in Hoover, Alabama. Since 1990, Jill has taught at the secondary and post-secondary levels in Alabama and Georgia. In 2017, Jill was an Aspirations in Computing Educator Award Recipient by the National Center for Women in Information Technology (NCWIT). Jill is a College Board Consultant for AP® Computer Science Principles, is a reader for Principles, and currently serves on College Board’s Development Committee for AP®CSP. Jill was a contributor on the AP® CSP Curriculum & Instruction Team and was a participating pilot teacher in the College Board National Pilot of AP® Computer Science Principles Phase II from 2013-2016. Jill loves to knit, sew, and cook. She and her husband have two sons – one in college and one in high school. The Westerlunds love to travel and to attend sporting events visiting stadiums around the country.

Jake Baskin is the Executive Director of the Computer Science Teachers Association (CSTA). Before joining Code.org in 2013, he was a high school computer science teacher, department chair, and professional development provider with the Chicago public schools. As a teacher, he focused on increasing access to computing for underrepresented groups and more than doubled female enrollment in introductory computer science classes. Baskin earned a Bachelor’s degree in Computer Science from Swarthmore College.

Make sure to fit at least one keynote session into your schedule.
**Meetings and Events Overview**  *Wednesday, May 1, 2019*

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>6:30 – 8:30 a.m.</td>
<td>Pre-Conference Registration and Check-in (Kraft Centre Lobby)</td>
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<td>Breakfast Served (Kraft Centre Dining Room)</td>
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<tr>
<td>8:30 a.m.– 4:00 p.m.</td>
<td>Pre-Conference Workshops</td>
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<tr>
<td>10:00 a.m. – 3:00 p.m.</td>
<td>Exhibitor Check-in (Pillsbury)</td>
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<td>3:30 – 5:00 p.m.</td>
<td>Exhibit Hall Open House (Pillsbury) After the pre-conference, be sure to visit the Exhibit Hall to find a wealth of information and items from a variety of exhibitors.</td>
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<tr>
<td>4:00 – 8:00 p.m.</td>
<td>Conference Registration and Check-in (Kraft Centre Lobby)</td>
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<tr>
<td>7:00 – 9:00 p.m.</td>
<td>WMC’s IGNITE and Welcome Reception (Kraft Centre Dining Room)</td>
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<tr>
<td>11:30 – 1:30 p.m.</td>
<td>Pre-Conference Lunch (Kraft Centre Dining Room)</td>
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**Pre-Conference Workshops**  *Wednesday, May 1, 2019*

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<tr>
<td>8:30 a.m. – 4:00 p.m.</td>
<td>Pre-Conference Workshops</td>
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**P001 Bauer-Morehouse**  
*The Power of Progressions: Untangling the Knotty Areas of Teaching and Learning Fractions*

*Graham Fletcher*

As more teachers look to add high-yield tasks to their repertoire, the struggle to make it all work becomes real. Let’s examine how problem-based lessons can be used throughout the scope of a unit and how we can harness their power to move student thinking forward. We’ll identify strategies and explore some tasks that help us find a healthy balance between application, conceptual understanding, and procedural fluency.

**P002 RWI-Crystal**  
*Inviting All Math Students to Think, Learn and Persevere*

*Andrew Stadel*

Many math students find that thinking critically and persevering to be challenging because they often struggle to make connections between math concepts. Our workshop will include ways to enhance your lesson design and sharpen your classroom facilitation strategies so all students are invited to enjoy making sense of math and remain invested in the math they’re learning.

After the pre-conference, be sure to visit the Exhibit Hall from 3:30-5:00 p.m.

Get your exhibit passport stamped for your chance to win daily door prizes.
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<tr>
<th><strong>P003</strong></th>
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<tr>
<td><img src="image" alt="Dr. Ron Lancaster" /></td>
<td><strong>Making Math Class More Like Mathematics</strong></td>
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<tr>
<td>Tracy Zagar</td>
<td>It's challenging to imagine math class as it ought to be when we apprenticed in math class as it was. In this workshop, we'll explore specific ways to make our math classrooms more like mathematics as it's actually practiced, which means infusing them with curiosity, creativity, inquiry, intuition, collaboration, communication, and much more. We'll start by briefly investing in our own understanding of what mathematicians do and how mathematicians think. What are mathematicians' habits of mind? We'll figure it out together. We'll then engage in real mathematics ourselves, using the habits of mind and practices of mathematicians, and then reflecting on our learning. What types of tasks, community norms, and instructional moves create the conditions for satisfying mathematical experiences? We'll connect this work to the classroom, doing more math ourselves (of course!) and looking at specific pedagogical strategies in classroom examples. Finally, we'll play &quot;Keep, Makeover, or Burn?&quot; - my favorite game to play when looking at math tasks and curriculum. What problems invite students in to authentic mathematics? We'll pack a lot in the day, but we'll also laugh plenty!</td>
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<th><strong>P004</strong></th>
<th><strong>Bauer-Bodie LaDue</strong></th>
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<tr>
<td><img src="image" alt="DeAnn Huinker, Melissa Hedges, Beth Schefelker, &amp; Michelle Douglas-Meyer" /></td>
<td><strong>Beyond Square, Circle, Triangle: Developing Geometric and Spatial Thinking in Young Learners through Playful Pedagogy</strong></td>
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<td></td>
<td>We are all aware of the importance of the development of early number, but did you know geometric and spatial thinking enhances early number development, supports problem solving, and lays the foundation for success in math and literacy? Our day will be grounded in early mathematics learning trajectories for geometry and shape (Clements and Sarama 2014) and facilitated through a playful approach to learning; one that invites and supports children ages three to seven to explore mathematical ideas in ways they find intriguing, engaging, challenging and joyful. Come explore this big idea of early mathematics and see how an intentional focus on geometric and spatial thinking taps into children’s diverse strengths and provides multiple entry points to explore mathematics in an engaging, accessible, and equitable way. Leave with an understanding of learning trajectories, related state standards, and instructional activities for development of geometric and spatial thinking. This work is based on the Strong Start Math Project, a three-year collaboration of the Milwaukee Public Schools and the University of Wisconsin-Milwaukee for early childhood teachers to deepen their content knowledge for teaching mathematics and strengthen their classroom practice.</td>
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<td><img src="image" alt="Dr. Ron Lancaster" /></td>
<td><strong>Calculus before Calculus: Activities to Deepen Student's Understanding of Mathematics</strong></td>
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<tr>
<td>Dr. Ron Lancaster</td>
<td>Using physical models and technology, all high school students can explore and understand topics covered in a calculus course without actually knowing any calculus. This focus can lead to students having a more meaningful experience in their algebra, geometry and pre-calculus courses. We will work through activities that involve average and instantaneous rate of change; limits, optimization problems and related problems. We will solve problems in different ways and will study how the solutions change when aspects of the original problem are changed. This course will be of interest to teachers looking for activities and projects that are engaging and designed to deepen students' understanding of mathematics. Various technologies that support this work will be presented. The focus will be on the mathematics curriculum from grades 7-12.</td>
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<tr>
<td><img src="image" alt="Jill Westerland and Jake Baskin" /></td>
<td><strong>2019 Computer Science Educators Summit: Building Computer Science Opportunity in Wisconsin</strong></td>
</tr>
<tr>
<td>Jill Westerland and Jake Baskin</td>
<td>The Computer Science Teachers Association (CSTA) WI-Dairyland presents our fourth annual all-day Computer Science Educators Summit. This day-long series will focus on improving and expanding computer science opportunities for K-12 students in Wisconsin. The CS Summit is sponsored by the NSF PUMP-CS Project and CSTA-Wisconsin Dairyland.</td>
</tr>
</tbody>
</table>
## Thursday Meetings and Events Overview
**Thursday, May 2, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30 a.m.–4:30 p.m.</td>
<td>Conference Registration (Kraft Centre Lobby)</td>
</tr>
<tr>
<td></td>
<td>First Timers Welcome/Orientation</td>
</tr>
<tr>
<td></td>
<td>7:00–7:30 a.m. Tower Dining Room</td>
</tr>
<tr>
<td></td>
<td>WMC Board members will provide an overview of the conference and answer your questions. Grab breakfast and stop by for valuable information to make the most of your conference experience.</td>
</tr>
<tr>
<td>6:30–8:30 a.m.</td>
<td>Breakfast Served (Kraft Centre Dining Room)</td>
</tr>
<tr>
<td></td>
<td>Effective Leaders, Effective Educators Administrator Series: The following series has been uniquely designed for school leaders!</td>
</tr>
<tr>
<td></td>
<td>7:00–7:30 a.m. Administrators Series Kickoff Breakfast with Dr. Becky Walker in the Kraft Centre Mitchell Dining Room (Get breakfast through buffet line and join us in the room at front of the dining room.)</td>
</tr>
<tr>
<td></td>
<td>8:00–9:00 a.m. Select one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Pillsbury Staughton: Maximize Effective Math Instruction by Crafting a Powerful Tool Belt, Andrew Stadel, Grades 6-8</td>
</tr>
<tr>
<td></td>
<td>• Bauer Morehouse C: How Will We Know What They're Thinking? Tracy Zager, General Interest</td>
</tr>
<tr>
<td>8:00 a.m.–4:00 p.m.</td>
<td>Visit the Exhibit hall (Pillsbury)</td>
</tr>
<tr>
<td>8:00 a.m. –4:00 p.m.</td>
<td>Sessions</td>
</tr>
<tr>
<td>11:00 a.m.–1:00 p.m.</td>
<td>Lunch</td>
</tr>
<tr>
<td>11:30 a.m.–12:30 p.m.</td>
<td>WMC President’s Luncheon (Mitchell Dining Room)</td>
</tr>
<tr>
<td>3:45–4:30 p.m.</td>
<td>Wisconsin Mathematics Council Annual Meeting (Bauer-Beaty)</td>
</tr>
<tr>
<td></td>
<td>3:45–4:30 p.m. Bauer - Beaty</td>
</tr>
<tr>
<td></td>
<td>YOU ARE INVITED to learn about the business of WMC. Enjoy conversation with WMC board and committee members as they share plans and review the past year’s accomplishments.</td>
</tr>
<tr>
<td>4:30–7:30 p.m.</td>
<td>Celebrate WMC (Kraft Centre Dining Room) including the WMEF Events</td>
</tr>
<tr>
<td></td>
<td>Celebrate WMC</td>
</tr>
<tr>
<td></td>
<td>4:30–7:30 p.m. Kraft Main Dining Room</td>
</tr>
<tr>
<td></td>
<td>Plan to attend the Celebrate WMC Reception and meet WMC leadership and colleagues while you enjoy a variety of hors d’oeuvres, a cash bar, and great conversation. A short awards program will be part of the reception as well as the WMEF Heads &amp; Tails and Raffle events.</td>
</tr>
</tbody>
</table>

**A note about reading the room locations:** Throughout the book, the first name indicates the building; the name after the dash indicates the room.
Thursday, May 2, 2019 Grades PK-2 Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>8:00-9:00</td>
<td>Bauer Boddie LaDue</td>
<td>Creating Masterful Mathematicians</td>
</tr>
<tr>
<td>102</td>
<td>8:00-9:00</td>
<td>Bauer Lightbody</td>
<td>More than Family Math Night: Engaging Families in Math</td>
</tr>
<tr>
<td>103</td>
<td>8:00-9:00</td>
<td>Bauer Morehouse A</td>
<td>Developing Early Number Sense Through Subitizing</td>
</tr>
<tr>
<td>122</td>
<td>9:30-10:30</td>
<td>Bauer Boddie LaDue</td>
<td>Writing in the Elementary Math Classroom</td>
</tr>
<tr>
<td>125</td>
<td>9:30-10:30</td>
<td>Kern Boehr Cary</td>
<td>Going Beyond Fast Facts: A Balanced Approach to Assessing Mathematical Fluency</td>
</tr>
<tr>
<td>131</td>
<td>9:30-11:00</td>
<td>Bauer Morehouse A</td>
<td>Learning to Count the Ziblandia Way</td>
</tr>
<tr>
<td>135</td>
<td>9:30-11:00</td>
<td>Kraft Mitchell Dining</td>
<td>Big Dreams Start with Early Math: Games to Ignite Joy and Curiosity</td>
</tr>
<tr>
<td>146</td>
<td>11:30-12:30</td>
<td>Bauer Boddie LaDue</td>
<td>Word Problems? No Problems!</td>
</tr>
<tr>
<td>148</td>
<td>11:30-12:30</td>
<td>Bauer Morehouse A</td>
<td>Counting Collections: Tips and Strategies for the Early Childhood Teacher</td>
</tr>
<tr>
<td>156</td>
<td>11:30-12:30</td>
<td>Kern Stansbury Hanson</td>
<td>3-Act Tasks in Action</td>
</tr>
<tr>
<td>168</td>
<td>1:00-2:00</td>
<td>Bauer Boddie LaDue</td>
<td>Every Operation Tells a Story</td>
</tr>
<tr>
<td>EQ 173</td>
<td>1:00-2:00</td>
<td>Bauer Morehouse C</td>
<td>PK-2 Students as Doers of Mathematics</td>
</tr>
<tr>
<td>191</td>
<td>2:30-3:30</td>
<td>Kern Boehr Cary</td>
<td>Using the Counting Trajectory to Drive Instruction in the 4K Classroom</td>
</tr>
<tr>
<td>198</td>
<td>2:30-4:00</td>
<td>Bauer Morehouse A</td>
<td>More or Less? Using Learning Progressions to Support Student Understanding of Comparison</td>
</tr>
</tbody>
</table>

SAVE THE DATE
WMC 52nd Annual Conference on May 6-8, 2020

Keynote Speakers To Date (More Added Soon)

Michael Flynn | Pam Harris

Megan Franke | John Stevens
## Grades 3-5 Thursday Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>107</td>
<td>8:00-9:00</td>
<td>Kern Brayton Case A</td>
<td>Developing a Meaning-Based Understanding of Angles</td>
</tr>
<tr>
<td>EQ 108</td>
<td>8:00-9:00</td>
<td>Kern Brayton Case B</td>
<td>Engagement and Equity, Make Math Happen!</td>
</tr>
<tr>
<td>111</td>
<td>8:00-9:00</td>
<td>Kern Stansbury Hanson</td>
<td>Rethinking &quot;Assessment&quot;: Incorporating The Formative 5</td>
</tr>
<tr>
<td>115</td>
<td>8:00-9:00</td>
<td>RWI McGarvey</td>
<td>Creating 3D Box Sculptures with One Piece of Grid Paper, for Grades 3-6</td>
</tr>
<tr>
<td>134</td>
<td>9:30-11:00</td>
<td>Kern Stansbury Hanson</td>
<td>Supporting Students Through Differentiation</td>
</tr>
<tr>
<td>138</td>
<td>9:30-11:00</td>
<td>RWI Crystal</td>
<td>What Makes a Square a Rectangle? Developing Student Understanding of Geometric Shapes</td>
</tr>
<tr>
<td>140</td>
<td>9:30-11:00</td>
<td>Staughton</td>
<td>Putting Students First with Math Workshop</td>
</tr>
<tr>
<td>EQ 145</td>
<td>11:30-12:30</td>
<td>Bauer Beaty</td>
<td>Engagement, Equity, and Exit Tickets- My Interpretation of the Math Workshop Model</td>
</tr>
<tr>
<td>149</td>
<td>11:30-12:30</td>
<td>Bauer Morehouse B</td>
<td>Successfully Developing Fact Fluency</td>
</tr>
<tr>
<td>151</td>
<td>11:30-12:30</td>
<td>Kern Boehr Cary</td>
<td>Let the Games Begin</td>
</tr>
<tr>
<td>158</td>
<td>11:30-12:30</td>
<td>RWI Crystal</td>
<td>From Multiplication to Multiplicative Comparison: Making Sense of Story Structure</td>
</tr>
<tr>
<td>172</td>
<td>1:00-2:00</td>
<td>Staughton</td>
<td>Meeting the Needs of ALL Learners through Math Workshop</td>
</tr>
<tr>
<td>175</td>
<td>1:00-2:00</td>
<td>Kern Brayton Case A</td>
<td>Leveraging Math Models to Promote Discourse</td>
</tr>
<tr>
<td>184</td>
<td>1:00-2:00</td>
<td>YC Cummings</td>
<td>Rich, Juicy, and Open Math Task Adventures</td>
</tr>
<tr>
<td>185</td>
<td>1:00-2:00</td>
<td>YC Dominguez Cox</td>
<td>Bridges Math Implementation</td>
</tr>
<tr>
<td>EQ 186</td>
<td>1:00-2:00</td>
<td>YC Fordham Ballenger</td>
<td>Catapulting Diverse Learners' Math Achievement Through Team Teaching</td>
</tr>
<tr>
<td>187</td>
<td>1:00-2:00</td>
<td>YC Huber Evans</td>
<td>Bada-Book-Bada-Boom - Battista!</td>
</tr>
<tr>
<td>200</td>
<td>2:30-4:00</td>
<td>Kern Brayton Case A</td>
<td>Where Do I Begin with Implementing a Math Workshop?</td>
</tr>
<tr>
<td>201</td>
<td>2:30-4:00</td>
<td>Kern Brown</td>
<td>Using Small Guided Groups to be Responsive to Learners and Providing Accessible Opportunities for All</td>
</tr>
<tr>
<td>202</td>
<td>2:30-4:00</td>
<td>Kern Stansbury Hanson</td>
<td>Numeracy Routines Grades K-5</td>
</tr>
<tr>
<td>204</td>
<td>2:30-4:00</td>
<td>RWI Crystal</td>
<td>Supporting the Language of Mathematics for ALL</td>
</tr>
<tr>
<td>206</td>
<td>2:30-4:00</td>
<td>Staughton</td>
<td>Teaching Through Math Residue While Fishing for Misconceptions</td>
</tr>
</tbody>
</table>

### Write for the Wisconsin Mathematics Teacher Journal!

WMC would like you share innovative practices with us. If you are interested in writing for the journal, please let us know at [www.wismath.org](http://www.wismath.org).

