Welcome to the 2015 MCTM/MinnMATYC Spring Conference! Our theme this year is "Shining a Light Through Equity and Powerful Instructional Practice".

Knowing and understanding mathematics can open doors to a variety of colleges and careers. Elementary and secondary teachers set high expectations, create a safe, respectful learning environment, and provide support for learning for ALL students. We assure that all students have equal access to powerful learning experiences by using high-quality, engaging mathematics instruction. Our students confidently engage in complex mathematical tasks, working together to make, refine, and explore conjectures. We keep the doors to a variety of colleges and careers open.

At two-year colleges, closing gaps and working towards equity is what we’re about. Our students are more likely than typical four-year college students to be low-income, more likely to be people of color, more likely to have disabilities, and therefore, statistically speaking, they are less likely to be strong math students. It has long been the goal of two-year college math departments to overcome these statistics and find paths to success for all students.

You will find, among the dozens of sessions presented over the next few days, many wonderful examples of “powerful instructional practice”. Take those ideas back to your classrooms, and share them with your colleagues. While you are here, discuss your own practices with others.

We hope you find much to inspire you in this year’s conference. Thank you for being here!

Enjoy!

Ellen Delaney
MCTM President

Anne Nelson Fisher
MinnMATYC President
2015 Spring Conference Schedule

Thursday, April 30
7:00–9:00 p.m. Registration & Some Exhibits Open.........................Edmund Fitzgerald Exhibit Hall
CONNECT Membership Meeting.................................................Gooseberry Falls

Friday, May 1
7:15 a.m.–12:15 p.m. Exhibits/Registration Open..........................Edmund Fitzgerald Exhibit Hall
7:30 a.m.–8:30 a.m. First-Timers' Orientation.............................Registration Area
8:45–9:30 a.m. Keynote.................................................................Ballroom J/K
Matt Larson
"Focus on What Matters Most: Effective Teaching!"
You are encouraged to sit by other teachers from your region. Look for signs on the tables that match the Regional number and color of your nametag.
9:45 a.m.–10:45 a.m. First-Timers' Orientation.............................Registration Area
9:45 a.m.–12:00 p.m. Sessions/Workshops.................................Various Rooms: See Schedule Pages
12:15–1:15 p.m. Lunch.................................................................Ballroom J/K
1:15–5:45 p.m. Exhibits/Registration Open.................................Edmund Fitzgerald Exhibit Hall
1:30–5:00 p.m. Sessions/Workshops.........................................Various Rooms: See Schedule Pages
5:15–6:00 p.m. Regional Meetings MCTM.................................Various Rooms: See Schedule Pages
5:45–7:00 p.m. Presidents’ Reception........................................Ballroom J/K
Sample a variety of foods from four different stations. Station 1: Vegetable Spring Rolls, Gruyere and Summer Leek Tart and Artichoke Dip with Crostini 2: Fresh Fruit Tray Station 3: Butternut Squash Ravioli With Sundried Tomato Cream Sauce 4: Roast New York Strip Served on Grilled Ciabatta, Brown Mustard, Mayonnaise, and Horseradish Sauce. Cash Bar.
7:15–8:45 p.m. Delegate Assembly..............................................Harbor Side 3rd Floor
Sundae Buffet: Cold Stone Creamery Vanilla Ice Cream, Hot Fudge, Strawberry Sauce, Caramel, Nut Topping, Sprinkles, Fresh Whipped Cream and Cherries. Join us for our annual financial and membership reports and discuss and vote on new resolutions for MCTM.

