

CATALYZING

Wonder

Joy

Beauty

WMC 53rd Annual Conference

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

WMC 2021 Virtual Annual Conference on May 6-8, 2021

Join us for an opening keynote speaker by ***Dr. Kristopher Childs*** on Thursday May 6th from 4:30-6:00 p.m.

You can also attend the all-day synchronous strand Friday May 7th focused on ***The Mo(ve)ment to Prioritize Antiracist Mathematics: Planning for This and Every School Year*** from 8:00 a.m. – 2:15 p.m.

These events will be followed by over ***70 asynchronous recorded sessions and live synchronous sessions*** on Saturday May 8th from 8:00 am - 3:30 pm. All live sessions will be recorded and available to conference participants until August 31, 2021.

2021 Featured Speakers

				
<i>Sandy Atkins</i>	<i>Sarah Bush</i>	<i>Gail Burrill</i>	<i>Diana Ceja</i>	<i>Dr. Kristopher Childs</i>

				
<i>Howie Hua</i>	<i>DeAnn Huinker</i>	<i>Christa Jackson</i>	<i>RunningHorse Livingston</i>	<i>Anne Marshall</i>

				
<i>Deanna McLennan</i>	<i>Kurt Salisbury</i>	<i>Michael Steele</i>	<i>John Stevens</i>	<i>Christina Tondevold</i>



Conference Opening Session *Thursday, May 6, 2021*

4:30 – 6:00 p.m.

Welcome and Introduction

Keynote Address from 5 – 6 p.m.



Dr. Kristopher Childs

I Hope School NEVER Goes Back to Normal!

In the education community many have stated, “they cannot wait until things get back to normal.” With “normal” being defined as pre-pandemic schooling. However, we must all ask ourselves pre-pandemic (i.e. normal) was every student receiving a high-quality classroom mathematics education experience?

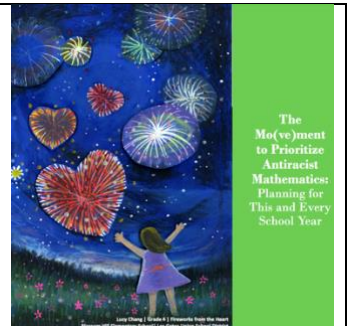
In this session, we will discuss the current state of students’ classroom mathematics education experiences, provide the key components to create an equitable classroom mathematics experience, and posit a reimagined classroom mathematics experience.

Pre-Conference Workshop *Friday, May 7, 2021*

8:00 a.m. – 2:15 p.m.

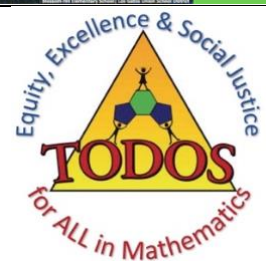
The Mo(ve)ment to Prioritize Antiracist Mathematics: Planning for This and Every School Year

A Discussion of the Position Statement of TODOS: Mathematics for All



8:00 - 9:00 a.m
Keynote Presentation

Diana Ceja, Past President of TODOS, Riverside County Office of Education



Discussion Breakout Sessions: Join WMC for an in-depth discussion on the four key areas outlined in the document.

9:15 - 10:00 Parents as Partners in Mathematics Education

10:15 - 11:00 Social and Emotional Needs of Students in Mathematics Classrooms

11:45 - 12:30 Student and Family-Centered Mathematics Assessment

12:45 - 1:30 Access, Use and Design of Technologies for Teaching Mathematics

1:45 - 2:15 Closing Remarks



Saturday Synchronous Virtual Sessions, May 8, 2021

8:00 a.m. – 9:00 a.m. (CST)				
#	Time	Grade Band	Zoom Room	Title and Speakers
100	8:00-9:00	WI DPI Grades 6-8	Boddie LaDue	Wisconsin DPI Statewide Mathematics Landscape in 6-8 Mathematics with Mary Mooney & Cynthia Cuellar Rodriguez
101	8:00-9:00	Featured Speaker Grades PK-2	Brayton Case	Joyful Math: Invitations to Play and Explore in the Early Childhood Classroom with Deanna McLennan
102	8:00-9:00	Grades 3-5	Crystal	Understanding the Equal Sign: Building Foundational Algebraic Reasoning Skills in Upper Elementary with Michelle Stephan and Erin O'Halloran
103	8:00-9:00	General Interest	Lightbody	Prioritizing and Building On-Ramps into Content with Lisa Hennessey
104	8:00-9:00	Grades 9-12	Kraft	Practical Formative Assessment Strategies to Use with High School Students with David Ebert
105	8:00-9:00	Featured Speaker General Interest	Morehouse	Teaching Mathematics in the Post-Pandemic Classroom with RunningHorse Livingston
106	8:00-9:00	Catalyzing Change Grades PK-5	Staughton	Reclaiming Wonder, Joy, and Beauty in Mathematics with DeAnn Huinker & Anne Marshall
107	8:00-9:00	Catalyzing Change Grades 9-12	Youth Center	Mathematics as a Tool to Make Sense of the World Around Us with Gall Burrill