### Are you looking to get more involved in WMC?

WMC is looking for volunteers to support their strategic plan. Committees include Professional Development, Communications, WMEF, and more. Volunteer for a committee today by filling out our Volunteer Form ([https://bit.ly/2GSpPfu](https://bit.ly/2GSpPfu)).
Thursday, May 2, 2019 Grades 6-8 Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>106</td>
<td>8:00-9:00</td>
<td>Kern Boehr Cary</td>
<td>Inspirational Ideas for Middle School Math Teachers</td>
</tr>
<tr>
<td>109</td>
<td>8:00-9:00</td>
<td>Kern Brown</td>
<td>Making Mistakes Matter</td>
</tr>
<tr>
<td>116</td>
<td>8:00-9:00</td>
<td>Staughton</td>
<td>Invite. Ignite! Unite!</td>
</tr>
<tr>
<td>141</td>
<td>9:30-11:00</td>
<td>YC Cummings</td>
<td>#LearnwithIM: Our Journey to Implement Illustrative Mathematics</td>
</tr>
<tr>
<td>142</td>
<td>9:30-11:00</td>
<td>YC Dominguez Cox</td>
<td>Collaborative Teacher Teams: Focus on Building Rigorous, Accessible &amp; Engaging Lessons</td>
</tr>
<tr>
<td>143</td>
<td>9:30-11:00</td>
<td>YC Fordham Ballenger</td>
<td>Supporting Students Who Struggle: Inspiring all Students to Achieve</td>
</tr>
<tr>
<td>144</td>
<td>9:30-11:00</td>
<td>YC Huber Evans</td>
<td>Going Deep with Grades 6 - 8 Mathematics</td>
</tr>
<tr>
<td>152</td>
<td>11:30-12:30</td>
<td>Kern Brayton Case A</td>
<td>Making Algebra Visible</td>
</tr>
<tr>
<td>154</td>
<td>11:30-12:30</td>
<td>Kern Brown</td>
<td>Building Thinkers in a Middle School Math Classroom</td>
</tr>
<tr>
<td>155</td>
<td>11:30-12:30</td>
<td>Kern Johnson</td>
<td>Share the Pear</td>
</tr>
<tr>
<td>EQ 170</td>
<td>1:00-2:00</td>
<td>Bauer Morehouse A</td>
<td>Universal Design for Learning (UDL) in the Math Classroom</td>
</tr>
<tr>
<td>EQ 174</td>
<td>1:00-2:00</td>
<td>Kern Boehr Cary</td>
<td>What Does Your Invitation Look Like?</td>
</tr>
<tr>
<td>EQ 176</td>
<td>1:00-2:00</td>
<td>Kern Brayton Case B</td>
<td>Building Positive Middle School Math Experiences</td>
</tr>
<tr>
<td>179</td>
<td>1:00-2:00</td>
<td>Kern Stansbury Hanson</td>
<td>Hunting Down Polygon Properties</td>
</tr>
<tr>
<td>189</td>
<td>2:30-3:30</td>
<td>Bauer Lightbody</td>
<td>Assess Your Students' Thinking Skills...Without Even Thinking About It!</td>
</tr>
<tr>
<td>192</td>
<td>2:30-3:30</td>
<td>Kern Brayton Case B</td>
<td>Teaching the Standard Algorithm for Division with Meaning</td>
</tr>
<tr>
<td>193</td>
<td>2:30-3:30</td>
<td>Kern Johnson</td>
<td>Gamifying the Classroom using the Classcraft Platform</td>
</tr>
<tr>
<td>197</td>
<td>2:30-4:00</td>
<td>Bauer Boddie LaDue</td>
<td>Using Manipulatives to Develop Conceptual Understanding in the Middle School</td>
</tr>
</tbody>
</table>

The WMEF welcomes you to the 2019 Annual Conference. Meet us outside of the Exhibit Hall in Pillsbury. Check us out online at http://wmefonline.org/.

Opportunities to Support WMEF

- **Bucket Raffle** – buy tickets in Pillsbury Hall
- **Heads and Tails Contest** – Thursday Celebrate WMC Event
  
  Sponsored by Houghton Mifflin Harcourt
- **The Pi Run/Walk** – Friday morning outside of Kern
  
  Sign up in Pillsbury Hall

  Sponsored by Mathematics Institute of Wisconsin, Pearson, Creating AHAs, Hubbard Avenue Diner, Houghton Mifflin Harcourt, Wisconsin Mathematics Council, Mathnasium of Wauwatosa, DreamBox Learning, Left Coast Design, and the Medical College of Wisconsin-Biostatistics

Your support allows us to support mathematics education around the state!

**Scholarships**
- Jane Howell & Sister Mary Petronia Van Straten – for undergraduates majoring in math education
- Arne Engebretsen Scholarship – for high school students planning to be math teachers

**Grants**
- **Hank Kepner Award** – for a district pursuing long-term, systemic math education reform
- **Julie Stafford Award** – for staff development opportunities
- **Student Activities Award** – to support student learning outside the classroom
- **Materials/Resources Grant** – to support innovative teaching strategies or projects
<table>
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<tbody>
<tr>
<td>104</td>
<td>8:00-9:00</td>
<td>Bauer Morehouse B</td>
<td>Leading Productive Discussions</td>
</tr>
<tr>
<td>112</td>
<td>8:00-9:00</td>
<td>Lawson MLK</td>
<td>Exploring Algebraic Concepts with Paper Construction, Algebra Tiles, and Arithmetic Context</td>
</tr>
<tr>
<td>114</td>
<td>8:00-9:00</td>
<td>RWI Mahaney</td>
<td>Early Math Placement Tool (EMPT): Preparing Students for College-Level Math</td>
</tr>
<tr>
<td>117</td>
<td>8:00-9:00</td>
<td>YC Cummings</td>
<td>Error Analysis Activities: Engaging All Students in Their Learning Process</td>
</tr>
<tr>
<td>118</td>
<td>8:00-9:00</td>
<td>YC Dominguez Cox</td>
<td>Probably need more Probability</td>
</tr>
<tr>
<td>119</td>
<td>8:00-9:00</td>
<td>YC Fordham Ballenger</td>
<td>Co-Teaching in the High School Mathematics Classroom</td>
</tr>
<tr>
<td>120</td>
<td>8:00-9:00</td>
<td>YC Huber Evans</td>
<td>Personalized Learning in Math Grades 9-12</td>
</tr>
<tr>
<td>CS 121</td>
<td>8:00-9:00</td>
<td>YC NG Jones</td>
<td>Coding in the Math Classroom</td>
</tr>
<tr>
<td>137</td>
<td>9:30-11:00</td>
<td>Lawson MLK</td>
<td>AP Statistics - Working with Sampling Distributions</td>
</tr>
<tr>
<td>139</td>
<td>9:30-11:00</td>
<td>RWI Mahaney</td>
<td>Co-Teaching in the Math Classroom</td>
</tr>
<tr>
<td>157</td>
<td>11:30-12:30</td>
<td>Lawson MLK</td>
<td>5 Steps to Effective Lesson Planning</td>
</tr>
<tr>
<td>159</td>
<td>11:30-12:30</td>
<td>RWI Mahaney</td>
<td>High Expectations, High Achievement: The Proficiency Model for Mathematics at UW-Parkside</td>
</tr>
<tr>
<td>CS 160</td>
<td>11:30-12:30</td>
<td>RWI McGarvey</td>
<td>AP Computer Science Principles?</td>
</tr>
<tr>
<td>162</td>
<td>11:30-12:30</td>
<td>YC Cummings</td>
<td>Breaking Tradition</td>
</tr>
<tr>
<td>163</td>
<td>11:30-12:30</td>
<td>YC Dominguez Cox</td>
<td>Meeting Student Needs during year one CPM implementation</td>
</tr>
<tr>
<td>164</td>
<td>11:30-12:30</td>
<td>YC Fordham Ballenger</td>
<td>Co-Planning to Co-Serve: Meeting Student Needs in Algebra, Geometry, and Algebra 2</td>
</tr>
<tr>
<td>165</td>
<td>11:30-12:30</td>
<td>YC Huber Evans</td>
<td>Engaging Students in Learning...We Have Strategies for That!</td>
</tr>
<tr>
<td>166</td>
<td>11:30-12:30</td>
<td>YC NG Jones</td>
<td>A Look at Some FUN and AMAZING Geometry Theorems</td>
</tr>
<tr>
<td>167</td>
<td>1:00-2:00</td>
<td>Bauer Beaty</td>
<td>Rebuilding Low-Achieving Students with Collaboration and High Expectations</td>
</tr>
<tr>
<td>169</td>
<td>1:00-2:00</td>
<td>Bauer Lightbody</td>
<td>Metacognitive Strategies in the Math Classroom</td>
</tr>
<tr>
<td>171</td>
<td>1:00-2:00</td>
<td>Bauer Morehouse B</td>
<td>Why Teach Mathematics? How Do We Convince Students that Learning Mathematics is Important?</td>
</tr>
<tr>
<td>177</td>
<td>1:00-2:00</td>
<td>Kern Brown</td>
<td>Drop the Points: A Common Sense Approach to Assessing Student Math Work</td>
</tr>
<tr>
<td>180</td>
<td>1:00-2:00</td>
<td>Lawson MLK</td>
<td>Collaboration and Cognitive Discourse Through Math Tasks</td>
</tr>
<tr>
<td>CS 183</td>
<td>1:00-2:00</td>
<td>RWI McGarvey</td>
<td>Computer Science is No Laughing Matter</td>
</tr>
<tr>
<td>188</td>
<td>2:30-3:30</td>
<td>Bauer Beaty</td>
<td>Team Teaching in the Inclusive Classroom</td>
</tr>
<tr>
<td>194</td>
<td>2:30-3:30</td>
<td>RWI Mahaney</td>
<td>The UW System Mathematics Placement Test</td>
</tr>
<tr>
<td>195</td>
<td>2:30-3:30</td>
<td>YC Huber Evans</td>
<td>There's So Much Out There! How Do I Find a Good Mathematical Task?</td>
</tr>
<tr>
<td>196</td>
<td>2:30-3:30</td>
<td>YC NG Jones</td>
<td>Climate Change - Model Mathematical Data from The Climate Reality Project Training with Al Gore</td>
</tr>
<tr>
<td>207</td>
<td>2:30-4:00</td>
<td>YC Cummings</td>
<td>Using Desmos Free Graphing App to Excite Students in HS Math</td>
</tr>
<tr>
<td>208</td>
<td>2:30-4:00</td>
<td>YC Dominguez Cox</td>
<td>Co-Teaching, Project Based Learning and Target Based Grading in Algebra 2 - a tall order</td>
</tr>
<tr>
<td>209</td>
<td>2:30-4:00</td>
<td>YC Fordham Ballenger</td>
<td>My Journey to a Standards-Based AP Calculus &amp; AP Statistics Classroom</td>
</tr>
<tr>
<td>#</td>
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<tr>
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<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>100</td>
<td>8:00-9:00</td>
<td>Bauer Beaty</td>
<td>Teacher Talk: How the Questions We Ask and the Way We Ask Them Make a Difference in Student Learning</td>
</tr>
<tr>
<td>105</td>
<td>8:00-9:00</td>
<td>Bauer Morehouse C</td>
<td>How Will We Know What They’re Thinking?</td>
</tr>
<tr>
<td>110</td>
<td>8:00-9:00</td>
<td>Kern Johnson</td>
<td>Learner Centered Mathematics</td>
</tr>
<tr>
<td>113</td>
<td>8:00-9:00</td>
<td>RWI Crystal</td>
<td>Why OER: Leveraging Openly Licensed Content for Equity and Access in Teaching and Learning</td>
</tr>
<tr>
<td>123</td>
<td>9:30-10:30</td>
<td>Bauer Lightbody</td>
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</tr>
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</tr>
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</tr>
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</tr>
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</tr>
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</tr>
<tr>
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</tr>
<tr>
<td>161</td>
<td>11:30-12:30</td>
<td>Staughton</td>
<td>Teaching on the Edge of Understanding and at the Speed of Learning</td>
</tr>
<tr>
<td>178</td>
<td>1:00-2:00</td>
<td>Kern Johnson</td>
<td>Designing Basic Digital Breakouts with the Google Suite</td>
</tr>
<tr>
<td>EQ 181</td>
<td>1:00-2:00</td>
<td>RWI Crystal</td>
<td>Reaching ALL Learners with Digital Accessibility</td>
</tr>
<tr>
<td>182</td>
<td>1:00-2:00</td>
<td>RWI Mahaney</td>
<td>E + R = O: Mindset in the Math Classroom</td>
</tr>
<tr>
<td>EQ 190</td>
<td>2:30-3:30</td>
<td>Bauer Morehouse B</td>
<td>10 Equitable Classroom Practices you can do RIGHT NOW!</td>
</tr>
<tr>
<td>199</td>
<td>2:30-4:00</td>
<td>Bauer Morehouse C</td>
<td>Conversations on College and Career Readiness</td>
</tr>
<tr>
<td>203</td>
<td>2:30-4:00</td>
<td>Lawson MLK</td>
<td>Math Teachers' Circle</td>
</tr>
<tr>
<td>205</td>
<td>2:30-4:00</td>
<td>RWI McGarvey</td>
<td>Engaging Students by Learning Mathematics with Origami</td>
</tr>
</tbody>
</table>

Visit the NCTM Bookstore, located in the Kraft Centre Lobby for books and information on national membership.
Teacher Talk: How the Questions We Ask and the Way We Ask Them Make a Difference in Student Learning
The Standards for Math Practice ask students to develop the ability to be adaptive problem solvers. How can we build our repertoire and expertise around questioning and productive discourse to positively impact student learning? In this session, we will look at resources around questioning, lifting specific strategies and tools for use with our students. We will practice with each other as models to gain confidence and ease with questioning.
Kristina Whiting, Madison Metropolitan School District
Jon Keppel

Creating Masterful Mathematicians
Are your students fluent? Can your students think flexibly about numbers? If your students’ friends are their fingers when they are doing math, the solution to fluency is the mathematical tools they are using. Investigate how mathematical tools can enhance seeing collections, understanding relationships and strategies, and be a concrete model for all situational problem solving!
Lynn Rule, MathRack

More than Family Math Night: Engaging Families in Math
Are you feeling like Family Math Nights are bringing in the same families? Do you want to think about different ways to engage your families in math? Join us for some ideas to get you started thinking about how to help families look at math as fun, exciting, and not like it used to be!
Lori Rugotska, School District of Hartford Joint #1
Nicole Emmer

Developing Early Number Sense Through Subitizing
Children’s understanding of number begins with subitizing. What is subitizing? Why is it important? Come engage in activities to support young children’s skill and ability early number sense. We will make connections to the Subitizing Learning Trajectory through videos and hands-on games.
Beth Schefelker, School District of South Milwaukee
Melissa Hedges

Leaving Productive Discussions
Want to lead productive discussions in math class? Ever heard of the book 5 Practices for Orchestrating Productive Mathematics Discussions by Margaret S. Smith and Mary Kay Stein? Come see us discuss our attempts at implementing the 5 practices in our math classrooms – hear about our successes, failures and suggestions as documented in our action research.
Erin McReynolds, Milwaukee Public Schools
Joan Masek

How Will We Know What They’re Thinking?
Curiosity about students’ mathematical thinking is at the heart of effective and joyful mathematics teaching. There are four channels via which we can gather information about student thinking: we can look at student work and products, we can observe and listen to students while they work and talk, we can confer with students about their thinking, and we can ask students to reflect on their own learning and share their self-assessments with us. We’ll explore how to open these four channels, so we can gather better, richer, more interesting information about our students and their thinking, even when using curricular materials that don’t prioritize formative assessment. We’ll get hooked on listening to students’ thinking!
Tracy Zager, Rollinsford Grade School/Stenhouse Publishers

Inspirational Ideas for Middle School Math Teachers
Are you a new math teacher looking for ideas? An experienced educator who wants to be inspired? This fast-paced session will explore ways to spice up your classroom and increase student engagement! We will discuss new approaches, specific activities and online resources that can have a profound impact on you and your students. Come and rekindle your passion for teaching! Note: Similar to last year's session by the same name.
John Marzion, Oak Creek Franklin School District
<table>
<thead>
<tr>
<th>Session Code</th>
<th>Session Title</th>
<th>Grades</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>107 Kern Brayton Case A (64)</td>
<td>Developing a Meaning-Based Understanding of Angles</td>
<td>3-5</td>
<td>Elizabeth Cutter-Lin, University of Wisconsin, Milwaukee</td>
</tr>
<tr>
<td>EQ 108 Kern Brayton Case B (64)</td>
<td>Engagement and Equity, Make Math Happen!</td>
<td>3-5</td>
<td>Connie Roetzer, River Falls School District</td>
</tr>
<tr>
<td>109 Kern Brown (50)</td>
<td>Making Mistakes Matter</td>
<td>6-8</td>
<td>Laura Bell, Cambria-Friesland School District</td>
</tr>
<tr>
<td>110 Kern Johnson (50)</td>
<td>Learner Centered Mathematics</td>
<td></td>
<td>Lisa Krohn, Johnson Creek</td>
</tr>
<tr>
<td>111 Kern Stansbury Hanson (64)</td>
<td>Rethinking &quot;Assessment&quot;: Incorporating The Formative 5</td>
<td>3-5</td>
<td>Kimberly Liermann, Sheboygan Area School District</td>
</tr>
<tr>
<td>112 Lawson MLK (24)</td>
<td>Exploring Algebraic Concepts with Paper Construction, Algebra Tiles, and Arithmetic Context</td>
<td>9-12</td>
<td>Bhesh Mainali, University of Wisconsin Superior</td>
</tr>
<tr>
<td>113 RWI Crystal (64)</td>
<td>Why OER: Leveraging Openly Licensed Content for Equity and Access in Teaching and Learning</td>
<td></td>
<td>Jan Wickboldt, CESA #11</td>
</tr>
<tr>
<td>114 RWI Mahaney (24)</td>
<td>Early Math Placement Tool (EMPT): Preparing Students for College-Level Math</td>
<td>9-12</td>
<td>Sonya Sedivy</td>
</tr>
</tbody>
</table>
115 RWI McGarvey (24)
Grades 3-5
Creating 3D Box Sculptures with One Piece of Grid Paper, for Grades 3-6
By looking at consumer boxes and using flat geometric nets, made from one small or large piece of paper, this project allows students to be creative, while at the same time engages them in challenging problem-solving, visual literacy, and geometry. Students start by making cubes and pyramids and move on to pentagonal dodecahedrons and much more.