Saturday, May 2
7:30 a.m.–12:45 p.m. Registration and Some Exhibits Open...........Edmund Fitzgerald Exhibit Hall
8:15 a.m.–12:45 p.m. Sessions/Workshops...............................Various Rooms: See Schedule Pages
10:35–11:05 a.m. MinnMATYC Open Forum.............................Ballroom L
11:15 a.m.–12:45 p.m. MinnMATYC Annual Business Meeting......Ballroom L
12:45 p.m. Keynote......................................................................Ballroom J/K
Matt Larson
"Overcoming Obstacles to Make Mathematics Work for All!"
Lunch
Roast Turkey With Lettuce, Tomato, Sprouts and Parmesian Pepper Cream Sauce on a Foccacia Bun. Private blend regular and decaf coffee, tea or milk served. Dessert: Assorted Bars.

Door Prizes following the Saturday Keynote Presentation. Must be present to win.
Place name tag in box as you enter for lunch.
### MCTM Regional Meeting Room Schedule

**Friday, May 1 • 5:15–6:00 p.m.**

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<thead>
<tr>
<th>Region</th>
<th>Director</th>
<th>Room</th>
<th>Region Color</th>
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<tr>
<td>1</td>
<td>Amy Wix</td>
<td>St. Louis River</td>
<td>Lavender</td>
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<td>2</td>
<td>Christy Hemp</td>
<td>Ballroom L</td>
<td>Orange</td>
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<tr>
<td>3</td>
<td>Kristin Cayo</td>
<td>Gooseberry Falls 1</td>
<td>Light Blue</td>
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<td>4</td>
<td>Rosemary Hunt</td>
<td>Ballroom O</td>
<td>Red</td>
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<tr>
<td>5</td>
<td>Mike Wallus</td>
<td>Split Rock 1</td>
<td>Brown</td>
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<tr>
<td>6</td>
<td>Mardi Knudson</td>
<td>Ballroom M-N</td>
<td>Gray</td>
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<tr>
<td>7</td>
<td>Becky Rud</td>
<td>Gooseberry Falls 2</td>
<td>Green</td>
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<tr>
<td>8</td>
<td>Russ Davidson</td>
<td>Gooseberry Falls 3</td>
<td>Dark Blue</td>
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Your MCTM Regional number is assigned to you based on eight geographical regions of Minnesota and is printed on your nametag. Your nametag is also color-coded by your region. Look for other conference attendees with the same colored nametag and introduce yourself to other math teachers in your region. During the regional meeting your regional director will report on the 2014 resolutions. Regions will then have an opportunity to discuss resolutions that will be presented at the Delegate Assembly, MCTM’s annual meeting.

### Delegate Assembly

We will hold the annual Delegate Assembly on Friday evening at 7:15 p.m. - Harbor Side 3rd Floor.

Come enjoy ice cream sundaes and coffee as we receive our annual financial and membership reports and discuss and vote on new resolutions for MCTM.

All delegates in attendance will receive a $20 Gift Certificate to the NCTM booth to use at the Spring Conference.

Contact your regional director if you are interested in becoming a delegate.
FIRST-TIMERS’ ORIENTATION
If this is your first Spring Conference, join President Ellen Delaney and President-Elect Sara Van Der Werf for a cup of coffee and rolls and get tips and ideas on how to make the most of the spring conference. Stop by the St. Louis River Room on Friday, 7:30–8:30 a.m. or from 9:45–10:45 a.m.

PRESIDENTS’ RECEPTION
Join us from 5:45–7:00 p.m. on Friday for the Presidents’ Reception, hosted by the MCTM Board of Directors. The reception will be held in Ballroom J/K of the City Side Convention Center immediately following the Regional Meetings. This is a wonderful opportunity to visit with friends and make new acquaintances while we extend congratulations to Minnesota's 2014 State Finalist for the Presidential Award; Sarah Currier from Elizabeth Hall School, Minneapolis, MN and Carissa Tobin from Nellie Stone Johnson School, Minneapolis, MN. The reception also recognizes the newly elected MCTM honorary member Dr. William Tomhave from Concordia College, Moorhead, MN.