9:30 a.m. – 10:30 a.m. (CST)				
#	Time	Grade Band	Zoom Room	Title and Speakers
200	9:30-10:30	WI DPI Grades 9-12	Boddie LaDue	Wisconsin DPI Statewide Mathematics Landscape in 9-12 Mathematics with Mary Mooney & Kenneth Davis
201	9:30-10:30	Grades PK-2	Brayton Case	More or Less? Using Learning Progressions to Support Student Understanding of Comparison with Michelle Douglas Meyer
202	9:30-10:30	Featured Speaker Grades 3-5	Crystal	Designing Wonder-Full Math Explorations with Sandy Atkins
203	9:30-10:30	Grades 9-12	Lightbody	Using Content Circles at the Secondary Level to Engage Learners with Cori Moran
204	9:30-10:30	Sponsored Speaker General Interest	Kraft	Cultural Competency: Providing Equitable Math Instruction with Cultural Relevance with Dr. India White
205	9:30-10:30	General Interest	Morehouse	Global Math Stories: Travel the World, Explore Social Justice, and Deepen your Understanding of Math with Chadd McGlone, Callie Herring, and Alix Van Zandt
206	9:30-10:30	Catalyzing Change Grades 9-12	Staughton	Catalyzing Change in High School Mathematics: The Purposes of Teaching Mathematics and To Whom with Gail Burrill
207	9:30-10:30	Grades 6-8	Youth Center	Assessment Can Happen Virtually Anywhere with Nicole Goerges & Jeremiah Morgan

11:00 a.m. – 12:00 p.m. (CST)

#	Time	Grade Band	Zoom Room	Title and Speakers
300	11:00-12:00	General Interest	Boddie LaDue	Crossing the Mathematics Bridge: How Educators and Students Walk Together with WI Math Alignment Taskforce
301	11:00-12:00	Featured Speaker Grades PK-5	Brayton Case	Wonder, Joy, and Beauty in Math?!?! with Christina Tondevold
302	11:00-12:00	Grades 3-5	Crystal	Creating Digital Math Games with PlayingCards.io with Maggie Gleason & Rachel Kozicke
303	11:00-12:00	Featured Speaker Grades 6-8	Lightbody	Journey to Mathland with Desmos with Kurt Salisbury
304	11:00-12:00	Grades 9-12	Kraft	Detracking High School Mathematics: Starting the Journey with Mallory Smith
305	11:00-12:00	General Interest	Morehouse	Belonging in the Math Classroom with Howie Hua
306	11:00-12:00	Catalyzing Change Grades 6-8	Staughton	Catalyzing Change through Joy, Wonder, and Beauty: Broadening the Purposes of Learning Mathematics in Middle School with Sarah Bush & Christa Jackson
307	11:00-12:00	Grades 9-12	Youth Center	Math & Culture on Zoom with Lauren Mauel

1:00 p.m. – 2:00 p.m. (CST)

#	Time	Grade Band	Zoom Room	Title and Speaker
400	1:00-2:00	WI DPI Grades 3-5	Boddie LaDue	Wisconsin DPI Statewide Mathematics Landscape in 3-5 Mathematics with Julie Bormett & Lori Williams
401	1:00-2:00	Grades PK-2	Brayton Case	Math Running Records: How One Assessment Has Changed the Math Culture of Districts with Ann Elise Record
402	1:00-2:00	Grades 3-5	Crystal	Interactive Google Slides for Math Teachers with Christy Pettis
403	1:00-2:00	Grades 6-8	Lightbody	Get some FACTs: Formative Assessment Classroom Techniques Meetup with Crystal Vesperman
404	1:00-2:00	Grades 9-12	Kraft	Using the Desmos Activity Builder to Assess Student Understanding with Abbey Turchyn
405	1:00-2:00	Featured Speaker General Interest	Morehouse	Would You Rather... A Realization of What Matters with John Stevens
406	1:00-2:00	General Interest	Staughton	I am a Mathematician! with Sally Losinske, Tracy Lynch, & Sarah Hynes
407	1:00-2:00	General Interest	Youth Center	Supporting Early Career and New Teachers in the New Normal with WI-AMTE
408	1:00-2:00	Grades 9-12	Pillsbury	Leveraging TI Technologies for Maximum Success on the ACT: Think Graphically and Other Strategies with Tom Reardon

2:30 p.m. – 3:30 p.m. (CST)

#	Time	Grade Band	Zoom Room	Title and Speaker
500	2:30-3:30	WI DPI Grades PK-2	Boddie LaDue	Wisconsin DPI Statewide Mathematics Landscape in PK-2 Mathematics with Julie Bormett & Jenni McCool
501	2:30-3:30	Grades 6-8	Brayton Case	What Went Wrong? Using Error Analysis to Elicit Student Thinking and Identify Misconceptions with Crystal Vesperman
502	2:30-3:30	Grades 3-5	Crystal	Taking Action in Elementary School: Connecting Representations and Posing Purposeful Questions with Paige Richards & DeAnn Huinker
503	2:30-3:30	Grades 6-8	Lightbody	Student Discovery of Integer Operation Rules Through Generalizations with Andrea Velazquez
504	2:30-3:30	Grades 9-12	Kraft	The UW System Math Placement Test and Early Math Placement Tool with Sonya Sedivy, Mark Schroeder, & Jason Thrun
505	2:30-3:30	Grades 6-8	Morehouse	You Can't Escape Math with Sandra Leiterman
506	2:30-3:30	Featured Speaker Grades 9-12	Staughton	Opening Up Opportunities for Rich Classroom Discourse: The 5 Practices in Practice with Michael Steele

Be sure to visit the Virtual Exhibit Hall to find a wealth of information and items from a variety of publishers and exhibitors. Take the **Exhibit Hall Survey** for your chance to win books authored by the Featured Speakers. The results of the drawing will be posted at 3:30 p.m. on **Saturday, May 8th**.