Peter Wilson, University Lake School

118 YC Dominguez Cox (30)
Grades 9-12
Probably need more Probability
This session provides ready-to-use classroom activities for AP Statistics or Probability courses that reinforce basic probability concepts with extensions that bring probability to life. Advanced topics such as The Law of Total Probability and Baye’s Theorem are discussed along with connections to matrices and graph theory applications.

Susan Baloun, Cochrane Fountain City High School

KEYNOTE
116 Staughton (300)
Grades 6-8
Invite. Ignite! Unite!
Inviting students to engage in mathematical conversations can be challenging. Let’s explore ways to invite all students into enjoyable math conversations that ignite their mathematical thinking and unite their ideas.

Andrew Stadel, Estimation 180

117 YC Cummings (96)
Grades 9-12
Error Analysis Activities: Engaging All Students in Their Learning Process
As teachers, we see common errors in student work regularly, but the students often don’t see them until after their work has been graded. Having students analyze incorrectly worked examples has proven to be an effective teaching strategy that students enjoy. In this session, you’ll see data around how this has impacted student achievement, participate in a sample activity, and leave with tools to implement error analysis in your classroom.

Melissa Manley, St. Francis School District

120 YC Huber Evans (96)
Grades 9-12
Personalized Learning in Math Grades 9-12
Models and methodologies (and supporting data) will be shared out dealing with personalized learning through the relevant use of and leveraging of blended learning, competency-based learning, interdisciplinary curriculum, contextual assessments, and gamification.

Eric Anderson, Kettle Moraine

CS 121 YC NG Jones (30)
Grades 9-12
Coding in the Math Classroom
In this session, we will look at creative ways that you can bring coding into your math classroom to enhance student learning. Teachers will leave this session with concrete strategies to enhance their instruction through the use of coding.

Jessica Kachur, Kenosha Unified School District
Thursday, May 2, 2019 9:30 – 10:30 a.m.

122 Bauer Boddie LaDue (64)
Grades PK-2

Writing in the Elementary Math Classroom
I will be sharing ideas for writing that I have been using in my elementary classroom. There will be a focus on mathematical writing that offers students opportunities to reason mathematically, use mathematical vocabulary, show levels of understanding, and make sense of a variety of mathematical situations.

Jennie Ebert, Prairie View Elementary School

123 Bauer Lightbody (50)
General Interest

Finding Math in the REAL World
Come find out how I’ve been finding REAL math in Milwaukee. Create thought-provoking questions, interest, and motivation. Set a context for investigations and connections in your community. Find a way to inspire further learning! Brainstorm some ideas together!

Mary Langmyer, Current volunteer

124 Bauer Morehouse B (100)
General Interest

A Map for Math Talk for K-8
Join us in a demonstration of an instructional routine that will elevate the math discourse in your classroom. Participants will experience a math lesson and learn strategies for discourse facilitation from Dr. Gladis Kersaint’s white paper.

Elizabeth Peyesr, Curriculum Associates

125 Kern Boehr Cary (64)
Grades PK-2

Going Beyond Fast Facts: A Balanced Approach to Assessing Mathematical Fluency
Participants will investigate the limitations of timed tests and explore formative assessments that can give teachers in grades 1-2 useful information about the key aspects of mathematical fluency.

Danielle Palm, Oak Creek Franklin School District

126 Kern Brayton Case A (64)
General Interest

Designing High Quality Professional Development for Your Colleagues
If you are a math coach/leader, it may be your responsibility to design and facilitate professional development for your colleagues. Time is valuable - make it count! Walk away with ideas to create professional development that builds on teachers’ expertise.

Paige Richards, Mathematics Institute of Wisconsin

127 Kern Brown (50)
General Interest

Powerful and Purposeful Conferring in the Math Classroom
In this session, you will learn how to incorporate conferring notes into your workshop at any level using Google forms and sheets. You will learn how to use conferring as a formative assessment to target instruction, group students, and provide purposeful, immediate feedback.

Angie Blessington, School District of Waukesha
Rachel Boario, Randi Leslie, and Kimberly Loppnow

128 Kern Johnson (50)
General Interest

Deepening Understanding Using Error Analysis
Looking for a new way to engage students in course curriculum, or a new way to gather data through formative assessment? Come hear how error analysis can be used to identify misconceptions, prevent common errors, and create understanding.

Michael Arnold, Coulee Christian School

CS 129 RWI McGarvey (24)
General Interest

Computer Science & Literacy: Integrating Picture Books and Graphic Novels
In 2017 WI became the 9th state to adopt computer science standards as part of the national CS movement. The publishing world is also seeing the influence of this movement with authors writing more books about CS. This session offers insight about how picture books (elementary) and graphic novels (MS/HS) align with the CS practices and represent diverse characters doing CS so teachers know where best to integrate these books into their lessons.

Rachelle Haroldson, University of Wisconsin-River Falls
Dave Ballard
Thursday, May 2, 2019 9:30 – 11:00 a.m.

**EQ 130 Bauer Beaty (50)**  
**General Interest**  
**Walking Through a Coaching Experience Using an Equity Lens**  
Together we will take a walk through a hypothetical coaching experience that includes lesson planning, sample evidence collection and teacher reflection time. We will learn how to listen and watch for equity concerns and then how to address these concerns during different parts of the coaching process.

Melissa Thomley, Instructional Math Coach  
Tracy Frank

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**EQ 133 Kern Brayton Case B (64)**  
**General Interest**  
**Catalyzing Change: Continuing the Critical Conversations**  
In this session, we will continue the work of the WMC and WI-AMTE Catalyzing Change in High School Mathematics book studies. We invite book study participants to discuss how their work in the classroom has been affected by the text. We also invite people who did not participate in the book study to join us to learn about the text, its implications, and how they might use it in their own classrooms.

Matthew Chedister, University of Wisconsin-La Crosse  
Rick Stuart, Lynn Schaal, and Ken Schelp

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**EQ 131 Bauer Morehouse A (50)**  
**Grades PK-2**  
**Learning to Count the Ziblandia Way**  
Have you ever wondered why place value concepts are so hard for children? We'll develop a deeper understanding of our number system and how to support children’s ability to move beyond counting by ones to counting with units. We will connect our new understanding to multiple early math learning trajectories. Come put yourself in the role of a learner as we explore a new counting system!

Joe Giera, School District of South Milwaukee  
Beth Schefelker

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**KEYNOTE**  
**132 Bauer Morehouse C (100)**  
**General Interest**  
**Going Beyond Groupwork: Teaching Students to Be Mathematical Colleagues**  
Mathematicians often work together, seeking colleagues when they need to think aloud, gather new ideas, argue productively, and receive constructive feedback. Let’s model classroom collaborations on these genuine mathematical interactions. We’ll analyze rich classroom examples to learn about four productive mathematical interactions for the classroom: thinking partnerships, math debates, cross-pollination of ideas, and peer critiques. We’ll focus in on thinking partnerships and cross-pollination as we engage in a rich math problem together. Throughout, we’ll be asking, "How can we equip students to be good colleagues, in mathematics and in life?"

Tracy Zager, Rollinsford Grade School/Stenhouse Publishers, Portland, Maine

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**134 Kern Stansbury Hanson (64)**  
**Grades 3-5**  
**Supporting Students Through Differentiation**  
This workshop will guide participants through exploring multiple perspectives of differentiation support for all students. Five research-based, proven differentiation techniques will be explored: Physical, Visual, Contextual, Symbolic, and Verbal. Participants will use hands-on techniques to explore similar problems through multiple techniques and collaboratively create a bank of resources to take back to their classrooms.

Mora Arnold, Houghton Mifflin Harcourt

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**135 Kraft Mitchell Dining (50)**  
**Grades PK-2**  
**Big Dreams Start with Early Math: Games to Ignite Joy and Curiosity**  
Based on the work done by the Strong Smart Math Project, participants will be armed with the research regarding the importance of early math education, the foundation of equitable outcomes. Participants will explore the counting and subitizing learning trajectories for children ages 3-8. Supporting activities and games that provide intentional growth and nurture children’s joy and curiosity in math will be the cornerstone of this session.

Cathy Hunt, CESA 5  
Chris Boettcher
136 Kraft Tower Dining (50)
General Interest

Leading by Design: Aligning Professional Learning, Educator Effectiveness, and School-wide Goals
Explore a process for leading school growth by aligning student, educator, and professional learning outcomes. Learn how to leverage Educator Effectiveness to maximize time, streamline support, and focus professional learning efforts on increasing student achievement in math. Investigate how to cultivate teacher ownership of Student Learning Outcomes by utilizing daily, classroom-level data.

Stacy Cortez, Kenosha Unified School District
Keri Heusdens, Camille Schroeder, Mandy Taylor, Timothy Nickel, Kim Hailer

137 Lawson MLK (24)
Grades 9-12

AP Statistics - Working with Sampling Distributions
Sampling distributions is an essential foundation in preparing students for inference on the AP Exam. Come check out and explore some activities that you can do with your kids in the classroom. Also, get the chance to network with other AP Statistics teachers from around the state.

Jason Dahl, Oconomowoc High School
Allison Hopkins

138 RWI Crystal (64)
Grades 3-5

What Makes a Square a Rectangle? Developing Student Understanding of Geometric Shapes
Come engage in student activities that deepen understanding of the progression of 2D shape classification in Grades 3-5. Participants will walk away with ideas for instruction around shape classification, with a focus on quadrilaterals. Join us as we ponder the question, "What makes a square a rectangle?"

Eric Kanters, Mathematics Institute of Wisconsin
Jennifer Metke

Exhibit Hall Hours:
Wednesday from 3:30 – 5:00 p.m.
Thursday from 8:00 a.m.–4:00 p.m.
Friday from 8:00 a.m.–1:30 p.m.

139 RWI Mahaney (24)
Grades 9-12

Co-Teaching in the Math Classroom
This session will include uncovering the “why” and the “how” behind co-teaching. Participants will take away real strategies to use when co-planning and co-teaching. We will also dive into leveling assessments. The ultimate goal of this session is to help teachers develop ways to make both the regular education and special education teachers experts in the classroom (as seen by students) to deepen the learning of ALL students.

Lisa Henjessey, Sun Prairie Area School District
Julie Le

KEYNOTE
Sponsored by Houghton Mifflin Harcourt

140 Staughton (300)
Grades 3-5

Putting Students First with Math Workshop
A shift from teacher-led direct instruction to a student-centered mathematics classroom must be made in order to change the story for students in mathematics. Engaging students in deep discourse, meaningful learning stations, rich problem-solving tasks, and small guided groups is the path to closing achievement gaps and providing equitable access to mathematics. The Math Workshop model of instruction creates an environment where teachers are facilitators and students believe in themselves as mathematicians, expressing a growth mindset regarding mathematics. Math Workshop focuses on differentiation, meeting the needs of all students while creating a learning environment that is possible for teachers to easily maintain.

Jennifer Lempp

141 YC Cummings (96)
Grades 6-8

#LearnwithIM: Our Journey to Implement Illustrative Mathematics
Are you curious about the Illustrative Mathematics open source curriculum for Grades 6-8? Do you have questions about how to implement IM? Join our interactive session where we will share the nitty-gritty of implementation. Please bring a device as we will incorporate an online platform for Q&A and we will reserve session time for guided exploration of the Open Up Resources site.

Jill Leffler, School District of Greenfield
Sara Brown
Collaborative Teacher Teams: Focus on Building Rigorous, Accessible & Engaging Lessons
This session will look at how successful teacher teams are able to build rigorous and accessible lessons to make an impact on their students’ learning and engagement in mathematics. Teachers will engage in strategies to build and maintain collaborative teacher teams, structures that facilitate conversations around student work and how to use the data to drive instruction and provide access points for all students.
Jon Keppel, Madison Metropolitan School District
Kristina Whiting

Supporting Students Who Struggle: Inspiring all Students to Achieve
All students struggle. Productive struggle is encouraged and expected, yet some students struggle unproductively more than others. How can you support the students who require intervention without removing the productive struggle? In this session, you will experience activities, investigations, and teaching strategies to support all your students. You will also hear from an 8th grade intervention teacher who has been using these strategies.
Mark Ray, CPM
Amy Zemlo

Going Deep with Grades 6 - 8 Mathematics
Digging deep into the conceptual understanding of grades 6 - 8 content that is traditionally taught at the procedural level or through memorization will be the focus of this session. Alternative practices will be shared in order to reach ALL learners.
Tammy Moynihan, CESA 8
Thursday, May 2, 2019 11:30 a.m. – 12:30 p.m.

EQ 145 Bauer Beaty (50)
Grades 3-5
Engagement, Equity, and Exit Tickets- My Interpretation of the Math Workshop Model
"What do I do next?, I can’t do this!, or Are we done yet?" are phrases that you may hear in your classroom. Come learn about my journey of how I found ways to increase student engagement, meet the needs of all students through an equity lens, and allow students to work at their own pace, while still implementing the districts curriculum and meeting the 3rd grade standards.
Ashley Gorman, River Falls School District

Connie Roetzer

146 Bauer Boddie LaDue (64)
Grades PK-2
Word Problems? No Problems!
The importance of using underlying structures, rather than key words or story-related actions to solve word problems, has found expression in the CCSS. Using visual models and graphic organizers we will experience ways to create success for our students in working with change problems, group problems and compare problems in grades K-2.
Paula Muehler, Math Learning Center

Ryan Hausmann

147 Bauer Lightbody (50)
General Interest
Meeting Students in their World
Over the years I have collected many nifty, engaging math problems. Many assumed knowledge of things that students don’t access regularly. In order to give students a chance to draw on their experiences to engage with the mathematics, some updates were necessary. Feel free to bring your own examples to add to the discussion. If time permits, we can also discuss free digital platforms for engaging students.
Linda Uselmann, Marian University

Visit the NCTM Bookstore, located in the Kraft Centre Lobby for books and information on national membership.