EXHIBITS – PRIZES
The exhibit area is in the Edmund Fitzgerald Exhibit Hall. Vendors are here to show you the latest in curriculum, technology, and other math-related products. Please take the time to stop by their booths and chat. Drawings for great prizes will take place throughout the day on Friday. Your ticket to enter can be found in your registration materials envelope. Place it in the pink box at the door prize table in back of the exhibition hall anytime before 5:15 p.m. Friday. Winners will be posted at the door prize table throughout the day. Check back frequently to see if you’ve won!!

KEYNOTES
The 2015 Spring Conference features two keynote presentations by Matt Larson. Friday morning, Matt will present his keynote presentation, “Focus on What Matters Most: Effective Teaching!” Saturday during lunch, Matt will present, “Overcoming Obstacles to Make Mathematics Work for All!”

TWITTER
Be sure to TWEET about the conference on Twitter at #mctmduluth. Follow MCTM on Twitter @mctm_mn.

RELICENSURE SESSIONS
Certificates toward relicensure in Mental Health will be available at the sessions presented by Heidi Hahn (#4 & #25). Christy Hemp’s session #85 qualifies for re-licensure requirement: Reading Preparation and her session #122, qualifies for re-licensure requirement: Technology Integration.

MCTM & MinnMATYC SESSIONS
All conference participants are encouraged to attend sessions from either organization.

DOOR PRIZES
Door prizes will be awarded after the Keynote address on Saturday. You must be present to win!

BOOK SALE
Looking for a good bargain on professional books? Visit the BOOK SALE inside the Exhibit Hall. The sale features slightly used professional books for $1, $2, $5 or $10 to support the Foundation. First come, first served during the Spring Conference only.

MinnMATYC
MinnMATYC will conduct their business meeting on Saturday from 11:15 a.m.–12:45 p.m. in Ballroom L. Join MinnMATYC President Anne Nelson Fisher and the board to discuss past year issues and to plan for the coming year.

MCTM REGIONAL MEETINGS
Your MCTM region number assigns you to one of the eight geographical regions in the state and is printed with a unique color-code on your nametag. See page 4 for a listing of each regional director and join them on Friday from 5:15–6:00 p.m. Each director will conduct a meeting to discuss issues and possible resolutions for the Delegate Assembly being held on the 3rd floor of Harbor Side from 7:15–8:45 p.m. This is an opportunity for your voice to be heard and to network with colleagues.

DULUTH AREA ACTIVITIES
A representative from the Duluth Convention and Visitors’ Bureau will be available on Thursday from 7:00 p.m.–9:00 p.m. and again on Friday from 7:30 a.m.–12:00 p.m. outside the Edmund Fitzgerald Exhibit Hall. Visit the official Duluth travel guide at www.visitduluth.com.
THE DECC

HARBOR SIDE – CITY SIDE

The DECC is divided into two parts, the Harbor Side and the City Side. The City Side is the side closer to the parking lot. The Harbor Side is closer to the Harbor. You can follow a yellow line on the floor to this part. It can be picked up on the upper level just outside the arena. Your program book has each side listed along with the room numbers.

COFFEE–INTERNET

MCTM is pleased to offer you complimentary coffee and wireless Internet. Coffee is available in the Exhibit Hall and Harbor Side in the morning. A DECC kiosk in the lobby also offers gourmet coffee.

REGISTRATION TABLE

The Registration Table is located in the Edmund Fitzgerald Exhibit Hall. Committee and board members will be available to assist you. This area will serve as a clearinghouse for lost and found articles.

SPEAKER HOSPITALITY ROOM

A Speaker Hospitality room is located in the Board Room, City Side, upper level. Speakers are welcome to use this room to store materials or to prepare for their presentation.

CONFERENCE EVALUATION FOR MCTM & MinnMATYC

Conference participants who registered through MCTM are asked to complete the pink conference evaluation form found in your registration packet. Place your form in the pink box. Conference participants who registered through MinnMATYC should place their evaluations in the box at the MinnMATYC Registration Table.