Session Descriptions

8:00 a.m. – 9:00 a.m.

100

Wisconsin DPI Statewide Mathematics Landscape in 6-8 Mathematics

Grades 6-8

Mary Mooney and Cynthia Cuellar Rodriguez

Every Wisconsin student is a mathematical thinker and doer who has important problems to solve. In this session learn how the Wisconsin Department of Public Instruction works to collaboratively develop resources that center students. This session will be an overview of resources that support recognizing, valuing and fostering positive mathematical identities. Participants will have opportunities to build a shared understanding of how to use the resources in service of students.

101 Featured Speaker

Joyful Math: Invitations to Play and Explore in the Early Childhood Classroom

Deanna Pecaski McLennan

Join author and educator Deanna Pecaski McLennan as she discusses building a kindergarten classroom in which math is inseparable from everything students do. She will encourage you to create invitations to engage with math through art, literacy, and outdoor play. With stories from her own classroom, she will inspire you to be curious about math, take risks, try new approaches, and collaborate with children as co-learners.

102

Understanding The Equal Sign: Building Foundational Algebraic Reasoning Skills in Upper Elementary

Grades 3-5

Michelle Stephan and Erin O'Halloran

This session will highlight the importance of all elementary students developing an understanding of the equal sign. This foundational algebraic reasoning skill fosters students' later success with algebra. We will identify ways to support student understanding by utilizing the mathematics teaching practices and engaging in activities that can be used in elementary classrooms and beyond.

103

Prioritizing and Building On-Ramps into Content

General Interest

Lisa Hennessey

In this session, we will go through a process for identifying priority standards for the coming 2021-2022 school year, using Achieve the Core and looking for standards that have endurance, leverage, and readiness. Following this, we'll make mock plans for building on-ramps into learning. Participants will learn how to do this work with their grade-level/course team and be able to practice this work.

104

Practical Formative Assessment Strategies to Use with High School Students

Grades 9-12

Dave Ebert

Formative assessment is a powerful tool to elicit evidence from students, give feedback to push learning forward, and adjust instruction based on evidence of students' learning. In this session we will learn and practice four practical, effective formative assessment strategies that can be implemented immediately in your classroom.

105 Featured Speaker

Teaching Mathematics in the Post-Pandemic Classroom

General Interest

RunningHorse Livingston

As the world recovers from Covid-19, we as math educators stand to face the challenges left in its wake. Teaching in front of a screen has created a deeper appreciation for the joys of being with our students. The blank screens and chirping crickets have given us cause to be better, but what does "being better" look like beyond 2021? This presentation will provide post-pandemic teaching strategies designed to address learning loss and ability gaps. Methods to foster social and emotional needs around math agency and classroom discourse will be explored. Measures of student engagement and ways to maximize discourse will also be examined. Redefining "success" in mathematics learning is critical to raising proficiency at all levels of student reasoning.

106 Featured Speakers
Reclaiming Wonder, Joy, and Beauty in Mathematics

Grades PK-5

DeAnn Huinker and Anne Marshall

What makes math joyful? What evokes wonder in mathematics? What makes math beautiful? How do we ensure all children develop into mathematically curious, confident, and capable learners while experiencing the wonder, joy, and beauty of mathematics? Examine the four key recommendations in NCTM's recently released, *Catalyzing Change in Early Childhood and Elementary Mathematics*. We will engage participants in activities that surface wonder, joy, and beauty and examine the power of mathematical experiences and how those impact students' mathematical identity.

107 Featured Speaker
Mathematics as a Tool to Make Sense of the World Around Us

Grades 9-12

Gail Burrill

Catalyzing Change suggests that one purpose of teaching mathematics is to make sense of the world in which we live, giving students not only the answer to "When will I ever use this?" but also to "Why care?" This provides an opportunity to dive deeper into a situation such as the pandemic, using real data and simulations to investigate questions involving screening accuracy, false positives and herd immunity, using some basic mathematical ideas.

9:30 a.m. – 10:30 a.m.

200
Wisconsin DPI Statewide Mathematics Landscape in 9-12 Mathematics

Grades 9-12

Mary Mooney and Kenneth Davis

Every Wisconsin student is a mathematical thinker and doer who has important problems to solve. In this session learn how the Wisconsin Department of Public Instruction works to collaboratively develop resources that center students. This session will be an overview of resources that support recognizing, valuing and fostering positive mathematical identities. Participants will have opportunities to build a shared understanding of how to use the resources in service of students.