148 Bauer Morehouse A (50)
Grades PK-2
Counting Collections: Tips and Strategies for the Early Childhood Teacher
You’ve heard of counting collections... but how do you implement them in your classroom? I’ve used counting collections in my classroom for two years, come learn from my experience! We'll begin by learning how to set up a successful counting collections experience in a kindergarten classroom. We will make ties to Clements’ Counting Learning Trajectory and discuss how that tool helped me make decisions to enhancements which I layered in as the year went on.
Brittany DeWindt, Milwaukee Public Schools

149 Bauer Morehouse B (100)
Grades 3-5
Successfully Developing Fact Fluency
Having students develop fact fluency is critical, but how can we do this? Come explore ways to integrate number talks and number strings to develop this essential skill. See how manipulatives can be used to further the development.
Kevin Dykema, Mattawan Consolidated Schools

KEYNOTE
150 Bauer Morehouse C (100)
General Interest
A Mathematical Look at National Flags
Imagine all the mathematics that appears within the designs of the flags of the US, South Korea, Greece, Isle of Man and other countries. Imagine looking at a flag and seeing shapes such as congruent and similar triangles; symmetry, transformations, lines, curves and functions. Imagine using flags to engage students in mathematical curiosity, discourse, and the effective use of various forms of technology. Imagine writing high-quality, contextualized mathematics tasks for your students. Join Ron Lancaster on May 2 and let's do more than imagine!
Ron Lancaster, University of Toronto
151 Kern Boehr Cary (64)
Grades 3-5
Let the Games Begin
Are you looking for fun math games that you can use during lessons or just quick simple games to enhance your students' number sense? Then you should come to this session. I will provide you with many games that can be used as work centers, during morning meetings, while waiting in line, closing circles, brain breaks and/or anytime you want to have some math fun. Little prep, fun, and meaningful to all.
Sara Swearingen, Wittenberg Elementary School

152 Kern Brayton Case A (64)
Grades 6-8
Making Algebra Visible
We will explore how we use manipulatives to assist our students in developing their algebraic thinking. We will focus on areas such as writing expressions, creating equations, and solving equations through a conceptual and visual manner before focusing on algorithms and symbolic manipulation.
Erick Hofacker, University of Wisconsin - River Falls
Ashlee LeGear

EQ 153 Kern Brayton Case B (64)
General Interest
Are We Walking Our Talk? Culturally Responsive Practices in a Mathematics Classroom
We've heard the buzzwords and we espouse cultural responsiveness and yet, African-American students have the largest achievement gap in mathematics. Telashay Swope and Jo Groene, Ph.D. students from UW-Milwaukee in Math Education, show real ways to build relationships and capacity with your minority students. With targeted best practices and contextual problem solving, you can make meaningful gains in your students' mathematical abilities.
Johanna Groene, UW-Milwaukee
Telashay Swope

154 Kern Brown (50)
Grades 6-8
Building Thinkers in a Middle School Math Classroom
Tired of begging students to engage in tough math problems? We've created a way to build excitement around math application and kids cheer when we work on challenging problems! We'll share how to build interest to solve rigorous problems, facilitate strategy sharing, and teach kids to question each other. We'll show you how to LOVE problems you skip because they seem too hard...they're a gold mine for implementing the Common Core Math Practices! Note: Same session as last year.
Cara Flach, Oak Creek Franklin School District
John Marzion

155 Kern Johnson (50)
Grades 6-8
Share the Pear
Are you looking for a way to get EVERY student involved in your class? Are you looking for an awesome formative assessment? Then you need to experience Peardeck! In this session, we will go through specific ways that math teachers can use Peardeck. You will experience a revolution in student engagement and also a convenient, relevant formative assessment tool. Bring your device, we would love to "share the pear" with you!
Elizabeth Trochil, Washington Middle School
Luke Fitzsimmons

156 Kern Stansbury Hanson (64)
Grades PK-2
3-Act Tasks in Action
How do students solve problems without words? How can students develop strategic competence and persevere in problem solving? In this session, you will explore one first grade classroom's experience with Three-Act Tasks. The class is transformed into an environment where they are challenging their own mathematical thinking and each others' to solve a real world problem.
Brianna Riley, Kenosha Unified School District
Diane Sockness
5 Steps to Effective Lesson Planning

We tend to overcomplicate lesson planning by choosing a wide range of goals that are often too lofty to obtain in a single lesson. Our students leave the classroom confused and frustrated with their own learning goals as a result. Taking a more simplified approach to lesson planning allows us time to focus on learning and formatively assess that learning. In this hands-on workshop we will look at a five step process to plan CPM lessons.

John Hayes, Mathematics Coach

From Multiplication to Multiplicative Comparison: Making Sense of Story Structure

Developing understanding of multiplicative comparison situations can be challenging for fourth grade students. Come and learn how the structure of multiplication can support students to make sense of the various problem formats. Leave with an understanding of how these problems lay a critical foundation to ratio and proportional reasoning.

Julie McNicoll, School District of South Milwaukee
Kathy Koscielniak

High Expectations, High Achievement: The Proficiency Model for Mathematics at UW-Parkside

Believing that students with appropriate support would meet the challenge of high standards in terms of both content and achievement, UW-Parkside launched its proficiency model for developmental mathematics courses in Fall 2012. This talk will highlight the main components of the proficiency model, its growth and influence upon additional curricular refinements, and its effect upon student success over its first six years.

Richard Karwatka, UW-Parkside

AP Computer Science Principles?

Which curricula is there for a APCSP course? I will share my three year experience with Mobile CSP, an introduction to computer science based on MIT’s App Inventor. Students build socially useful mobile apps and work through activities to improve their writing, communication, collaboration, and creativity skills. A complete set of student lessons, detailed lesson plans, assessment materials, and a dashboard for tracking student progress will be shared.

Mary Walz, Sauk Prairie High School

Breaking Tradition

Secondary mathematics is one of the most difficult areas to really engage students and break the traditional style of stand and deliver. This session will provide strategies that will help teachers transfer the focus from the teacher to the students. Teachers will leave with a toolkit of strategies and a set goal to keep students engaged in thought-provoking activities. The strategies will be modeled and practiced throughout the session.

Tanya Amys, Maple School District

Special Thanks to our Keynote Speaker Sponsors

Jennifer Lempp's appearance is sponsored by Houghton Mifflin Harcourt.
164 YC Fordham Ballenger (30)
Grades 9-12
Co-Planning to Co-Serve: Meeting Student Needs in Algebra, Geometry, and Algebra 2
The special education teachers at Nicolet High School are aligned with the math department to meet the needs of all students in their Algebra, Geometry and Algebra 2 courses. Using common planning time and proportional representation, the staff works together to include scaffolds and skill building for students who need it. The special education staff has compiled resources for students and will share their work and philosophy.
Kristin Susedik, Nicolet USD
Christopher Early and Sarah Dickerson

165 YC Huber Evans (96)
Grades 9-12
Engaging Students in Learning...We Have Strategies for That!
Participants will be introduced to multiple formative assessment strategies that require little to no planning and promote active engagement, collaborative learning, & individual accountability. The repertoire of strategies shared will be applied in many ways and allow participants to leave with activities that gauge student understanding and provide feedback. Be ready to energize your students’ learning even at the end of the school year!
Lisa Stomberg, Ashwaubenon School District
Cassandra Schneider

166 YC NG Jones (30)
Grades 9-12
A Look at Some FUN and AMAZING Geometry Theorems
We will use the TI-Nspire to explore some FUN and AMAZING theorems. These theorems are not ones usually covered in a standard Geometry course, but they are easy for students to discover on their own. We will give proofs of some of these amazing theorems and simply marvel at some of the others.
Ray Klein, T3 Teachers Teaching with Technology

Be sure to visit the Exhibit Hall to find a wealth of information and items from a variety of publishers and exhibitors. Get your exhibit passport stamped for your chance to win daily door prize drawings.

WMC Congratulates WMEF’s 2019 Scholarship Recipients!
Join us at the Celebrate WMC Thursday Event to honor these future math teachers.

<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Recipient</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arne Engebretsen</td>
<td>Sierra Hunstable</td>
<td>Clintonville High School</td>
</tr>
<tr>
<td>Memorial Scholarship</td>
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<tr>
<td>Sister Mary Petronia Van Straten</td>
<td>Jacqueline deWerff</td>
<td>Concordia University Wisconsin</td>
</tr>
<tr>
<td>Scholarship</td>
<td></td>
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<tr>
<td>Jane Howell Scholarship</td>
<td>Emily Amundson</td>
<td>UW Riverfalls</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Thursday, May 2, 2019 1:00 – 2:00 p.m.

167 Bauer Beaty (50)
Grades 9-12
Rebuilding Low-Achieving Students with Collaboration and High Expectations
Does decreasing rigor really support our struggling math students? For years, the norm in education has been to reduce rigor and increase repetition for these students. Unfortunately, this only rips the context from the math and increases student perception of, "I am never going to need this." Come discuss why collaboration, high rigor, and higher expectations support struggling math students and re-engage them in the learning process.

Steven Thayer, Wautoma Area School District

168 Bauer Boddie LaDue (64)
Grades PK-2
Every Operation Tells a Story
When teachers expose children to a range of problem situations without prescribing strategies, children will build on what they have learned and apply it to more difficult problems. This session will investigate the early development of strategies for number operations using a variety of problem structures and literature. Number operations firmly grounded in mathematical problem situations will put the focus on understanding, not 'right' answers.

Lynn Rule, MathRack

169 Bauer Lightbody (50)
Grades 9-12
Metacognitive Strategies in the Math Classroom
To enable students to be reflective learners, we must provide them with strategies and activities to encourage metacognition. This session will provide participants the opportunity to engage in different metacognitive strategies and reflection opportunities that can be taken back to their own classroom. Collaborative hands-on activities, along with opportunities for writing and reflection will be modeled. Appropriate for grades 6-12.

Lisa Sprangers, Elmbrook School District

EQ 170 Bauer Morehouse A (50)
Grades 6-8
Universal Design for Learning (UDL) in the Math Classroom
Universal Design for Learning (UDL) provides a framework that helps all students be successful in the classroom. How can the key tenets of UDL be applied to the mathematics classroom? If you are new to UDL or a UDL expert, this session will utilize UDL components to gain a deeper knowledge of UDL and how you can ensure success for all.

Maggie McHugh, School District of La Crosse

171 Bauer Morehouse B (100)
Grades 9-12
Why Teach Mathematics? How Do We Convince Students that Learning Mathematics is Important?
Much of the focus on what students should know in mathematics has been on college and career readiness. NCTM’s Catalyzing Change suggests there is more to mathematics. What does this mean for us as teachers? Is knowing what factors are, and how they connect to the roots of a function more important than being able to factor? Let’s revisit what we do and why.

Gail Burrill, Michigan State University

KEYNOTE
Sponsored by Houghton Mifflin Harcourt

172 Staughton (300)
Grades 3-5
Meeting the Needs of ALL Learners through Math Workshop
In this session, you will learn why Math Workshop is a valuable vehicle for mathematics instruction and how to establish routines and procedures that will help get your guided groups and learning stations up and running. Participants will also gain a solid understanding of the different structures within Math Workshop and be able to see how it all fits into a math block. Come learn why successful implementation of Math Workshop is a better fit for both students and teachers.

Jennifer Lempp

Meet the 2019 DME Recipient
Dr. Erick Hofacker,
UW River Falls

WMC’s Distinguished Mathematics Educator Award is the most prestigious award that the Council bestows.
PK-2 Students as Doers of Mathematics
In order to advance access and equity in mathematics, teachers must implement high leverage teaching practices that empower all students. This session will focus on practices that provide PK-2 students with opportunities to engage with mathematics in rich and meaningful ways that emphasize conceptual understanding and mathematical reasoning so that they see themselves as doers of mathematics and problem solvers.

Jennifer Kosiak, University of Wisconsin - La Crosse
Jenni McCool

What Does Your Invitation Look Like?
What motivates and encourages students to engage? In this session, we’ll discuss some of the elements of inviting environments and activities. We’ll take a brief look at some of the invitations offered by the new Illustrative Mathematics Middle School Curriculum and share our own ideas with each other.

Christine Lucas, University of Wisconsin Milwaukee, Greenfield School District

Leveraging Math Models to Promote Discourse
Come one, come all! Have you ever wondered why so many students struggle to carry on math conversations once you stop facilitating? Putting mathematical models at the center of the conversation is changing that for me. Teachers will be exposed to various mathematical models, games, and techniques in order to keep students talking.

Dan Pochinski, School District of Waukesha

Building Positive Middle School Math Experiences
In this session, we will look at ways to help ensure that the launch of a new lesson and the start of a new problem is a positive math experience. We will experience and discuss strategies that address status in the classroom, that make thinking valued and that help students build a positive math identity. Walk away with ideas for orchestrating your upcoming lessons to be positive for all math learners.

Tracy Frank, Math Coach
Melissa Thomley
180 Lawson MLK (24)
Grades 9-12
Collaboration and Cognitive Discourse Through Math Tasks
Attendees will engage in activities where they collaboratively experience math tasks as well as learn about and facilitate experiences around rich math tasks. Accessibility for all learners, real-life tasks, and multiple approaches to tasks will be emphasized and coupled with engagement techniques, and opportunities for extension for students at all ability levels. Participants will leave with a collection of relevant HS math tasks.
Heidi Downs, Houghton Mifflin Harcourt

181 RWI Crystal (64)
General Interest
Reaching ALL Learners with Digital Accessibility
This session is designed to help participants learn about ways to build capacity with their teachers in the realm of designing to meet the needs of all learners. They will hear about the different perspectives and tools needed to create accessible, digital content. Participants will learn about our journey and structures to support opening doors to access for all.
Melissa Piette, Wausau School District
Laura Morris

182 RWI Mahaney (24)
General Interest
E + R = O: Mindset in the Math Classroom
Chasing outcomes, fear of failure and fear of judgment are behaviors that run rampant in our classrooms. These behaviors can hinder meaningful learning. In this session, we will discuss how important mindset can be when it comes to student learning. I will share the Event + Response = Outcome framework we use in the classroom to help students get their minds right and learn together.
Rick Witte, Arrowhead Union High School District

183 RWI McGarvey (24)
General Interest
CS is No Laughing Matter
Computer Science is serious business, changing the world, but there’s also some opportunities for humor. Humor leads to increased engagement and a positive atmosphere. Share a large collection of humorous memes, cartoons and graphics that help students make it through challenging assessments. Enjoy videos that help students through lectures and CS themed magic tricks that increase engagement.
Daniel Rhode, Baraboo High School

184 YC Cummings (96)
Grades 3-5
Rich, Juicy, and Open Math Task Adventures
I will be sharing how to create, implement, design and tailor everyday math tasks/activities to make them rich, juicy, and open task adventures for all students! I will highlight the insights, findings, and work I have compiled over the past several years in collaborating with some of the state's top math teachers/professionals! Please come to learn, share and take away tasks that will ignite your math classroom to the next level!
Tristan Kittilson, Glenwood City School District

185 YC Dominguez Cox (30)
Grades 3-5
Bridges Math Implementation
Bring your questions and ideas around Bridges implementation in your school/district. In this session, you will have the opportunity to share your stories and strategies and hear others' stories and strategies around successes and challenges implementing Bridges.
Teri Hedges, Madison Metropolitan School District

186 YC Fordham Ballenger (30)
General Interest
Catapulting Diverse Learners' Math Achievement Through Team Teaching
Raising diverse learners’ math achievement is done in isolation in most schools. Silos created by walls often limit the diversity of thought, expertise, discourse, and social development among students and educators. Maria Klassy and Madison Corey share their story of how they utilize the structures of team teaching to build a culture of acceptance among their diverse community of learners, thus, catapulting them to higher math achievement.
Maria Klassy, School District of Waukesha
Madison Corey

187 YC Huber Evans (96)
Grades 3-5
Bada-Book-Bada-Boom - Battista!
Looking for materials to use for math intervention? This session will present Cognition-Based Assessment & Teaching (CBA) by Michael Battista. Learn about the levels of sophistication in student reasoning, instructional strategies, assessment tasks, and how to incorporate this into math intervention. Place value, addition/subtraction, multiplication/division, and fractions will be presented. CBA can be used effectively at all three RTI tiers.
Laura Klescewski, Retired Math Interventionist
**Team Teaching in the Inclusive Classroom**

An inclusive classroom is incredibly powerful for ALL students. In this session, we will discuss how our district has built a culture around inclusion and team teaching. We will focus on how you can move your classroom or school to more inclusive practices including: building culture around inclusion, team teaching strategies for staff, study team strategies for students, modified activities for engagement, and differentiated forms of assessments.

Allison Hopkins, Oconomowoc High School
Jennifer Sunder-Bratz, Lydia Sobol, and Sam Tietgen

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**Assess Your Students' Thinking Skills...Without Even Thinking About It!**

Energize your classroom by encouraging your students to take risks in problem solving. REAL problems are not the same as the practice exercises they are so used to doing. By observing the dialogue that takes place while "arguing" about whose way is a "better" solution, you will easily assess their understanding of math concepts and how they think.

Nicholas Restivo, MOEMS

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**10 Equitable Classroom Practices you can do RIGHT NOW! (And why math classrooms need them)**

As teachers, we work hard to create systems and supports for all of our students to experience success. Come experience 10 (research-based and researcher studied) practices that contribute to forming an equitable environment in our school. You will leave with a (figurative) tool bag that you can implement on Monday!

Mary Lee McKenzie, Clark Street Community School
Beth Ott

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**Gamifying the Classroom using the Classcraft Platform**

In this session, I will discuss the power of gamification and show you how to transform your classroom using the Classcraft platform. I will share my experience teaching in a gamified mathematics classroom and how it has engaged and motivated students, changed the culture of the classroom and fostered positive social interaction, and provided amazing tools for self-pacing and differentiation, behavioral supports, classroom management, and fun!

Courtney Vail, School District of La Crosse
Lauren Durand
Thursday, May 2, 2019 2:30 – 3:30 p.m.

194 RWI Mahaney (24)
Grades 9-12
The UW System Mathematics Placement Test
Come learn about the UW System Math Placement Test. Topics will include the development of the test, objectives measured, sample items, and validation work. Included will be time for questions.
Sonya Sedivy, UW Center for Placement Testing
Richard Karwatka

195 YC Huber Evans (96)
Grades 9-12
There’s So Much Out There! How Do I Find a Good Mathematical Task?
Mathematical learning hinges on the selection of a good task. Given the volume of mathematical tasks and lessons that are available online, teachers sometimes have to sort through massive amounts of information just to find that one good task or lesson to use with their students. I will provide some techniques for finding and implementing high cognitive demand tasks that attend to the learning goals you set for a lesson.
Jenny Sagrillo, University of Wisconsin - Milwaukee

196 YC NG Jones (30)
Grades 9-12
Climate Change - Model Mathematical Data from The Climate Reality Project Training with Al Gore
Obtain the most current data about climate change, its causes and its consequences. Have your students model this significant data using the mathematics that they are studying, and have them discover the correlations among various sets of data. Help your students become more socially aware of this important issue with excellent applied mathematics. Obtain all materials: data, student worksheets, teacher notes, and a detailed step-by-step blog.
Tom Reardon, Fitch High School / Youngstown State University

Tweet to Win: WMC wants you to share your highlights, so Tweet your favorite WMC Annual Conference moments using #wismath19. We will randomly select two people each day to receive a WMC prize.