PUBLISHER/EXHIBITOR SESSIONS

There are sessions offered by both Publishers and Exhibitors. Publisher and Exhibitor sessions are differentiated in the session description.

MAKE THE MOST OF YOUR CONFERENCE EXPERIENCE

To make the most of the Spring Conference consider the following suggestions:

- Take time to visit the exhibits
- If this is your first conference, attend the First-Timers’ Orientation Friday, 7:30–8:30 a.m. or from 9:45–10:45 a.m. in the St. Louis River Room. Share your particular interests and ask for suggestions for sessions to attend
- Arrive early at sessions, as they may fill up quickly
- Sit near the front to be able to see, hear and receive handouts
- Allow time for networking. Join your colleagues in one of the planned activities or create your own
- Challenge yourself to meet 10 other attendees from your region. Look for nametags with the same color as your own.
- Arrange to share at least two new ideas with a colleague
- Plan to keep up with one or two new contacts via email or phone
- Plan to attend the Symposium and the Spring conference April 28-30 in Duluth next year
- Please put cell phones on silent or turn them off during sessions
- Sign onto Twitter. Use and/or follow the hashtag #mctm to connect with conference attendees on social media.

SPECIAL THANKS

The Conference Committee would like to thank the following for their contribution to this year’s conference:

- United Educators Credit Union for donating pens
- Duluth CVB and the DECC
- All of the people and organizations that coordinated the use of LCD projectors for the conference
- The Inn on Lake Superior and The Suites at Waterfront Plaza for donating certificates for a one night stay for our speaker drawing and our weekend getaway door prize
- Education Minnesota for the grant made available to MinnMATYC
Matt Larson is the K-12 mathematics curriculum specialist for the Lincoln Public Schools in Lincoln, NE. He is a co-author of the recent IES What Works Clearing House Report: Teaching Strategies for Improving Algebra Knowledge in Middle and High School and the co-author of numerous other professional books, including: the Common Core Mathematics in a PLC at Work™ series, and Beyond the Common Core: A Handbook for Mathematics in a PLC at Work series.

He is a member of the writing team for the recent NCTM publication: Principles to Actions: Ensuring Mathematical Success for All. And he is a co-author of K-12 mathematics programs published by Houghton Mifflin Harcourt.