201
More or Less? Using Learning Progressions to Support Student Understanding of Comparison

Grades PK-2

Michelle Douglas Meyer

Comparing sets is challenging for PreK–Grade 2 students. Join us to understand how to use learning progressions and investigate the progression for comparing quantities. Leave with specific research-based strategies to support students as they move through challenging levels on the progression.

202 Featured Speaker
Designing Wonder-Full Math Explorations

Grades 3-5

Sandy Atkins

How can we design math experiences for kids that have them saying: "I think it was the greatest!", "Do we have to pack up?", "Can't we keep going?", "Wow!?" There's more to it than fun. Join us as we examine the before, during, and after for several student tested explorations.

203
Using Content Circles at the Secondary Level to Engage Learners

Grades 9-12

Cori Moran

In this presentation, a brief overview of Restorative Practices and content circles will be presented to novice and advanced practitioners on how important they can be in a rich discussion based math classroom. All will then participate in a math content based circle to show how trust and connection are built upon to engage students in mathematics. Data and tools to facilitate in your classroom or school will be shared.

204 Sponsored Speaker

Cultural Competency: Providing Equitable Math Instruction with Cultural Relevance

General Interest

Dr. India White

Scores from the National Assessment of Educational Progress suggest that if current educational practices in math classrooms remain the same, the achievement gap between Caucasians and African descent demographics will be eliminated in approximately 217 years. To close the academic achievement gap for all students, teachers must be equipped with methods to conduct equitable instruction that is culturally relevant. In this session, attendees will learn methods for providing cultural relevance within specific academic settings. Participants will be empowered with strategies that will engage students in a relevant manner as well as acquire pedagogy, perspective, and practices to implement in the math classroom.

205

Global Math Stories: Travel the World, Explore Social Justice, and Deepen your Understanding of Math

General Interest

Chadd McGlone, Callie Herring, and Alix Van Zandt

Mathematics lessons come alive when they make meaningful, real-world connections. Introducing students to other cultures can happen even when traveling isn't possible. Global Math Stories (GlobalMathStories.org) are a free resource that support teachers in weaving global themes into their math lessons. The stories include sample problems, learning activities, and social justice questions.

206 Featured Speaker

Catalyzing Change in High School Mathematics: The Purposes of Teaching Mathematics and To Whom

Grades 9-12

Gail Burill

Catalyzing Change argues that inequities in the way mathematics is offered in our high schools must be addressed and offers some suggestions for doing so. It also argues that there are more reasons for teaching mathematics than preparing students to be "college and career ready". Exploring these ideas from the context of our classrooms can help us make a difference in who learns what mathematics for all of the students we teach.

207

Assessment Can Happen Virtually Anywhere

Grades 6-8

Nicole Goerges and Jeremiah Morgan

Want to explore some strategies to make an equitable assessment? Come to our session to reflect on your current assessment practices and to explore some strategies to help your students take joy and ownership of their learning.



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>)

300

Crossing the Mathematics Bridge: How Educators and Students Walk Together

General Interest

Wisconsin Mathematics Alignment Taskforce

Join us for a continued state-level conversation on the PK-20 mathematics progression. In this session, members of the Wisconsin Mathematics Alignment Taskforce will highlight their work towards building an equitable and coherent PK-20 system of mathematics preparation, so students have access to the array of post-secondary options available to them. Taskforce members will share recent UW System efforts in creating common learning outcomes for certain gateway mathematics courses such as Quantitative Reasoning, Statistics, and College Algebra as well as how these post-secondary options in mathematics connect to current high school mathematics.

301 Featured Speaker

Wonder, Joy, and Beauty in Math

Grades K-5

Christina Tondevoid

If you did a word association game with the word "Math", I don't think 'wonder', 'joy', and 'beauty' would be on the list of words that people associate with math. It's time that we change that. Join me as we talk about practical ways you can make changes to your math instruction that will help your students see that mathematics can be full of wonder, joy, and beauty.

302

Creating Digital Math Games with PlayingCards.io

Grades 3-5

Maggie Gleason and Rachel Kozicke

Are you looking for a way to play games with students virtually? Or an easier way to store games for use in the classroom? In this session you will learn about a website, PlayingCards.io, that can be used to digitize card games, board games, and more. Come learn how to transfer math games you are already using in class to the digital world.

303 Featured Speaker

Journey to Mathland with Desmos

Grades 6-12

Kurt Salisbury

Seymour Papert used the term "Mathland" to propose a world where one would learn mathematics naturally. Desmos, as a tool for instruction, has the power to display the natural beauty of mathematics through a variety of animations, digital manipulatives, and connected ideas. In this session we'll explore how Desmos can make visual patterns come to life, connect mathematical representations, and show mathematics as a series of real-world actions.

304

Detracking High School Mathematics: Starting the Journey

Grades 9-12

Mallory Smith

What is tracking and why do we do it? Come to learn about the journey of a high school math teacher to dismantle tracking systems in order to provide all students with equitable opportunities in mathematics. We will examine how and why we started the journey in my high school, how we engaged stakeholders, where we are in the process, and our next steps.