Special Thanks to our Pi Walk/Run Sponsors
197 Bauer Boddie LaDue (64)
Grades 6-8
Using Manipulatives to Develop Conceptual Understanding in the Middle School
Manipulatives are not only for elementary classrooms, but can be used in middle school classrooms to teach the mathematical processes conceptually. This instructional practice ensures students not only understand how math works, but also why it works.
Lynn Schaal, New London Middle School

198 Bauer Morehouse A (50)
Grades PK-2
More or Less? Using Learning Progressions to Support Student Understanding of Comparison
A student has gaps in their learning, what do you do? We will investigate a research-based learning trajectory and discuss how to use it to target instruction to move a student forward. In this session, we will focus on the learning trajectory for comparing, connections to CCSS, and instructional and assessment implications.
Melissa Hedges, WI Department of Public Instruction

199 Bauer Morehouse C (100)
General Interest
Conversations on College and Career Readiness
Join us for a continued conversation on college and career readiness. In this session, a panel of UW System mathematics faculty will highlight the knowledge, skills, and habits of mind required so that students have successful experiences in credit-bearing college mathematics courses. The panel will also share current UW System efforts in both creating common learning outcomes for certain gateway mathematics courses such as College Algebra, Statistics, and Quantitative Reasoning and bridging the PK-16 mathematics pathway.
UW System Math Faculty

200 Kern Brayton Case A (64)
Grades 3-5
Where Do I Begin with Implementing a Math Workshop?
Meeting the needs of students in math classrooms is a challenge that teachers face each day. By implementing a math workshop, teachers can follow a consistent routine that allows them the opportunity to work with individual groups while students practice math strategies in a variety of ways. Come to this workshop to learn more about tips and ideas to make this framework part of your math classroom so you can differentiate for all learners.
Rose Palmer, School District of Waukesha

201 Kern Brown (50)
Grades 3-5
Using Small Guided Groups to be Responsive to Learners and Providing Accessible Opportunities for All
Within the math workshop model, participants will get to experience how lessons are thoughtfully planned based on individualized achievement. By implementing small guided groups in your classroom we can explore ways to establish systems for intentional planning, reflective questioning, developing efficient conferring notes, and strategies to prompt student discourse through critical thinking skills & engaging application activities.
Michelle Tranchita, School District of Waukesha
Adam Dalpra and Kevin Shockley

202 Kern Stansbury Hanson (64)
Grades 3-5
Numeracy Routines Grades K-5
In this session you will learn the importance of numeracy routines, how to implement them in your classroom, and interact with a plethora of numeracy routine resources.
Terri Froiland, School District of Waukesha
Lindsey Johnston

203 Lawson MLK (24)
General Interest
Math Teachers' Circle
Traditional math circles are designed using a simple concept: to bring people together to celebrate and explore the beauty of mathematics by tackling low floor/high ceiling problems. Come and experience your very own Math Circle where we will actively be investigating the hidden mathematics of the card game SET. No knowledge of the game is required.
Nathan Warnberg, UW-La Crosse

204 RWI Crystal (64)
Grades 3-5
Supporting the Language of Mathematics for ALL
All students are language learners in math because they come with different linguistic resources and skills. As the emphasis is shifting from “the right answer” to reasoning, how can we create a learning environment rich in purposeful dialogue? Based on Zwiers’ work, we will share oracy strategies that support student conversations so they build reasoning and language skills, while extending student thinking and voice.
Leslie Waltz, School District of Waukesha
Rachel Boari
Thursday, May 2, 2019 2:30 – 4:00 p.m.

205 RWI McGarvey (24)
General Interest

Engaging Students by Learning Mathematics with Origami
From simple to complex, come on a mathematical journey while making some fun and amazing origami together. You will learn how to incorporate origami into math lessons that you are already doing. During the session you will be able to take everything you make. We will make simple designs with one piece of paper along with modular origami up to thirty pieces of paper. We will make connections to real-world applications with origami.

Kyle Gregerson, Menomonie School District

207 YC Cummings (96)
Grades 9-12

Using Desmos Free Graphing App to Excite Students in HS Math
Kids love Desmos and so will you. It is available on phones, tablets, laptops and is better than any graphing calculator available. It has a Chromebook or iPad test app that makes it perfect to use on your assessments. Bring your device to explore.

Mike Tamblyn, Whitewater Unified School District

208 YC Dominguez Cox (30)
Grades 9-12

Co-Teaching, Project Based Learning and Target Based Grading in Algebra 2- a tall order
During this session I will share the ups and downs of making a pure project-based Algebra 2 class in a test heavy environment. I will discuss how we matched our target based curriculum with authentic activities for a class of 60. I will also share all of the projects (and rubrics) we have created- and discuss what went well, and what changes we plan to make for next year when we switch to a different schedule.

Andie Peterson-Longmore, Neenah Joint School District

209 YC Fordham Ballenger (30)
Grades 9-12

My Journey to a Standards-Based AP Calculus & AP Statistics Classroom
Our high school has adopted a standards-based grading, or Grading for Learning, philosophy beginning this school year. I will share our department’s journey to prepare for this change over the past two years as well as what I have implemented in my Advanced Placement (AP) Calculus and AP Statistics classes THIS school year. This is partially a repeat of last year's presentation with reflections after one complete year.

Damion Beth, Baraboo High Schoo

Join us at the Celebrate WMC event on Thursday evening for our 51st Annual Conference Celebration!

KEYNOTE
206 Staughton (300)
Grades 3-5
Teaching Through Math Residue While Fishing for Misconceptions
Many times throughout the course of a year, we teach a lesson and the understanding goes out with the trash because student retention is minimal. What only makes things worse is that all the misconceptions we thought we addressed resurface towards the end of a unit. Let’s explore how task selection can play a pivotal role in building math residue. Residue makes lessons stick and it reduces the amount of times that misconceptions rear their ugly head.
Graham Fletcher, Henry County Schools, Georgia

Mathematical Proficiency for Every Student Conference
Join us for a one-day focus on Equity on December 5, 2019.
More information will be available on June 15th at www.wismath.org.
Harness the Power of “I Can”

Our revolutionary programs boost confidence and competence in mathematics, accelerating students along the progression to algebra for college and career success.

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Dave Stouffer
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Pre-K
K–8
9–12
K–6
K–8
K–8
5–12
1–5
6–12

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### Friday Meetings and Events Overview
**Friday, May 3, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:15 a.m. – 7:30 a.m.</td>
<td>Annual Pi Run &amp; Walk (Kern Lodge)</td>
</tr>
<tr>
<td></td>
<td><strong>8th Annual Pi Run/Walk</strong> 6:15 a.m. Meet outside of the Kern Lodge parking lot. Get out your running shoes and participate in the 7th 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 entrance of the Exhibit Hall.</td>
</tr>
<tr>
<td>6:30 a.m.–1:30 p.m.</td>
<td>Conference Registration and Check-in (Kraft Centre Lobby)</td>
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<tr>
<td>6:30–8:30 a.m.</td>
<td>Breakfast Served (Kraft Centre Dining Room)</td>
</tr>
<tr>
<td>7:00–7:30 a.m.</td>
<td>First Timer Orientation (Tower Dining Room)</td>
</tr>
<tr>
<td>8:00 a.m.–1:30 p.m.</td>
<td>Visit the Exhibit hall (Pillsbury)</td>
</tr>
<tr>
<td>8:00 a.m. – 3:30 p.m.</td>
<td>Sessions</td>
</tr>
<tr>
<td>8:00 a.m. – 12:30 p.m.</td>
<td>WI-AMTE Sponsored Sessions</td>
</tr>
<tr>
<td>11:00 a.m.–1:00 p.m.</td>
<td>Lunch</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>Closing Session Drawing: Enter your name at the beginning of any 2:30 session to be eligible to win gift cards, conference registration, and much more! Drawing will be at 3:30 p.m. You must be present to win!</td>
</tr>
</tbody>
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A note about reading the room locations: **Throughout the book, the first name indicates the building; the name after the dash indicates the room.**
### Friday, May 3, 2019 Grades PK-2 Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>303</td>
<td>8:00-9:00</td>
<td>Bauer Morehouse A</td>
<td>Using the Bead String to Structure Composite Units and Develop Facile Strategies</td>
</tr>
<tr>
<td>306</td>
<td>8:00-9:00</td>
<td>Kern Boehr Cary</td>
<td>Dollars and Sense and Making Tens</td>
</tr>
<tr>
<td>313</td>
<td>8:00-9:00</td>
<td>RWI Crystal</td>
<td>Weaving Math Across the Day</td>
</tr>
<tr>
<td>332</td>
<td>9:30-11:00</td>
<td>Bauer Morehouse A</td>
<td>Reasoning About Shape Using Attribute Blocks</td>
</tr>
<tr>
<td>339</td>
<td>9:30-11:00</td>
<td>Kern Johnson</td>
<td>Conferring: Working Toward Goals, Individual Learning Strategies, and Keeping it Real</td>
</tr>
<tr>
<td>340</td>
<td>9:30-11:00</td>
<td>Kern Stansbury Hanson</td>
<td>Making Counting Count!</td>
</tr>
<tr>
<td>358</td>
<td>11:30-12:30</td>
<td>Kern Stansbury Hanson</td>
<td>It's Never too Early To Start Problem Solving!</td>
</tr>
<tr>
<td>363</td>
<td>11:30-12:30</td>
<td>Staughton</td>
<td>Developing Representational Competence in Our Students</td>
</tr>
<tr>
<td>EQ 364</td>
<td>1:00-2:00</td>
<td>Bauer Beaty</td>
<td>Forming a Positive Math Identity: How Student Self-Affirmations Can Counteract Stereotype Threat</td>
</tr>
<tr>
<td>EQ 365</td>
<td>1:00-2:00</td>
<td>Bauer Boddie LaDue</td>
<td>Emerging Mathematicians: Our Students and their Math Identities</td>
</tr>
<tr>
<td>383</td>
<td>2:30-3:30</td>
<td>Kern Brayton Case B</td>
<td>Counting Collections: Tips and Strategies for the Early Childhood Teacher</td>
</tr>
</tbody>
</table>

### Friday, May 3, 2019 Grades 3-5 Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>305</td>
<td>8:00-9:00</td>
<td>Bauer Morehouse C</td>
<td>Solving Awesome Problems Using Reading, Writing, Speaking, and Listening…and a Touch of Arguing!</td>
</tr>
<tr>
<td>310</td>
<td>8:00-9:00</td>
<td>Kern Johnson</td>
<td>Conferring: Working Toward Goals, Individual Learning Strategies, and Keeping it Real</td>
</tr>
<tr>
<td>CS 341</td>
<td>9:30-11:00</td>
<td>Kraft Mitchell Dining</td>
<td>Hands-on Computer Science in the K-5 Classroom</td>
</tr>
<tr>
<td>324</td>
<td>9:30-10:30</td>
<td>Kraft Tower Dining</td>
<td>Difficulties in Writing Story Problems</td>
</tr>
<tr>
<td>325</td>
<td>9:30-10:30</td>
<td>RWI Crystal</td>
<td>Multiplication Fact Fluency</td>
</tr>
<tr>
<td>350</td>
<td>11:30-12:30</td>
<td>Bauer Morehouse A</td>
<td>Progressing Through Fraction Understanding</td>
</tr>
<tr>
<td>354</td>
<td>11:30-12:30</td>
<td>Kern Brayton Case A</td>
<td>Simple Centers, Seriously?</td>
</tr>
<tr>
<td>356</td>
<td>11:30-12:30</td>
<td>Kern Brown</td>
<td>Co-Teaching: How We Meet the Needs of ALL Students</td>
</tr>
<tr>
<td>363</td>
<td>11:30-12:30</td>
<td>Staughton</td>
<td>Developing Representational Competence in Our Students</td>
</tr>
<tr>
<td>369</td>
<td>1:00-2:00</td>
<td>Bauer Morehouse C</td>
<td>Interventions from Tier 1 to Tier 3</td>
</tr>
<tr>
<td>373</td>
<td>1:00-2:00</td>
<td>Kern Johnson</td>
<td>Creating High Expectations through Meaningful Math Routines</td>
</tr>
<tr>
<td>375</td>
<td>1:00-2:00</td>
<td>RWI Crystal</td>
<td>Helping Families Help Children Learn Math</td>
</tr>
<tr>
<td>380</td>
<td>2:30-3:30</td>
<td>Bauer Morehouse A</td>
<td>The Changing Face</td>
</tr>
<tr>
<td>382</td>
<td>2:30-3:30</td>
<td>Kern Brayton Case A</td>
<td>What’s Your Angle on Angles?</td>
</tr>
</tbody>
</table>
### Friday, May 3, 2019 Grades 6-8 Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>307</td>
<td>8:00-9:00</td>
<td>Kern Brayton Case A</td>
<td>Amazing Websites for Your Math Classroom</td>
</tr>
<tr>
<td>308</td>
<td>8:00-9:00</td>
<td>Kern Brayton Case B</td>
<td>Super Simple Skill Assessment</td>
</tr>
<tr>
<td>330</td>
<td>9:30-11:00</td>
<td>Bauer Boddie LaDue</td>
<td>High-Impact Strategies in the Math Classroom: Bringing John Hattie’s Research to Life</td>
</tr>
<tr>
<td>336</td>
<td>9:30-11:00</td>
<td>Kern Brayton Case A</td>
<td>Start Infusing Formative Assessment Classroom Techniques (FACTs) into Your Daily Teaching Practice</td>
</tr>
<tr>
<td>344</td>
<td>9:30-11:00</td>
<td>Staughton</td>
<td>What If We’ve Been Teaching Mathematics All Wrong?</td>
</tr>
<tr>
<td>348</td>
<td>11:30-12:30</td>
<td>Bauer Boddie LaDue</td>
<td>Make a Box; Get a Handle on Geometry</td>
</tr>
<tr>
<td>352</td>
<td>11:30-12:30</td>
<td>Bauer Morehouse C</td>
<td>Blowing your Mind with Borrowing: A Close Look at Subtraction!</td>
</tr>
<tr>
<td>355</td>
<td>11:30-12:30</td>
<td>Kern Brayton Case B</td>
<td>All in with IM</td>
</tr>
<tr>
<td>384</td>
<td>2:30-3:30</td>
<td>Staughton</td>
<td>What if We’ve Been Teaching Mathematics all Wrong?</td>
</tr>
</tbody>
</table>

### Friday, May 3, 2019 General Interest Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EQ 304</td>
<td>8:00-9:00</td>
<td>Bauer Morehouse B</td>
<td>Preparing for 2020: The Revolution of Rehumanizing Mathematics</td>
</tr>
<tr>
<td>312</td>
<td>8:00-9:00</td>
<td>Lawson MLK</td>
<td>Math Teacher Education as a Lifelong Endeavor</td>
</tr>
<tr>
<td>315</td>
<td>8:00-9:00</td>
<td>RWI McGarvey</td>
<td>My ITP: Exploring the Mathematics of this Condition</td>
</tr>
<tr>
<td>316</td>
<td>8:00-9:00</td>
<td>Staughton</td>
<td>A Framework for High-Leverage Mathematics Teaching, Learning, and Coaching</td>
</tr>
<tr>
<td>EQ 321</td>
<td>8:00-9:00</td>
<td>YC NG Jones</td>
<td>De-tracking and Ability Grouping Mathematics Meetup</td>
</tr>
<tr>
<td>EQ 333</td>
<td>9:30-11:00</td>
<td>Bauer Morehouse B</td>
<td>Math Out Equity Part 1</td>
</tr>
<tr>
<td>334</td>
<td>9:30-11:00</td>
<td>Bauer Morehouse C</td>
<td>Establishing Mathematics Leadership Capacity in Elementary Schools</td>
</tr>
<tr>
<td>CS 335</td>
<td>9:30-11:00</td>
<td>Kern Boehr Cary</td>
<td>Makey Makey(ing) Opportunities for Computer Science</td>
</tr>
<tr>
<td>338</td>
<td>9:30-11:00</td>
<td>Kern Brown</td>
<td>Using Formative Assessment to Leverage Learning</td>
</tr>
<tr>
<td>342</td>
<td>9:30-11:00</td>
<td>Lawson MLK</td>
<td>Forming Partnerships Between Districts and Higher Education</td>
</tr>
<tr>
<td>322</td>
<td>9:30-10:30</td>
<td>Bauer Beaty</td>
<td>3-Dimensional Teaching</td>
</tr>
<tr>
<td>323</td>
<td>9:30-10:30</td>
<td>Kern Brayton Case B</td>
<td>Making Student Thinking Visible with Number Talks</td>
</tr>
<tr>
<td>326</td>
<td>9:30-10:30</td>
<td>RWI McGarvey</td>
<td>CPM (College Preparatory Mathematics) Networking Session</td>
</tr>
<tr>
<td>347</td>
<td>11:30-12:30</td>
<td>Bauer Beaty</td>
<td>Developing Networks</td>
</tr>
<tr>
<td>CS 349</td>
<td>11:30-12:30</td>
<td>Bauer Lightbody</td>
<td>The CSforAll Commitment Challenge</td>
</tr>
<tr>
<td>EQ 351</td>
<td>11:30-12:30</td>
<td>Bauer Morehouse B</td>
<td>Returning to Our Roots: Principles of Indigenous Pedagogy</td>
</tr>
<tr>
<td>353</td>
<td>11:30-12:30</td>
<td>Kern Boehr Cary</td>
<td>Escape Room Workshop: MATH SUPERHEROES: Conquer Student Arithmophobia!</td>
</tr>
<tr>
<td>359</td>
<td>11:30-12:30</td>
<td>Lawson MLK</td>
<td>Transition into Teaching Leadership</td>
</tr>
<tr>
<td>360</td>
<td>11:30-12:30</td>
<td>RWI Crystal</td>
<td>Algebra I with Patterns</td>
</tr>
<tr>
<td>361</td>
<td>11:30-12:30</td>
<td>RWI Mahaney</td>
<td>Teaching with Endurance: Overcoming the Challenges for the Long Haul</td>
</tr>
<tr>
<td>CS 366</td>
<td>1:00-2:00</td>
<td>Bauer Lightbody</td>
<td>The NEW ISTE Standards for Educators of Computer Science - All Educators!</td>
</tr>
<tr>
<td>EQ 367</td>
<td>1:00-2:00</td>
<td>Bauer Morehouse A</td>
<td>Real World Math Connections: How to Make Math Culturally Relevant</td>
</tr>
<tr>
<td>371</td>
<td>1:00-2:00</td>
<td>Kern Brayton Case A</td>
<td>My Journey in Intervention</td>
</tr>
<tr>
<td>374</td>
<td>1:00-2:00</td>
<td>Kern Stansbury Hanson</td>
<td>Math Tasks and Manipulatives: A Winning Combination</td>
</tr>
<tr>
<td>EQ 381</td>
<td>2:30-3:30</td>
<td>Bauer Morehouse B &amp; C</td>
<td>Math Out Equity Part 2</td>
</tr>
</tbody>
</table>
## Friday, May 3, 2019 Grades 9-12 Sessions