Larson has taught mathematics at the secondary and college levels and has held an appointment as an honorary visiting associate professor at Teachers College, Columbia University. He has served on the Board of Directors for the National Council of Teachers of Mathematics and as past chair of NCTM’s Research Committee.
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<tr>
<td>1</td>
<td>First-Timers’ Orientation</td>
<td>General  St. Louis River Room</td>
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</table>
|   | **Speakers:** Ellen Delaney – President  
Anoka School District - Anoka, MN  
Sara Van Der Werf – President-Elect  
Ramsey Middle Schol - Minneapolis, MN |   |
| 2 | What Holes? - Part II | PreK-5  Harbor Side 202 |
|   | **Speaker:** Mary Sucher  
Independent School District #196- Rosemount, MN |   |
| 3 | My Favorite Technologies From a Middle School Math Geek | 6-8  Harbor Side 203 |
|   | **Speaker:** Michelle Bacon  
Willow Creek Middle School - Rochester, MN |   |
| 4 | Part I - Mental Health - Early Warning Signs | 6-8  Harbor Side 204 |
|   | **Speaker:** Heidi Hahn  
ISD 181 - Brainerd, MN |   |
| 5 | Lessons Learned from Statway for all Teachers | College  Harbor Side 205 |
|   | **Speaker:** Joan Carter  
Minneapolis Community College - Minneapolis, MN |   |
| 6 | Eliminating Road Blocks in a Developmental Math Pathway | College  Harbor Side 301 |
|   | **Speaker:** Becky Groseth  
Anoka-Ramsey Community College - Anoka, MN |   |
| 7 | Panel Discussion - Surviving the First Years of Teaching | 9-12  Harbor Side 302 |
|   | **Speakers:** Terry Wyberg & Larry Luck  
University of Minnesota - Minneapolis, MN |   |
| 8 | Flipping With a Twist - Promoting Inquiry While Flipping the Classroom | 9-12  Harbor Side 303 |
|   | **Speaker:** Jonathan Osters  
The Blake School - Minneapolis, MN |   |
| 9 | Finding Great Math Lessons Online | 6-12  Harbor Side 304 |
|   | **Speaker:** Christy Pettis  
University of Minnesota - St. Paul, MN |   |
| 10 | Mastery All the Time | 6-12  Harbor Side 305 |
|   | **Speaker:** Andy Pethan  
Byron High School - Rochester, MN |   |
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<th>Speaker(s)</th>
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| 11         | 9:45 a.m.–10:45 a.m. Ballroom L | **Forget the Papers! Formative Assessment in the Digital Age**  
Do you want to give more timely feedback to your students without all the papers, but struggle with how you can capture student learning digitally? Come learn how Movenote, Google Classroom and Google Docs can transform how you monitor and support student learning. | **Speaker:** Jessica Rice  
*Bloomington Public Schools - Bloomington, MN* |
| 12         | 9:45 a.m.–10:45 a.m. Ballroom M/N | **Using Multiple Representations to Make Connections in Algebra**  
Participate in activities that help find the connections between a rule, graph, table and context. Learn ways to help students move from each representation to the others, developing deep understanding of multiple ways to solve problems. | **Speaker:** Mark Christenson  
*Kittson Central Schools - Hallock, MN* |
| 13         | 9:45 a.m.–10:45 a.m. Ballroom O | **Place Value Development in Multiplication & Division**  
Place value at its core is a multiplicative rate of ten. This session will look at how explicitly working with factors of ten aids students’ understanding of multiplication and division. | **Speaker:** James Brickwedde  
*Hamline University - St. Paul, MN* |
| 14         | 10:00 a.m.–11:30 a.m. Registration Area | **CAS – Computer Algebra System – In Grades 8-12**  
What is CAS? Explore how to use it to help your students learn and discover algebra, geometry, and beyond.  
I used CAS with low achieving algebra 1 students with great success.  
Hands on! Take away all activities. | **Speaker:** Tom Reardon  
*Fitch High School / Youngstown State University - Youngstown, OH* |
| 15         | 10:00 a.m.–11:30 a.m. French River 1 | **Proportional Reasoning With a Step, a Chip, and a Degree**  
Explore proportionality across the 6-8 Standards. Rate, ratio, constant of proportionality, and constant rate of change will be seen in real world problem solving.  
Student ready materials will be available following the session. | **Speaker:** Paul Agranoff  
*Aims Center for Math and Science Education - Fresno, CA* |
| 16         | 10:00 a.m.–11:30 a.m. French River 2 | **Modeling and Simulation: Teaching Statistics for Deeper Understanding**  
This presentation shows how modeling and simulation-based teaching statistical inference can deepen students’ understanding and enable them to investigate more complex phenomena. This is part of a new College in the Schools course offered from the University of Minnesota. | **Speakers:** Michael Huberty & Andrew Zieffler  