305

Belonging in the Math Classroom

General Interest

Howie Hua

As we go through our lives, we often search for places that make us feel like we belong. In this session, we will discuss strategies to show how students belong in math and in our classrooms in hopes to create a more inclusive community."

Tweet to Win: WMC wants you to share your highlights, so Tweet your favorite WMC Annual Conference moments @WisMathCouncil using #wismath21. We will randomly select two people to receive a WMC prize.

306

Catalyzing Change through Joy, Wonder, and Beauty: Broadening the Purposes of Learning Mathematics in Middle School

Grades 6-8

Sarah Bush and Christa Jackson

Join us for a closer look at the first key recommendation of Catalyzing Change in Middle School Mathematics: Broadening the Purposes of Learning Mathematics. We will explore the different purposes and discuss beginning action steps for building them into your mathematics program! Specifically, we'll share examples of engaging students in the joy, the wonder, and the beauty of mathematics in the middle grades.

307

Math & Culture on Zoom

Grades 9-12

Lauren Mael

This session will focus on teaching mathematics and culture on virtual formats. Throughout covid, teachers are seeing a decrease in attendance, participation, and engagement from students. Many students do not feel seen or interested due to the strange situation of learning from home. This session will focus on creating a positive culture in a virtual environment while delivering high-quality mathematics.

1:00 p.m. – 2:00 p.m.

400

Wisconsin DPI Statewide Mathematics Landscape in 3-5 Mathematics

Grades 3-5

Julie Bormett and Lori Williams

Every Wisconsin student is a mathematical thinker and doer who has important problems to solve. In this session learn how the Wisconsin Department of Public Instruction works to collaboratively develop resources that center students. This session will be an overview of resources that support recognizing, valuing and fostering positive mathematical identities. Participants will have opportunities to build a shared understanding of how to use the resources in service of students.

401

Math Running Records: How One Assessment Has Changed the Math Culture of Districts

Grades PK-2

Ann Elise Record

Learn how the research-based Math Running Record math fact interview can transform the math culture within your school district. Providing data on all the facets of fact fluency: flexibility, accuracy, efficiency, and automaticity provides the information teachers need to plan instructional responses to develop a foundation of flexible thinking.

402

Interactive Google Slides for Math Teachers

Grade 3-5

Christy Pettis

Learn ways to use the standard features of Google Slides to create interactive and engaging learning experiences that develop your students' mathematical reasoning and problem solving skills and create opportunities for productive class discussions. The session will focus on a math game designed for grades 3-5, but the techniques are appropriate/adaptable for K-12. Be ready to interact on the slides during the session!

403

Get some FACTs: Formative Assessment Classroom Techniques Meetup

Grades 6-8

Crystal Marie Vesperman

Do you have formative assessment strategies that work well in your classroom? Do you need new ideas to expand your current collection? Do you want to find better ways to use these formative assessments to support and challenge your students? Bring your ideas, experiences, research, and questions to this collaborative session.

404

Using the Desmos Activity Builder to Assess Student Understanding

Grades 9-12

Abbey Turchyn

This session will showcase how to use the Desmos Activity Builder to assess students' thinking with both formative and summative assessments. It will also discuss ways to give students feedback on their thinking. The last part of the session will be open to participants sharing their experiences using Desmos this past year.

405

Would You Rather... A Realization of What Matters

General Interest

John Stevens

Constructing viable arguments and critiquing the reasoning of others has never been more vital to the well-being of ourselves, of our students, and of our societal push for a better life experience. From world events to stories that break in our local newsrooms, our students have the opportunity to use mathematics to help shape, and improve, the world around them; we as math teachers have an avenue and obligation to equip them in the best ways possible.

406

I am a Mathematician!

General Interest

Sally Losinske, Tracy Lynch, and Sarah Hynes

In this session, we will explore the idea of mathematical identity and how we can cultivate strong mathematical identities in our students. We will do a series of activities reflecting on our own mathematical identities and how they were formed. Lastly, we will discuss a plan of action for building mathematical identity among our students.

407

Supporting Early Career and New Teachers in the New Normal

General Interest

WI-AMTE Lori Rugotska, Matt Chedister, Lynn Schaal, and Mike Steele

Join us as we look at a case study of an early career mathematics teacher and explore ways to support the unique challenges for this group of teachers through and after COVID. We'll also touch on how to deal with change and uncertainty in the professional environment.

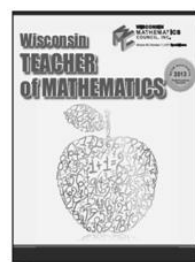
408

Leveraging TI Technologies for Maximum Success on the ACT: Think Graphically and Other Strategies

Grades 9-12

Tom Reardon, Sponsored by Texas Instruments

Students who only excel at procedural fluency (memorizing steps & formulas) will have a tough time on the math section of the redesigned ACT. We will focus on conceptual understanding of some "big ideas": function composition and evaluation, transformation graphing, solving problems with multiple solution paths. Use creative technology integration as both a learning tool and a test-taking tool. Obtain activities, strategies, and some of the most recent ACT test questions.



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.