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
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<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>8:00-9:00</td>
<td>Bauer Beaty</td>
<td>Structuring Support Courses for Struggling Algebra and Geometry Students</td>
</tr>
<tr>
<td>301</td>
<td>8:00-9:00</td>
<td>Bauer Boddie LaDue</td>
<td>Developing Core Concepts in Calculus: The Role of Technology</td>
</tr>
<tr>
<td>CS 302</td>
<td>8:00-9:00</td>
<td>Bauer Lightbody</td>
<td>Transforming Computer Science Education with Industry Volunteers</td>
</tr>
<tr>
<td>309</td>
<td>8:00-9:00</td>
<td>Kern Brown</td>
<td>Teaching Calculus with Technology: What (if anything) Should Change?</td>
</tr>
<tr>
<td>311</td>
<td>8:00-9:00</td>
<td>Kern Stansbury Hanson</td>
<td>Intro to Math HyperDocs</td>
</tr>
<tr>
<td>314</td>
<td>8:00-9:00</td>
<td>RWI Mahaney</td>
<td>Building a Math Museum: Harness the Power of Creativity and Collaboration to Teach CCSS</td>
</tr>
<tr>
<td>317</td>
<td>8:00-9:00</td>
<td>YC Cummings</td>
<td>Engaging All Students in your Algebra 1 Classroom</td>
</tr>
<tr>
<td>318</td>
<td>8:00-9:00</td>
<td>YC Dominguez Cox</td>
<td>Fantastic Numbers</td>
</tr>
<tr>
<td>319</td>
<td>8:00-9:00</td>
<td>YC Fordham Ballenger</td>
<td>Using Google Sites to Enhance your Math Classroom</td>
</tr>
<tr>
<td>320</td>
<td>8:00-9:00</td>
<td>YC Huber Evans</td>
<td>Math Intervention for High School Students</td>
</tr>
<tr>
<td>331</td>
<td>9:30-11:00</td>
<td>Bauer Lightbody</td>
<td>Test Writing and Grading on the Four Point Scale</td>
</tr>
<tr>
<td>EQ 337</td>
<td>9:30-11:00</td>
<td>Kern Brayton Case B</td>
<td>More Restore than Before: Fostering Math Discussions</td>
</tr>
<tr>
<td>343</td>
<td>9:30-11:00</td>
<td>RWI Mahaney</td>
<td>Game on! A Discussion and Share-Out of Gamification in the Secondary Classroom</td>
</tr>
<tr>
<td>345</td>
<td>9:30-11:00</td>
<td>YC Fordham Ballenger</td>
<td>AP Statistics - Working with Regression</td>
</tr>
<tr>
<td>346</td>
<td>9:30-11:00</td>
<td>YC NG Jones</td>
<td>Writing Math Tests In the Era of Standards-Based Grading</td>
</tr>
<tr>
<td>327</td>
<td>9:30-10:30</td>
<td>YC Cummings</td>
<td>Teaching Math with Technology - Focus on Algebra</td>
</tr>
<tr>
<td>CS 328</td>
<td>9:30-10:30</td>
<td>YC Dominguez Cox</td>
<td>Why Inheritance? A Practical Illustration of Object-Oriented Programming Principles in Java</td>
</tr>
<tr>
<td>329</td>
<td>9:30-10:30</td>
<td>YC Huber Evans</td>
<td>Provide Strategies, Activities and Conceptual Understanding to Better Prepare Students for the ACT</td>
</tr>
<tr>
<td>EQ 357</td>
<td>11:30-12:30</td>
<td>Kern Johnson</td>
<td>Removing Barriers for Students in the Mathematics Classroom</td>
</tr>
<tr>
<td>362</td>
<td>11:30-12:30</td>
<td>RWI McGarvey</td>
<td>Using Car Logos to Teach Geometry Concepts</td>
</tr>
<tr>
<td>EQ 368</td>
<td>1:00-2:00</td>
<td>Bauer Morehouse B</td>
<td>Mathematics + History + Social Justice = Global Mathematics</td>
</tr>
<tr>
<td>370</td>
<td>1:00-2:00</td>
<td>Kern Boehr Cary</td>
<td>Using Technology to Teach Transformations from Algebra through Calculus</td>
</tr>
<tr>
<td>372</td>
<td>1:00-2:00</td>
<td>Kern Brown</td>
<td>Building a Culture of Personal Responsibility and Fun in the Secondary Classroom</td>
</tr>
<tr>
<td>376</td>
<td>1:00-2:00</td>
<td>Staughton</td>
<td>Building Mathematical Models Related to the Design of Buildings</td>
</tr>
<tr>
<td>377</td>
<td>2:30-3:30</td>
<td>Bauer Beaty</td>
<td>Minutes Matter -- Moving Away From Daily Homework</td>
</tr>
<tr>
<td>378</td>
<td>2:30-3:30</td>
<td>Bauer Boddie LaDue</td>
<td>Green Bay Lambeau Field Renovation Activity – The Math Behind Keeping the Field Warm</td>
</tr>
<tr>
<td>379</td>
<td>2:30-3:30</td>
<td>Bauer Lightbody</td>
<td>Geometric Probability Project: DARTBOARD and the MoMath Rosenthal Prize</td>
</tr>
</tbody>
</table>
Friday, May 3, 2019 8:00 – 9:00 a.m.

300 Bauer Beaty (50)
Grades 9-12
Structuring Support Courses for Struggling Algebra and Geometry Students
This session will discuss the development of the support courses at Poynette High School with a focus on the daily structure and grading for the course. We will also discuss the teaching practices used, successes and struggles of teachers and students, and multiple years of standards-based data. (Follow-up to Supporting Struggling Algebra and Geometry Students presented last year, but participants did not need to attend previous session.)

Dr. Leah Hover-Preiss, Poynette School District

301 Bauer Boddie LaDue (64)
Grades 9-12
Developing Core Concepts in Calculus: The Role of Technology
Experiences with interactive dynamic technology can be used to help students develop robust conceptual structures for key calculus concepts such as rate of change, concavity, derivative, accumulation, or average value. The session will also explore how these concepts play out in some typical AP exam questions.

Gail Burrill, Midhigan State University

CS 302 Bauer Lightbody (50)
Grades 9-12
Transforming Computer Science Education with Industry Volunteers
Computing represents 60% of STEM jobs, but only 25% of schools teach CS. Learn how TEALS partners teachers with engineers to teach AP CS.

Mark Zachar, Microsoft Philanthropies TEALS Program
Alex Pehler

303 Bauer Morehouse A (50)
Grades PK-2
Using the Bead String to Structure Composite Units and Develop Facile Strategies
The 100 bead string is a powerful tool in helping students envision, make connections, and verbalize number relationships. Our goal is to get students facile with structuring composite units, but how we get them there is the KEY! Come explore the learning trajectories and corresponding bead string activities that will build deeper connections with foundational knowledge needed to develop conceptual place value.

Dina Mendola, US Math Recovery Council®

KEYNOTE

EQ 304 Bauer Morehouse B (100)
General Interest
Preparing for 2020: The Revolution of Rehumanizing Mathematics
What does “teaching for tomorrow” look like? As math educators we have accepted the proposed ideology shifts about effective practice but the blueprint for day-to-day instruction still feels imprecise. We like the idea of productive discourse but fear mismanaged student discussion. We want students to feel free to conjecture but what if their ideas are off base? We try to use context to help students conceptualize but despite our best efforts they become lost in the aesthetic. We try to make connections but students simply do not see them. Rehumanizing mathematics is an approach to teaching that provides answers to these authentic challenges.

Runninghorse Livingston, Mathematize Inc.

305 Bauer Morehouse C (100)
Grades 3-5
Solving Awesome Problems Using Reading, Writing, Speaking, and Listening...and a Touch of Arguing!
Energize your classroom by encouraging your students to take risks in solving problems. REAL problems are not the same as the practice exercises. By observing the dialogue that takes place while “arguing” about whose way is a "better" solution, you will easily assess their understanding of math concepts and how those concepts are processed.

Nicholas Restivo, MOEMS

306 Kern Boehr Cary (64)
Grades PK-2
Dollars and Sense and Making Tens
We will engage you in a card sort activity and subsequent task in which you explore place value as it relates to money using visuals. We will extend the use of these tools to explore addition and subtraction while connecting these concepts to real-life situations. We will also use tools to explore ways to make tens.

Ashlee LeGear, School District of Waukesha
Erick Hofacker
307 Kern Brayton Case A (64)
Grades 6-8
Amazing Websites for Your Math Classroom
Learn about a variety of amazing math websites and how you could incorporate them into your math classroom. These websites are geared for math classrooms 3-8. Participants should bring a laptop to actively participate.
Caitlin Clausen, School District of Holmen

308 Kern Brayton Case B (64)
Grades 6-8
Super Simple Skill Assessment
In this session, we will explore online tools that make it very easy to assess student understanding in a formative or summative way. Increase your responsiveness to specific student needs in your classroom. Save time, save energy, save copying costs, and save your sanity if you are currently using and grading worksheets and quizzes. Computers or mobile devices are suggested.
John Marzion, Oak Creek Franklin School District
Cara Flach

309 Kern Brown (50)
Grades 9-12
Teaching Calculus with Technology: What (if anything) Should Change?
The existence of technology such as graphing calculators, Desmos, and Wolfram Alpha, has undoubtedly influenced the way many of us teach calculus, but the overall format of a typical Calculus course has remained largely unchanged. In this session, participants will be led in a discussion of more mathematically substantial changes made possible by technology. For example, why not follow history and start your calculus course with integration?
Kevin McLeod, UW-Milwaukee

310 Kern Johnson (50)
Grades 3-5
Conferring: Working Toward Goals, Individual Learning Strategies, and Keeping it Real
Ensure that ALL your students have access to high quality math instruction that will meet their needs through math conferring. Participants will learn from classroom teachers how conferring helps students focus their work on specific goals and takes individual learning strategies into account. We will explore how this CAN work alongside meeting students in small and large groups. Learn about purposeful note-taking.
Susan Aleson, School District of Waukesha
Kelly Horton and Jessica Bartmann

311 Kern Stansbury Hanson (64)
Grades 9-12
Intro to Math HyperDocs
This session will introduce teachers to the power of using HyperDocs, a combined lesson planning/activity Google Document, to give students more freedom for self-directed and self-paced learning and as a way to integrate further technology into the math classroom. The focus will be on high school mathematics, but examples for middle school math will be shown. Bring your laptop to be ready to investigate and start to build your own!
Blake Burgess, Whitnall School District

312 Lawson MLK (24)
General Interest
Math Teacher Education as A Lifelong Endeavor
A panel discussion will discuss the opportunities for teachers to find continuous and effective professional development in the field.
Organized by WI-AMTE

313 RWI Crystal (64)
Grades PK-2
Weaving Math Across the Day
Participants will get a variety of ideas for integrating math across the curriculum into science and social studies instruction. Learn about daily routines that support math standards and small group learning to help reach all learners. Play-based learning will also be presented along with ideas for enriching this play to incorporate more math. Many examples of games to use with students will be provided as well as some make and take activities.
Erin Fossum, Dixon Elementary School

314 RWI Mahaney (24)
Grades 9-12
Building a Math Museum: Harness the Power of Creativity and Collaboration to Teach CCSS
If you are already a believer in project-based learning, having your students create a mathematics museum exhibit can take your practice to the next level! In this session, discover how the Learning on Display model can infuse art, writing, research and creativity into your mathematics curriculum. You will see an overview of the process behind student-created museums and experience some of the activities that engage students collaboratively.
Bradley Hartney, Milwaukee Public Schools
My ITP: Exploring the Mathematics of this Condition
ITP = Idiopathic (or Immune) Thrombocytopenic Purpura.
It is a medical condition not a math acronym! Earlier this school year, I had quite a learning experience with my ITP encounter, and I am here to share my story as it relates to mathematics. Expect some fundamental medical background explanations involving basic mathematics that may help you motivate your students as we pause to appreciate the professionals who understand math and science. We may even answer the quintessential question "Where will we EVER use this?"

Christine Lucas, University of Wisconsin Milwaukee

Fantastic Numbers
Using paper-folding, cut-and-pasting, graphing, counting, and measuring, you will discover the world’s most fantastic numbers. You will discover roots, phi, pi, and e. No advanced math will be used.

George J Marino, Retired Math Interventionist

Using Google Sites to Enhance your Math Classroom
I will take you through how I use google sites to enhance my classroom for extra student help, parent communication, and catching up students who are gone. Learn the basics and some new features of Google Sites. Learn how to make your website user friendly and professional. *Please bring your computer, tablet, Chromebook, etc. so you can practice!*

Kristyn Wilks-Muth, Union Grove Union High School

Math Intervention for High School Students
Supporting our struggling math learners as they reach high school becomes increasingly challenging. We have developed and implemented a math intervention program for these particular students. In this session, we will share elements of our framework, curriculum, resources, and strategies. Expect to engage in a few of our intervention activities, learn about our program and experiences, and gather ideas to help strengthen your own interventions.

Melanie Jackson, Neenah Joint School District
Nathan Koenecke

De-tracking and Ability Grouping Mathematics Meetup
De-tracking and elimination of ability grouping in mathematics education are drawing attention in conversations about equity, access, and empowerment. This interactive gathering invites you to network, learn, and share with fellow educators who are interested in and/or committed to de-tracking students and teachers, and eliminating ability grouping in mathematics education. Bring your ideas, experiences, research, and questions.