500

Wisconsin DPI Statewide Mathematics Landscape in PK-2 Mathematics

Grades PK-2

Julie Bormett and Jenni McCool

Every Wisconsin student is a mathematical thinker and doer who has important problems to solve. In this session learn how the Wisconsin Department of Public Instruction works to collaboratively develop resources that center students. This session will be an overview of resources that support recognizing, valuing and fostering positive mathematical identities. Participants will have opportunities to build a shared understanding of how to use the resources in service of students.

501

What went wrong? Using Error Analysis to Elicit Student Thinking and Identify Misconceptions

Grades 6-8

Crystal Marie Vesperman

Having students analyze incorrectly worked examples is an engaging teaching strategy that gets students reflecting on their own understanding of the concepts while talking about the mathematics behind the errors they see. In this session, you will participate in sample activities, share your own experiences, and leave ready to implement error analysis in your classroom.

502

Taking Action in Elementary School: Connecting Representations and Posing Purposeful Questions

Grades 3-5

Paige Richards and DeAnn Huinker

Calling all elementary school teachers! Join us for this interactive session as we dive into two of NCTM's mathematics teaching practices—mathematical representations and purposeful questions. Placing greater focus on representations and purposeful questions in elementary classrooms are core teaching practices for empowering children as mathematical doers, knowers, and sense-makers. Walk away with ideas to strengthen your practice.

503

Student Discovery of Integer Operation Rules Through Generalizations

Grades 6-8

Andrea Velazquez

I will discuss building conceptual understanding through student discourse that leads to making generalizations about addition and subtraction of integers. We will explore the 5 Practices for Orchestrating Productive Mathematics Discussions that help guide students to making generalizations. I will use the number line as a strategic tool in building comprehension. I will share technology tools that can be utilized in a virtual setting.

504

The UW System Math Placement Test and Early Math Placement Tool

Grades 9-12

Sonya Sedivy, Mark Schroeder, and Jason Thrun

Come learn about the UW System Math Placement Test and Early Math Placement Tool (EMPT)! We will discuss how the placement test is developed, administered, and used on the various UW campuses. We will also talk about our partner program, the EMPT. The EMPT is a free program for WI high schools that can be used to help students prepare for college-level mathematics. This session will provide opportunities for Q&A.

505

You Can't Escape Math

Grades 6-8

Sandra Leiterman

Increasing motivation to learn math can be a daunting task! In this session, you'll learn how to incorporate active learning in the middle school math classroom. Active learning increases engagement and allows students to take ownership of their learning. Participants will see example lessons, be provided with several ed tech tools, and even learn how to create and take part in an Escape Room using mathematics topics and concepts.

506

Opening Up Opportunities for Rich Classroom

Discourse: The 5 Practices in Practice

Grades 9-12

Michael Steele

Strengthening student voice in our mathematics classrooms is a constant challenge. The 5 Practices model introduced by Smith and Stein provides a structure for planning, enacting, and reflecting on lessons that provide students with meaningful opportunities to engage in deep mathematical thinking, reasoning, and discussion. But implementing rich tasks using the 5 Practices poses a number of challenges. In this session, we will explore challenges related to implementing the 5 Practices and identify strategies to overcome those challenges.

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WMC wishes to thank our synchronous presenters for their dedication to mathematics education.

If you couldn't attend one of these sessions, you will have access to the recorded session until August 31, 2021 in the WMC Conference Portal.

General Interest

600

Understanding How to Implement GAISE Recommendations into K-12 Mathematics

General Interest

Angela Walmsley

The focus of this session is to show how to implement the GAISE (Guidelines for Assessment and Instruction in Statistics Education) report recommendations into K-12 mathematics classrooms. The session will provide a brief history of statistical education in the United States. Next, the majority of the session will be to showcase the same topic across the three levels as described by GAISE.

601

Deductive and Inductive Reasoning using Popular Tabletop Games

General Interest

Chris Hlas, University of Wisconsin – Eau Claire

Mathematical reasoning involves both inductive and deductive elements (e.g., NCTM's "Reasoning and Sense Making"). Rules will be introduced for games that reinforce inductive or deductive reasoning including: BattleLine (deductive reasoning), Similo (interpretive deduction), Love Letter (social deduction), Zendo (inductive reasoning). Connections to mathematics will also be highlighted for each game.

602

Oops! Math Mistakes We Wish We Had Not Made

General Interest

Timothy Deis

We will explore mathematical mistakes that have impacted society. This is (supposed to be) a fun talk looking at what math errors have occurred through engineering, advertising, programming, etc. The talk borrows heavily from content from the book "Humble Pi" by Matt Parker.

603

Teaching Methods Classes in COVID - What Have We Learned For The Future?

General Interest

WI-AMTE Matthew Chedister, Stephanie Bernander, Erin Eddington, and Jenny Lynn Sagrillo

The teaching of methods classes for preservice teachers has been forced to shift due to the pandemic. In this talk, we will explore what has changed, what lessons we have learned, and how these lessons will enhance how we teach methods classes in the future.

604

Escape the Monotony

General Interest

Jason Thurow, Fox Point Bay School District

Are you looking for new ways to promote agency in your classroom. Experience, learn and get tips on creating your very own escape room. Attendees will have the opportunity to test their math skills while they navigate an escape room. After the room is completed, you will have an opportunity to see how the room was put together. Use these ideas and add your own to create a one of a kind experience that your students are sure to remember.

605

Closing the Achievement Gap with Freckle Sponsored by Renaissance

General Interest

Kristin Johnson, Sponsored by Renaissance

In this sponsored session, you will explore the emotional, cognitive, and behavior lenses of student engagement. You will also learn how to integrate these aspects into Freckle by Renaissance in order to fill gaps in student learning.

606

A Look into the Future: Preservice Teachers' Technology and Formative Assessment Projects

General Interest (Grades 6-12)

Matt Chedister and UWL Teacher Candidates (Tia Beachard, Maggie Lang, Maya Mathews, Hannah Meverden, Lindsey Pedersen, and Mariah Stewart)

In this session, teacher candidates will share their technology and formative assessment tasks designed to enhance conceptual understanding in middle and high school mathematics. Math topics include transformations, volume, and composition of functions.

607

Let's Get Messy!!! Mathematical Modeling during Distance Learning

General Interest (Grades 6-12)

Andy Swank, Curriculum Specialist, Savvas Learning Company

Let's challenge the myth that students can't engage in true Mathematical Modeling in a distance learning setting. We'll discuss some ideas for getting your students IN the chat, OFF mute, and engaged in the Mathematical Modeling Cycle and the Standards for Mathematical Practice. This interactive workshop leverages 3-Act Math combined with Desmos to get you thinking about how to provide a space for students to be the authors of their own ideas, so you can engage in Culturally Responsive Instruction - even when you're all on your webcams in your own spaces.



Asynchronous Virtual Sessions

PK-2

700

Math Journals that Work

Grades PK-2

Rose Palmer

Math journals can help deepend students' mathematical understanding. In this session, we will discuss the importance and benefits of math journaling in the classroom. We will also examine different parts of the math journal using student examples.

701

Promoting Productive Struggle in the PK-2 Classroom

Grades PK-2

Jenni McCool and Jenn Kosiak

In order to engage students in productive struggle, 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 grapple with mathematics in rich and meaningful ways so that they see themselves as doers of mathematics and problem solvers.

702

Navigating Bridges and Number Corner in a Hybrid Learning Setting

Grades PK-2

Mark Bussian

This session will highlight learning tools designed to support students in both a virtual and face-to-fae setting. This session was part of the WMC Math Chat Series.

703

Virtual Ten Frames and Number Rack

Grades PK-2

Lori Williams

Ten frames and number racks are tools to designed to develop number sense while building conceptual understanding in addition and subtraction. In this session, we will look at how these tools can be used in the virtual or face-to-face classroom. This presentation was part of the WMC Math Chat Series.

704

Supporting the Language of Math

Grades PK-5

Leslie Waltz

In this session we will go over three tools that support language learners in the mathematics classroom. You will be able to access an article and some videos with additional tools.

705

Math Routines in the Early Grades

Grades PK-2

Jenn Kosiak and Jenni McCool

Math routines are short reasoning activities that are designed to develop number sense. This session will examine several math routines for you to implement in the early grades. These routines will focus on building both conceptual understanding and procedural fluency.



Asynchronous Virtual Sessions

Grades 3-5

800

The Arc of Arithmetic to Algebra

Grades 3-5

Elizabeth Peyser

The foundations of number sense and algebraic thinking developed in K–2 are essential for upper elementary, middle school, and high school mathematics, yet are often misunderstood. Join us to explore the progression of learning from kindergarten to high school to experience how elementary skills prepare students for Algebra 1. No matter what grade you teach, you will find something to use with your students to propel them forward.

801

Number Lines 101: The Fundamentals

Grades 3-5

Elizabeth Peyser

Number lines are a lovely sense-making model from early elementary to secondary mathematics. Sometimes the construction and understanding are a bit elusive by students and educators! Join us for hands-on learning to build and use this important tool. Digital tools and hands-on manipulatives will be explored.

802

No More Tricks

Grades 3-5

Deb Heitman and Troy Gruszynski

Butterfly method. Altogether always means add. Big number always goes on top when subtracting. Students come to us with shortcuts taught by well meaning teachers, or parents, or even a textbook without understanding. Unfortunately, shortcuts can lead to misunderstandings in the future. In this session we will explore a few of the shortcuts/tricks that should no longer be taught in math classes and share what can be done instead.

803

Number Talks and the Potential to Build Stunning Fluency with your Students

Grades 3-5

David Stanchfield

Do your students struggle with numbers, fractions, and basic operations? In this session we will go through the basics of a number talk, show a number talk in action, share some strategies to solve problems, and highlight the many mathematical advantages of Number Talks that help with mathematical fluency and positive classroom discourse.

804

Equal Sign: What Does It Mean?

Grades 3-5

Amanda Lavin

Did you know that most students do not understand the true meaning of the equal sign? This is your chance to combat these misconceptions and dive deeper into how to best teach your students about the meaning of the equal sign. We will share some research-based tips and strategies that have worked in our third/fourth grade classes. Join us to explore the power of the equal sign!