Becky Walker, Howard-Suamico School District
322 Bauer Beaty (50)  
General Interest  
3-Dimensional Teaching  
How do we encourage students to embrace the concept of productive struggle? How do we help all students to feel as though they belong in our classroom? How do we create confidence in all of our students? The answer lies in 3-D Teaching. Based off of the 3-D coaching model, we will look at the 3-dimensions of our students and how to use those different dimensions to foster productivity, confidence and self-worth.  
Tanya Amys, Maple School District  
Bob Coleman

323 Kern Brayton Case B (64)  
General Interest  
Making Student Thinking Visible with Number Talks  
This session will help your students enhance their number sense through math talks. With conceptual understanding being our ultimate goal in math classrooms, performing math talks consistently can help all students build confidence in recognizing patterns and relationships between numbers. Students gain access to seeing multiple representations, learn to communicate their solutions to others and make sense of someone else's justification.  
Angela Kraft, Oconomowoc Area School District

324 Kraft Tower Dining (50)  
Grades 3-5  
Difficulties in Writing Story Problems  
This session will include some of the difficulties that both teachers and students experience while writing a story problem for the given fraction number sentences. This task is challenging especially for multiplication and subtraction story problems. The session will include a discussion on the possible reasons for the difficulty to create story problems.  
Sirin Budak, UW Stevens Point

325 RWI Crystal (64)  
Grades 3-5  
Multiplication Fact Fluency  
“It is critical that students know their basic facts well, and teaching them effectively requires much more than flash cards and timed tests” (Van de Walle, et al., 2014). In this session, I’ll model the intervention process I use with students to master the basic multiplication facts in 4th grade and beyond. Tweaks to the process for teaching the fact strategies in third grade will also be included.  
Lori Williams, Manitowoc Public School District

326 RWI McGarvey (24)  
General Interest  
CPM Networking Session  
Teachers who have been using the College Preparatory Mathematics (CPM) program or teachers who are interested in learning more about CPM should join this networking session. See how the program is being implemented in a variety of districts and get ideas for topics including differentiation, intervention, assessment, student and teacher collaboration, course sequencing, professional development opportunities.  
Bruce Brusoe, CPM Educational Program

327 YC Cummings (96)  
Grades 9-12  
Teaching Math with Technology - Focus on Algebra  
Learn how to integrate technology into your algebra classroom. Technology provides opportunities for all students to learn in an active, self-directed environment. The use of technology enhances and changes mathematics learning as well as mathematics teaching. In this session, participants will experience the following technologies: quick response codes; poll everywhere; socratic; graphing calculators; desmos; quizlet; clickers; motion sensors.  
Joan Masek, Milwaukee Public Schools  
Erin McReynolds

CS 328 YC Dominguez Cox (30)  
Grades 9-12  
Why Inheritance? A Practical Illustration of Object-Oriented Programming Principles in Java  
Students, regardless of their level of programming proficiency upon entering AP CS A, often resist the important elements of object-oriented programming taught in the course. This session will review a practical application of inheritance using a basic Tetravex game written in Java and a graphical user interface. Abstract classes, inheritance, and polymorphism will be discussed.  
Christopher Reis, Marquette University High School

329 YC Huber Evans (96)  
Grades 9-12  
Provide Strategies, Activities and Conceptual Understanding to Better Prepare Students for the ACT  
We will provide interactive activities that align to the types of problems that are on the newly revised ACT that can be integrated into your daily lessons. Creatively use technology as a learning, teaching and discovery tool! Topics include Pythagorean triples, functions, systems, percents, matrices, stats, and trig. Get access to problems from recent exams and all activities.  
Tom Reardon, Fitch High School/Youngstown State University
330 Bauer Boddie LaDue (64)
Grades 6-8
High-Impact Strategies in the Math Classroom: Bringing John Hattie's Research to Life
Through his research, John Hattie has compiled a list of influences on student achievement, from the ones that allow for the most growth in a single school year, down to the influences with a negative impact. This workshop will engage teachers and leaders in activities that will bring this research to life in their classrooms.
Denise McDowell, Big Ideas Learning

331 Bauer Lightbody (50)
Grades 9-12
Test Writing and Grading on the Four Point Scale
Are you struggling with writing or coming up with a grade for an assessment using the four point model? This session will look at ways to not only effectively come up with a score but also how to create assessments that will make that decision easy and straightforward. And if that was not enough, we will be talking about how to use this format to handle the rigor of reassessment.
Jeff Harding, Mundelein High School

332 Bauer Morehouse A (50)
Grades PK-2
Reasoning About Shape Using Attribute Blocks
Do you have attribute blocks that have been sitting in your closet for years and don’t know what to do with them? Come explore how to use attribute blocks to develop young children’s spatial reasoning and language skills. We will connect this work to the 2D Shape Learning Trajectory. You will leave with new ideas to make use of this valuable tool. This session revisits ideas from Wednesday’s Early Childhood preconference.
Melissa Hedges, WI Department of Public Instruction

EQ 333 Bauer Morehouse B (100)
General Interest
Math Out Equity
Equity is more than a buzz word; it is a lifestyle, a practice. Join us for a workshop on equity and equitable teaching practices. Through an exploration of self, history, and systems, equity and inclusion has to be embedded in every type of curriculum to ensure that all students have a welcoming place to learn, grow, and feel safe.
Shaundel Spivey, Western Technical College
Maggie McHugh

334 Bauer Morehouse C (100)
General Interest
Building Mathematics Leadership Capacity in Elementary Schools
Ensuring that all students have access to high-quality math instruction requires a shared vision and strong leadership that extends beyond the principal’s office. This session will share our efforts, in partnership with the Mathematics Institute of Wisconsin, to increase math leadership capacity in preparation for the implementation of new instructional materials in grade K-5.
Jennifer Lawler, Kenosha Unified School District
Kristi Gettelman and Eric Kanters

CS 335 Kern Boehr Cary (64)
General Interest
Makey Makey(ing) Opportunities for Computer Science
In this workshop we’ll play with devices called makey makeys that allow users to turn everyday objects into buttons. Using the Scratch language, we will explore ways to spark investigation of CS topics. Bring a laptop and creativity!
Josh Hertel, University of Wisconsin-La Crosse

336 Kern Brayton Case A (64)
Grades 6-8
Start Infusing Formative Assessment Classroom Techniques (FACTs) into Your Daily Teaching Practice
Active collaboration required! Share your experiences with formative assessment practices and get feedback on ways to improve on what you’re already doing. New FACTs will be introduced and practiced so teachers are ready for their middle school math classroom on Monday morning! Participants will add additional strategies to their assessment toolbox and walk away armed with new ideas.
Crystal Marie Vesperman, School District of La Crosse

EQ 337 Kern Brayton Case B (64)
Grades 9-12
More Restore than Before: Fostering Math Discussions
Looking for ways to engage all learners? Using Restorative Content circles, community and trust are built as a way to foster deeper conversations and understanding. A great tool for fostering a stronger math identity, self-assessment, and equity! Come experience for yourself! Research also discussed.
Cori Moran, South Milwaukee School District
Friday, May 3, 2019 9:30 – 11:00 a.m.

338 Kern Brown (50)
General Interest
Using Formative Assessment to Leverage Learning
Formative assessment is not a new strategy. In fact, John Hattie states that formative assessment has a .90 effect size. But are we using the right type of formative assessment to leverage learning? This session will provide attendees with strategies and practices to review their formative assessment practices and use this new learning to leverage learning for all students.
Kurt Krizan, Little Chute Area School District

339 Kern Johnson (50)
Grades PK-2
Conferring: Working Toward Goals, Individual Learning Strategies, and Keeping it Real
Ensure that ALL your students have access to high quality math instruction that will meet their needs through math conferring. Participants will learn from classroom teachers how conferring helps students focus their work on specific goals and takes individual learning strategies into account. We will explore how this CAN work alongside meeting students in small and large groups. Learn about purposeful note-taking.
Susan Aleson, School District of Waukesha
Kelly Horton and Jessica Bartmann

340 Kern Stansbury Hanson (64)
Grades PK-2
Making Counting Count!
From counting objects, to counting on, and counting down, educational researchers continue to link children’s understanding of counting to future math success. Participants will explore how counting progresses through Pre-Kindergarten to 1st grade with a focus on creating conceptual understanding instead of counting procedures.
Rachel Kozicke, School District of Waukesha

CS 341 Kraft Mitchell Dining (50)
Grades 3-5
Hands-on Computer Science in the K-5 Classroom
Come learn hands-on computer science activities that you can do with your students in the K-5 classroom. Examples of Code.org offline unplugged activities will be presented. You will get the opportunity to play with a variety of robotics and try out devices you can use in the classroom. You will learn how you can teach computer science in your classroom in a way that will engage students in material you are already teaching.
Kyle Gregerson, Menomonee School District

342 Lawson MLK (24)
General Interest
Forming Partnerships Between Districts and Higher Education
The AMTE standards call for partnerships between school districts and teacher preparation programs to support the development of preservice teachers and their mentors. How can we build and grow these connections? In this session, we will discuss how to form these partnerships, how to sustain them, and what outcomes successful partnerships can accomplish.
Organized by WI-AMTE

343 RWI Mahaney (24)
Grades 9-12
Game on! A Discussion and Share-Out of Gamification in the Secondary Classroom
This session will serve as a share-out and networking for resources and methodologies for gamification and game-based instruction in the Grades 9-12 classroom.
Eric Anderson, Kettle Moraine

Attend three WMC Equity Sessions and get a free gift from WMC. Turn in your Equity sticker card found in the back of this booklet at the WMC Registration Area.
KEYNOTE

344 Staughton (300)
Grades 6-8
What If We’ve Been Teaching Mathematics All Wrong?
One of the biggest myths is that mathematics is all about computation. John Allen Paulos wrote in his book Innumeracy, "...mathematics has as much to do with computation as writing has to do with typing." Yet, school mathematics continues to focus heavily on computation and arithmetic and not nearly enough on critical thinking and problem solving. What the Common Core gets right is the 8 Mathematical Practices, and these competencies depend on instruction and curriculum that expose students to mathematics as a way of thinking and solving problems.
Fawn Nguyen, Mesa Union Junior High School, Somis, California

345 YC Fordham Ballenger (30)
Grades 9-12
AP Statistics - Working with Regression
Get ready to check out and do some activities pertaining to regression. We will work through previous AP exam questions pertaining to regression topics and also discuss how to handle inference for regression as the AP exam approaches.
Jason Dahl, Oconomowoc High School
Allison Hopkins

346 YC NG Jones (30)
Grades 9-12
Writing Math Tests In the Era of Standards-Based Grading
These teachers of a geometry course will share with participants their strategy for identifying “power” standards and the unpacking of associated learning targets to test, writing test questions for varying levels of proficiency, and evaluating/grading student work. Participants will get to collaborate to plan a test for a learning target within a unit of study within their subject matter.
Allen Langenhuizen, Appleton Area School District
Anthony Palma and Tom Pritzl

Friday, May 3, 2019 11:30 a.m. – 12:30 p.m.

347 Bauer Beaty (50)
General Interest
Developing Networks
I paused my career to explore my professional learning and networking. I will share my strategy for finding and connecting with others, how significant those connections are, and how this relates to the students we teach!
Mary Langmyer, Teacher on Leave

348 Bauer Boddie LaDue (64)
Grades 6-8
Make a Box; Get a Handle on Geometry
Turn a used greeting card into a box, or more accurately, a rectangular prism, while exploring definitions and delving into a deeper understanding of the nuances among quadrilaterals, parallelograms, rectangles, squares, and more. The relationships between area and perimeter are brought into focus by this hands on activity.
Nicholas Restivo, MOEMS

CS 349 Bauer Lightbody (50)
General Interest
The CSforAll Commitment Challenge
CSforAll nationally works to enable all students in grades K-12 to achieve computer science literacy as an integral part of their educational experience. The CSTA WI-Dairyland Chapter is a member and has made a commitment to achieving CSforAll in Wisconsin. What does “all” really mean and how can we achieve the goal of having each district sign this pledge? Small group work will focus on the commitment as well the district pledge.
Joe Kmoch, CSTA WI-Dairyland
350 Bauer Morehouse A (50)
Grades 3-5
Progressing Through Fraction Understanding
Participants will develop their understanding of how fraction understanding develops through the Common Core State Standards (grades 3 through 5). This session will include not only the “unpacking” of the standards, but activities to support learners as they progress through 3.NF.1 - 5.NF.7
Kathy Koscielniak, South Milwaukee School District
Julie McNicoll

352 Bauer Morehouse C (100)
Grades 6-8
Blowing your Mind with Borrowing: A Close Look at Subtraction!
Subtraction. That operation most students shy away from. The one that they still have difficulty with in middle school. In this session, we will investigate different ways of thinking about subtraction that can be introduced in middle school to have students build a love of subtracting through conceptual understanding of number, operations, and the concept of “borrowing”! Be ready to think about subtracting like you never have before!
Stephanie Bernander, University of Wisconsin Oshkosh

353 Kern Boehr Cary (64)
General Interest
Escape Room Workshop: MATH SUPERHEROES: Conquer Student Arithmophobia!
This is not your normal workshop session environment. Put your problem-solving and teamwork skills to the test to unlock the clues and solve the mystery to escape! Strategies and cooperation are critical to success in this challenge. Experience problem-solving and mathematical modeling activities that can be used in the classroom in this lively and challenging Escape Room context!

354 Kern Brayton Case A (64)
Grades 3-5
Simple Centers, Seriously?
Preparation, classroom management, and differentiation can all make using centers challenging. Come learn new strategies and hear ideas to make center learning meaningful for students and realistic for teachers. See how manipulatives can be used to engage your students at centers.
Kevin Dykema, Mattawan Consolidated Schools

355 Kern Brayton Case B (64)
Grades 6-8
All in with IM
Come join us as we dig a little deeper into the Illustrative Mathematics (IM) curriculum. Join two teachers who have begun the exploration of this curriculum this year. Navigate your way through a task, ask questions, see the curriculum layout, and uncover how equity is built into the curriculum. We would love to have other users of the curriculum join us and add to the rich conversations that will unfold.
Mary Zastrow, Reedsville Middle School
Michelle Butturini

KEYNOTE

351 Bauer Morehouse B (100)
General Interest
Returning to Our Roots: Principles of Indigenous Pedagogy
At one point in everybody’s history, their ethnic cultural group was considered “tribal.” This includes European ethnic groups. As modern indigenous communities design solutions for the achievement gap, it is becoming evident that a return to traditional teaching and learning practices are effective for all students. The art and science of oral tradition, for example, directly embody Standards of Mathematical Practice centered on engagement, discourse, and constructing arguments. Drawing distinct intradisciplinary and interdisciplinary connections as outlined in NCTM’s Effective Mathematics Teaching Practices is congruent with holistic teaching and learning. As many indigenous groups believe, to know who you are is to know who you were.
Runninghorse Livingston, Mathematize Inc.

356 Kern Brown (50)
Grades 3-5
Co-Teaching: How We Meet the Needs of ALL Students
What can we do to address the varying abilities found in a math classroom? The co-teaching model was our answer to integrating interventions and differentiation in the classroom. We will share our journey in how we provide all students access to rich math activities. Co-teaching strategies will be demonstrated, misconceptions will be addressed, and how we made this model work for Coleman Elementary School will be shared.
Deb Heitman, Coleman School District
Troy Gruszynski
**Friday, May 3, 2019 11:30 a.m. – 12:30 p.m.**

**EQ 357 Kern Johnson (50)**
**Grades 9-12**

**Removing Barriers for Students in the Mathematics Classroom**
Methods of paving avenues through barriers that allow access, equity, and success to all students from my classroom will be shared. Including affirmation of students, raising rigor to create productive struggle, and good teaching strategies to support students that have worked for my students and me.

Colleen Thompson, Mishicot High School

**358 Kern Stansbury Hanson (64)**
**Grades PK-2**

**It’s Never too Early To Start Problem Solving!**
Children as young as kindergarten can problem solve when given an opportunity to solve problems in a way that makes sense to them. Learn how to introduce problem solving and encourage students to share their strategies in grades K-2. An overview of Cognitively Guided Instruction, problem types, and solution strategies will be covered.

Laura Klescewski, Retired math interventionist

**359 Lawson MLK (24)**
**General Interest**

**Transition into Teaching Leadership**
Teacher leaders are one of the keys to improving mathematics education. A panel of teacher leaders will discuss their experiences with a focus on how they made this transition from classroom teaching to various forms of teacher leadership. Come to hear about entry points to start your leadership journey!

**360 RWI Crystal (64)**
**General Interest**

**Algebra I with Patterns**
Humans look for consistency and order. What can we expect to happen next? This seems to naturally lead to using digital technology and other tools to make predictions and check them. This presentation will share our knowledge of how teachers and students experience Algebra I through a pattern-finding approach.

George Reese, University of Illinois at Urbana-Champaign

Jana Sebestik

**361 RWI Mahaney (24)**
**General Interest**

**Teaching with Endurance: Overcoming the Challenges for the Long Haul**
Teaching is challenging. The intensity of this challenge continues to escalate with the result being growing attrition rates and increasing discouragement. The U.S. spends billions in professional development but there exists no clear value of most teacher development efforts. This presentation will combine research, experience, and lessons from coaching and mentoring to provide clarity on how to overcome challenges faced by teachers of mathematics.

Brad Kahrs, University of Wisconsin-Stevens Point

**362 RWI McGarvey (24)**
**Grades 9-12**

**Using Car Logos to Teach Geometry Concepts**
According to the Common Core State Standards for Mathematics, students are expected to have knowledge of the concept of symmetry (including different types of symmetry). In this talk, we will illustrate how to use car logos to teach the concept of symmetry. Other relevant mathematical topics in the analysis of car logos will be discussed.

Senfeng Liang, University of Wisconsin-Stevens Point

Madeline Ahrens

**KEYNOTE**

**363 Staughton (300)**
**Grades PK-5**

**Developing Representational Competence in Our Students**
Principles to Actions highlights representations as a high-leverage teaching practice. It is only through representations that students have access to mathematical ideas. Examine what it means to develop representational competence and empower students through connections among visual, physical, contextual, verbal, and symbolic representations.

DeAnn Huinker, University of Wisconsin-Milwaukee
EQ 364 Bauer Beaty (50)
Grades PK-2

Forming a Positive Math Identity: How Student Self-Affirmations can Counteract Stereotype Threat
This session focuses on the vital role student self-affirmations play in developing a positive mathematical identity. We will look at research on stereotype threat, the situational predicament in which individuals are at risk of confirming negative stereotypes about their group, and how we can help marginalized students counteract these threats.

John Silverthorne, Wauwatosa School District

EQ 365 Bauer Boddie LaDue (64)
Grades PK-2

Emerging Mathematicians: Our Students and their Math Identities
Access and equity are very real issues for our students, in particular students of color. Culturally Relevant Teaching (CRT) can help each and every student develop a strong mathematical identity in order to reach mathematical competence. This session will focus on the Ready for Rigor framework and its use in the math classroom.