805

Modeling Division with Virtual Manipulatives

Grades 3-5

Lori Williams

In this session, we will examine strategies for teaching division with conceptual understanding. We will also explore models and strategies to build a stronger foundation of the meaning of division using virtual manipulatives. This presentation was part of the WMC Math Chat Series.

 **Asynchronous Virtual Sessions**

Grades 6-8

900

Answering the Question, 'When am I ever Going to Use this in the Real World'

Grades 6-8

Ann Franz

The NEW Manufacturing Alliance working in partnership with math teachers has created Get Real Math videos featuring 4th - 12th grade Common Core math skills that demonstrates how what is learned in school is applied to the workplace. The free videos and teacher lesson plans provides application to what is learned and ACP awareness.

901

Nearpod or Pear Deck- Which One Should I Choose?

Grades 6-8

Alissa Hansen and Jamie Prestosa

In this hybrid and virtual world, technology platforms are more useful and necessary than ever. In this session, you will learn the basics of Nearpod and Pear Deck in the mathematics classroom. We will explore the similarities and differences so you can make the best choice for your students.

902

Connecting Arithmetic to Algebraic Reasoning – Solve Me Mobiles

Grades 6-8

Adrienne Burns

For some students solving equations in middle school can feel like a new skill that leaves all the math of elementary school behind. This presentation will show how to use Solve Me Mobiles to help students connect the arithmetic they use to solve the puzzles with the algebraic reasoning expected in middle school.

903

Connecting Arithmetic to Algebraic Reasoning - Splats

Grades 6-8

Adrienne Burns

For some students solving equations in middle school can feel like a new skill that leaves all the math of elementary school behind. This presentation will show how to use Steve Wyborne's Splat tasks to help students connect the arithmetic they use to solve the puzzles with the algebraic reasoning expected in middle school.

904

Implementing the 5 Practices Remotely

Grade 6-8

Lisa Hennessey

The 5 Practices is a critical framework for orchestrating effecting discourse in the classroom. In this session, we will focus on how to transform these practices to the virtual classroom. This presentation was part of the WMC Math Chat Series.

905

Middle School Math Routines

Grades 6-8

Maggie McHugh

Math routines are reasoning activities that are designed to develop number sense. This session will examine several math routines to implement in the middle grades in a virtual or face-to-face setting.

906

Connecting the Real World to Middle School Mathematics

Grades 6-8

Jenn Kosiak and UW-L Teacher Candidates

In this session, we will examine social justice math lessons relating to water access and climate. Designed by teacher candidates at UW-La Crosse, these lessons incorporate a wide-variety of mathematical topics such as statistics, functions, and proportional reasoning.

907

Introduction to Ratios in Middle School

Grades 6-8

Valerie Camille Jones, Sponsored by Texas Instruments Education

Deep dive into a video series designed to set students up for success in core math courses. These lessons are great for both in-person and virtual learning. Intro to Ratios is led by Valerie Camille Jones, Ph.D., currently teaches at The Ron Clark Academy and was recently honored with the Presidential Award for Excellence in Mathematics and Science Teaching, which is America's highest honor in math and science for teachers. She is a champion of promoting math esteem. In the classroom, she develops art and video game simulations to connect students to math and coordinates field trips to provide real-life examples of the influence of math.



Asynchronous Virtual Sessions

Grades 9-12

1000

Colliding Masses, an Interesting Counting Problem, and a Jaw Dropper

Grades 9-12

Jason Thrun

The title of this presentation hints at a result that's been popular on the Internet for several years. If the title doesn't jog your memory, then I think you will really enjoy this surprising result. In the presentation, I'll model the problem on a TI-84, reveal the jaw dropper, and explain what's going on. The explanation uses trig, but the result can be appreciated by anyone who enjoys math. Participants may wish to bring a chin guard.

1001

Edpuzzle: Make Any Video into a Lesson

Grades 9-12

Ahlia Dupree

In this session, you will explore how to increase student engagement in your mathematics classroom with Edpuzzle. Learn how this tool can be used in both a virtual and face-to-face setting.

1002

Math Equity Project

Grades 9-12

Mary Lee McKenzie

This session will focus on the teaching practices of the Math Equity Project. Through examples, we will also explore models for designing culturally relevant projects in the mathematics classroom.

1003

Using Pear Deck in the Math Classroom

Grades 9-12

Joe Schneider

Learn how to integrate interactive slides using Pear Deck in your high school mathematics classroom. This session will focus on a variety of strategies to engage students in the virtual and face-to-face setting.

1004

It's About the Learning! So Let's not Make it about the Grade

Grades 9-12

Scott Anderson

In this session, I will share my journey for assessing academic mastery. I will also discuss my success and challenges to help students see it is about the learning!

1005

Transformation n Algebra: A Video Series

Grades 9-12

Robert Ahdoot, Sponsored by Texas Instruments Education

Deep dive into a video series designed to set students up for success in core math courses. These lessons are great for both in-person and virtual learning.

Introduction to Transformation in Algebra is lead by Robert Ahdoot is a math educator and founder of YayMath.org, a free online collection of math video lessons, filmed LIVE in Robert's classroom, featuring authentic student interaction, that's both fun and emotionally connective. It has given life to now iconic, full costume math characters, like the "MathemaGyptian" and "MathemaChicken."