Danielle Robinson, Milwaukee Public Schools

CS 366 Bauer Lightbody (50)
General Interest

The NEW ISTE Standards for Educators of Computer Science - All Educators!
With the growing awareness that computer science knowledge, skills, and dispositions are infused in almost everything we study, there is a growing need to provide a framework for all educators to bring various computer science knowledge skills, and dispositions into their course domains. Computational thinking, the marriage of higher order thinking skills, and computing are the focus. Let’s share some ideas together in both large and small groups.

Joe Kmoch, CSTA WI-Dairyland

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EQ 367 Bauer Morehouse A (50)
General Interest

Real World Math Connections: How to Make Math Culturally Relevant
One of the biggest misconceptions about math is that we can’t make it culturally relevant. We will learn how we can take real world connections one step further and be culturally relevant in math. The session will include math lesson ideas connected to Common Core math standards in a variety of grade levels. We will discuss how to make math engaging at any grade level.

Melissa Tempel, School District of Waukesha

EQ 368 Bauer Morehouse B (100)
Grades 9-12

Mathematics + History + Social Justice = Global Mathematics
This session will describe how one high school created an elective course, Global Mathematics, that helps students understand and critique the world while also experiencing wonder, joy, and beauty. This course engages students at every ability level through the study of the history of math and the usefulness of math to address global and local issues. Course materials will be shared.

David Ebert, Oregon High School

369 Bauer Morehouse C (100)
Grades 3-5

Interventions from Tier 1 to Tier 3
For years teachers struggled with tier 1 while interventionists struggled with tier 2/3. We have finally found a way to help out teachers with tier 1 while allowing that to feed into tier 2 and then lead that to tier 3. It’s not always perfect but it’s a whole lot better than it was.

Mark Schommer, D.C. Everest School District
Sarah Trimner

370 Kern Boehr Cary (64)
Grades 9-12

Using Technology to Teach Transformations from Algebra through Calculus
Understanding transformations can help students make sense of mathematical concepts including those they encounter for the first time. The session will focus on teaching transformations to write equations of lines, model exponential growth, derive the equation of the sum and product of sinusoids, understand the z-score, and discover the Chain Rule. Participants will learn why transformations in the x-direction have the opposite effect.

Ronn Blaha, Brookfield Central High School
Scott Nelsen
Friday, May 3, 2019 1:00 – 2:00 p.m.

371 Kern Brayton Case A (64)
General Interest

My Journey in Intervention
Come join an interventionist as they detail their accidental journey. Session will include a discussion of services provided, programs used, and experiences encountered trying to figure out what intervention is. This session is designed for new interventionists or for others who want to see what intervention can be like. Please bring a device.

Christian Hellermann, School District of Wabeno Area

372 Kern Brown (50)
Grades 9-12

Building a Culture of Personal Responsibility and Fun in the Secondary Classroom
Students learn more effectively and efficiently in mathematics when they own their journey. Also, meeting the students where they are at doesn’t hurt :) Topics covered will include: student-created goals, student-led parent conferences, student narratives and records, and gamification.

Eric Anderson, Kettle Moraine

373 Kern Johnson (50)
Grades 3-5

Creating High Expectations through Meaningful Math Routines
This session tackles the complex issue of how to create high expectations for all students in elementary classrooms. Understanding which math routines to use and how to strategically scaffold them for optimal learning will be one of the key components discussed. Participants will also discuss and see examples of how personal math reflections can empower students to meet high expectations.

Matt Coaty, CUSD 95 Lake Zurich, IL

374 Kern Stansbury Hanson (64)
General Interest

Math Tasks and Manipulatives: A Winning Combination
Rich mathematical tasks that engage students in solving and discussing are a vital part of a mathematics classroom. Manipulatives can be utilized as a tool to help students with such tasks by providing entry points for each and every student. Come explore some rich tasks utilizing a variety of manipulatives.

Kevin Dykema, Mattawan Consolidated Schools

375 RWI Crystal (64)
Grades 3-5

Helping Families Help Children Learn Math
Two fourth grade teachers share strategies and resources for leading successful parent math nights. Michelle Kornitz and Kim McLean have been teaching parents for 5 years, introducing them to unit concepts, current best practices in math, and games supporting student engagement and learning.

Michelle Kornitz, Glendale-River Hills School District
Kim McLean

KEYNOTE

376 Staughton (300)
Grades 9-12

Building Mathematical Models Related to the Design of Buildings
The focus of this session will be on mathematical models and activities related to the shapes and designs of astonishing and unusual buildings in Abu Dhabi, Dubai, San Francisco, Dallas, Yellowknife and elsewhere around the world. As we travel from the ground floor to the top of these buildings we will make stops to visit linear and quadratic functions; we will meet the golden ratio and interact with topics from algebra, geometry, and trigonometry.

Ron Lancaster, University of Toronto

ATTEND ANY OF THE 2:30 SESSIONS AND ENTER YOUR NAME FOR A DRAWING TO WIN GREAT WMC PRIZES. THE WINNERS WILL BE ANNOUNCED AT 3:30 IN EACH SESSION!
Minutes Matter -- Moving Away From Daily Homework
Technology and standards have changed, why not daily practice? Hear how a rural Wisconsin teacher committed to making his classroom different, making minutes matter, no busy work, and no “playing school” requirement to learning math.

Scott Anderson, Juda School District

Green Bay Lambeau Field Renovation Activity – The Math Behind Keeping the Field Warm
Lambeau Field was renovated in 2018. While touring it, I developed a math activity. Some questions: What is the cost of tubing under field?, What is the length of tubing in miles?, What is the volume of solution in tubing in gallons?, and What is the volume of plastic needed to make tubing? To solve, students must ask for data needed. Necessary skills include problem solving, units conversion, volume, and slope. Student and teacher materials, solutions, and photos provided. Bonus: program to draw Packers logo on TI-calculator.

Tom Reardon, Fitch High School/Youngstown State University

Geometric Probability Project: DARTBOARD and the MoMath Rosenthal Prize
The DARTBOARD project shows the BUF (Beauty, Usefulness, and Fun) of Mathematics. Students calculate and analyze theoretical and experimental probabilities by hand and with technology (GeoGebra and Google Sheets). In addition to exploring this project and the extensions of this project, I will also take you on an adventure of MoMath (National Museum of Mathematics in NYC) and the Rosenthal Prize.

Elizabeth Masslich, Cedarburg School District

What’s Your Angle on Angles?
Do your students struggle to “see” angle relationships? Are protractors perplexing? This session will provide lessons and hands-on activities to illuminate angle measurement understanding, explore application of angle relationships in middle school, and connect this understanding to transformational geometry and high school trigonometry.

Elizabeth Peyser, Curriculum Associates

Counting Collections: Tips and Strategies for the Early Childhood Teacher
You’ve heard of counting collections... but how do you implement them in your classroom? I’ve used counting collections in my classroom for two years, come learn from my experience! We’ll begin by learning how to set up a successful counting collections experience in a kindergarten classroom. We will make ties to Clements’ Counting Learning Trajectory and discuss how the tool helped me make enhancements that I layered in as the year went on.

Brittany DeWindt, Milwaukee Public Schools

What if We’ve Been Teaching Mathematics all Wrong?
One of the biggest myths is that mathematics is all about computation. John Allen Paulos wrote in his book Innumeracy, "...mathematics has as much to do with computation as writing has to do with typing." Yet, school mathematics continues to focus heavily on computation and arithmetic and not nearly enough on critical thinking and problem solving. What the Common Core gets right is the 8 Mathematical Practices, and these competencies depend on instruction and curriculum that expose students to mathematics as a way of thinking and solving problems.

Fawn Nguyen, Mesa Union Junior High School
The Wisconsin Mathematics Council is proud to host a comprehensive mathematics education Exhibit Hall located in Pillsbury. Come explore the wide variety of materials available and to speak with exhibit representatives. Take your exhibit passport (located on the next page) along as you make your way around the Exhibit Hall to be stamped. When all of your squares are stamped, bring it back to the WMC booth in the Exhibit Hall entryway to be entered in the daily door prize drawings.

**2019 Conference Exhibitors** (see booth number and map below)

<table>
<thead>
<tr>
<th>Aherns Education Group (34)</th>
<th>MathRack (64)</th>
<th>ORIGO Education (21)</th>
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<tbody>
<tr>
<td>CPM Educational Program (52)</td>
<td>McGraw-Hill Education (13)</td>
<td>Pearson (22)</td>
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<td>Curriculum Associates (11)</td>
<td>Microsoft TEALS Program (32)</td>
<td>The Markerboard People (54)</td>
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<td>DreamBox Learning (44)</td>
<td>MOEMS - Math Olympiads for Elementary and Middle Schools (63)</td>
<td>The Math Learning Center (53)</td>
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<td>EAI Education (31)</td>
<td>Mountain Math/Language (33)</td>
<td>US Math Recovery Council (43)</td>
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<td>ETA hand2mind (16)</td>
<td>Nasco (15)</td>
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<td>Heinemann Publishing (61)</td>
<td>National Center for Computer Science Education (24)</td>
<td>UW Madison (45)</td>
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<tr>
<td>Mathematics Institute of Wisconsin (41)</td>
<td>National Geographic Learning / Big Ideas Math (65)</td>
<td>UW Superior (25)</td>
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**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.**
Exhibitor Passport
2019 WMC 51st Annual Conference

To be eligible for prizes, return the form to the Exhibit Hall Entryway.

Prize winners will be listed on the Whova App or check the boards at the exhibit hall entrance.

DRAWING WILL BE HELD AT:
Thursday: 12:30 p.m., 1:30 p.m., 2:30 p.m., 3:30 p.m.
Friday: 11:30 a.m., 12:30 p.m., 1:30 p.m.

Prizes must be picked up in person.
All prizes must be claimed by Friday at 3:00 pm.
# Exhibitor Passport

2019 WMC 51st Annual Conference

<table>
<thead>
<tr>
<th>Exhibitor</th>
<th>National Council of Supervisors of Mathematics</th>
<th>Pearson</th>
<th>McGraw Hill Education</th>
<th>Origo Education</th>
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<td>Ahrens Education Group</td>
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**First & Last Name ____________________**

To be eligible for prizes, return form to the Exhibit Hall Entryway
**Equity Strand**

The Wisconsin Mathematics Council is committed to continuing the critical dialogue surrounding equity in our classroom, school, and educational system. Though many excellent presentations at the Annual Conference center on equitable practices, the sessions below highlight a series of sessions focused on the deep investigation of the system injustices in our society and ways to be catalysts for change.

Attend 3 (three) sessions listed below.
Get a sticker at each session. Put the sticker over the session attended.

Turn in at the registration table for a special gift.

### Thursday, May 2

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:00 – 9:00am</td>
<td>108- Engagement and Equity, Make Math Happen!</td>
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<tr>
<td>9:30 – 11:00am</td>
<td>130- Walking Through a Coaching Experience Using an Equity Lens</td>
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<tr>
<td>9:30 – 11:00am</td>
<td>133- Catalyzing Change: Continuing the Critical Conversations</td>
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<tr>
<td>11:30 – 12:30pm</td>
<td>145- Engagement, Equity, and Exit Tickets- My Interpretation of the Math Workshop Model</td>
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<tr>
<td>1:00 – 2:00pm</td>
<td>176- Building Positive Middle School Math Experiences</td>
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<td>1:00 – 2:00pm</td>
<td>173- PK-2 Students as Doers of Mathematics</td>
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<tr>
<td>1:00 – 2:00pm</td>
<td>186- Catapulting Diverse Learners' Math Achievement Through Team Teaching</td>
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<tr>
<td>2:30 – 3:30pm</td>
<td>190- 10 Equitable Classroom Practices you can do RIGHT NOW! (And why math classrooms need them)</td>
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### Friday, May 3

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:00 – 9:00am</td>
<td>304- Preparing for 2020: The Revolution of Rehumanizing Mathematics</td>
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<tr>
<td>8:00 – 9:00am</td>
<td>321- De-tracking and Ability Grouping Mathematics Meetup</td>
</tr>
<tr>
<td>9:30 – 11:00am</td>
<td>333- Math Out Equity</td>
</tr>
<tr>
<td>9:30 – 11:00am</td>
<td>321- De-tracking and Ability Grouping Mathematics Meetup</td>
</tr>
<tr>
<td>11:30 – 12:30pm</td>
<td>351- Returning to Our Roots: Principles of Indigenous Pedagogy</td>
</tr>
<tr>
<td>11:30 – 12:30pm</td>
<td>357- Removing Barriers for Students in the Mathematics Classroom</td>
</tr>
<tr>
<td>1:00 – 2:00pm</td>
<td>364- Forming a Positive Math Identity: How Student Self-Affirmations can Counteract Stereotype Threat</td>
</tr>
<tr>
<td>1:00 – 2:00pm</td>
<td>365- Emerging Mathematicians: Our Students and their Math Identities</td>
</tr>
<tr>
<td>1:00 – 2:00pm</td>
<td>367- Real World Math Connections: How to Make Math Culturally Relevant</td>
</tr>
<tr>
<td>1:00 – 2:00pm</td>
<td>368- Mathematics + History + Social Justice = Global Mathematics</td>
</tr>
<tr>
<td>2:30 – 3:30pm</td>
<td>381- Math Out Equity Part II</td>
</tr>
<tr>
<td>2:30 – 3:30pm</td>
<td>381- Math Out Equity Part II</td>
</tr>
<tr>
<td>Aleson (310)</td>
<td>Hartney (314)</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Aleson (339)</td>
<td>Hayes (157)</td>
</tr>
<tr>
<td>Amys (162)</td>
<td>Hedges, M. (198, 332)</td>
</tr>
<tr>
<td>Amys (322)</td>
<td>Hedges, T. (185)</td>
</tr>
<tr>
<td>Anderson, E. (120, 343, 372)</td>
<td>Heitman (356)</td>
</tr>
<tr>
<td>Arnold (128)</td>
<td>Hennessey (139)</td>
</tr>
<tr>
<td>Arnold (134)</td>
<td>Hofacker (152)</td>
</tr>
<tr>
<td>Baloun (118)</td>
<td>Hopkins (188)</td>
</tr>
<tr>
<td>Bell (109)</td>
<td>Hover-Preiss (119, 300)</td>
</tr>
<tr>
<td>Bernander (352)</td>
<td>Huinker (316, 363)</td>
</tr>
<tr>
<td>Beth (209)</td>
<td>Hunt (135)</td>
</tr>
<tr>
<td>Blaha (370)</td>
<td>Jackson (320)</td>
</tr>
<tr>
<td>Blessington (127)</td>
<td>Kachur (121)</td>
</tr>
<tr>
<td>Brusoe (326)</td>
<td>Kahrs (361)</td>
</tr>
<tr>
<td>Budak (324)</td>
<td>Kanters (138)</td>
</tr>
<tr>
<td>Burgess (311)</td>
<td>Karwatka (159)</td>
</tr>
<tr>
<td>Burrell (171, 301)</td>
<td>Keppel (142)</td>
</tr>
<tr>
<td>Chedister (133, 179)</td>
<td>Kittilson (184)</td>
</tr>
<tr>
<td>Clausen (307)</td>
<td>Klassy (186)</td>
</tr>
<tr>
<td>Coaty (373)</td>
<td>Klein (166)</td>
</tr>
<tr>
<td>Cortez (136)</td>
<td>Klescewski (187, 358)</td>
</tr>
<tr>
<td>Cutter-Lin (107)</td>
<td>Knochel (358)</td>
</tr>
<tr>
<td>Dahl (137, 345)</td>
<td>Knochel (366)</td>
</tr>
<tr>
<td>DeWintt (148, 383)</td>
<td>Knochel (375)</td>
</tr>
<tr>
<td>Downs (180)</td>
<td>Koscieniak (350)</td>
</tr>
<tr>
<td>Dykema (149, 354, 374)</td>
<td>Kosiak (173)</td>
</tr>
<tr>
<td>Ebert, J. (122)</td>
<td>Kozicke (340)</td>
</tr>
<tr>
<td>Ebert, E. (368)</td>
<td>Kraft (323)</td>
</tr>
<tr>
<td>Flach (154)</td>
<td>Krizan (338)</td>
</tr>
<tr>
<td>Fletcher (161, 206)</td>
<td>Krohn (110)</td>
</tr>
<tr>
<td>Fossum (313)</td>
<td>Lancaster (150, 376)</td>
</tr>
<tr>
<td>Frank (176)</td>
<td>Langenhuiizen (346)</td>
</tr>
<tr>
<td>Giera (131)</td>
<td>Lawler (334)</td>
</tr>
<tr>
<td>Gorman (145)</td>
<td>Leffler (141)</td>
</tr>
<tr>
<td>Gregerson (205, 341)</td>
<td>LeGear (306)</td>
</tr>
<tr>
<td>Groene (153)</td>
<td>Lempp (140, 172)</td>
</tr>
<tr>
<td>Guyette (177)</td>
<td>Liang (362)</td>
</tr>
<tr>
<td>Harding (331)</td>
<td>Liermann (111)</td>
</tr>
</tbody>
</table>
This certificate is presented to

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In recognition of attendance and participation at the WMC 51st Annual Conference on May 1-3, 2019.

Lori Williams
Lori Williams
WMC President