*University of Minnesota - Minneapolis, MN*  
Dan Butler  
*Mounds View High School - Arden Hills, MN* |
| 17         | 10:00 a.m.–11:30 a.m. Gooseberry Falls 1 | **5 Indicators of Decimal Number Sense**  
Latest version of the Rational Number Project decimal lessons will be shared along with examples of thinking among students who used these lessons. This work has led to our identifying 5 indicators of decimal number sense. | **Speakers:** Kathleen Cramer  
*University of Minnesota - Minneapolis, MN*  
Debra Monson  
*University of St. Thomas - St. Paul, MN*  
Sue Ahrendt  
*University of Wisconsin River Falls - River Falls, WI* |
| 18         | 10:00 a.m.–11:30 a.m. Gooseberry Falls 2 | **Creating Team-Worthy Problems**  
After a quick look at the difference between teams and groups, we will look at team-worthy problems and what that means. We will look at changes needed to create team-worthy problems that increase student participation, engagement, and accountability. | **Speaker:** Cheryl Tucker  
*Minneapolis Public School - Minneapolis, Minnesota* |
| 19         | 10:00 a.m.–11:30 a.m. Gooseberry Falls 3 | **Eighth Grade Math Through Programming**  
In this session participants will be introduced to methods that are used to reinforce 8th grade mathematics standards with concurrent development of basic programming skills in two languages, TI.Basic and JavaScript. A complete semester course will be offered to participants for their use. | **Speaker:** Thomas Totushek  
*ISD 625 - Saint Paul, MN* |
| 20         | 10:00 a.m.–11:30 a.m. Split Rock 1 | **Building Number Sense**  
Our students need to understand Number Sense and Place Value. Number Sense Routines will be demonstrated along with five frames, ten frames and mini ten frames. Learn how you can use all of these tools with your K-2 students. | **Speakers:** Betty Wendorff, Sarah Mizioro & Terry Meryhew  
*St. Paul Public Schools - St. Paul, MN* |
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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Location</th>
<th>Speaker(s)</th>
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<tr>
<td>10:00 a.m.–11:30 a.m.</td>
<td><strong>Guided Mathematics: Meeting All Students' Needs in Math Class</strong></td>
<td>Split Rock 2</td>
<td>Sarah Hunter, Mary Lambrecht, Mike Wallus &amp; Lesli Gisi</td>
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<td><em>Minneapolis Public Schools - Minneapolis, MN</em></td>
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<td>11:00 a.m.–12:00 p.m.</td>
<td><strong>Teaching the &quot;Middle&quot; to Middle Schoolers</strong></td>
<td>St. Louis River</td>
<td>Dorothy Wintz</td>
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<td><em>Carondelet Catholic School - Minneapolis, MN</em></td>
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<td>11:00 a.m.–12:00 p.m.</td>
<td><strong>Structuring Numbers-Strategies to Build Number Sense</strong></td>
<td>Harbor Side 202</td>
<td>Alison Ross &amp; Courtney LaRoche</td>
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<td><em>Wayzata Public Schools - Plymouth, MN</em></td>
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<td>11:00 a.m.–12:00 p.m.</td>
<td><strong>Problem Solving Lesson Design and Cooperative Learning</strong></td>
<td>Harbor Side 203</td>
<td>Daniel Vrieze</td>
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<td><em>Dover-Eyota - Eyota, MN</em></td>
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<td>11:00 a.m.–12:00 p.m.</td>
<td><strong>Decimal, Fraction, and Percent Equivalence Using Base-10 Blocks</strong></td>
<td>Harbor Side 204</td>
<td>Kathleen Wilson</td>
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<td><em>St. Paul Public Schools - St. Paul, MN</em></td>
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<tr>
<td>11:00 a.m.–12:00 p.m.</td>
<td><strong>What's Happening to x?</strong></td>
<td>Harbor Side 204</td>
<td>Mike Reiners</td>
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<td><em>Christ's Household of Faith School - Saint Paul, MN</em></td>
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**Friday, May 1**

**PreK-5 Split Rock 2**

**Guided Mathematics: Meeting All Students' Needs in Math Class**

What if we acknowledged that whenever we teach whole group lessons we are really teaching to a small group of students? What if each math lesson was tailored for and taught in small groups in order to meet each student's needs? We will model a co-taught lesson using Guided Math as the framework.

**Speakers:** Sarah Hunter, Mary Lambrecht, Mike Wallus & Lesli Gisi

*Minneapolis Public Schools - Minneapolis, MN*

**3-8 St. Louis River**

**Teaching the "Middle" to Middle Schoolers**

Learn engaging activities and problems that make teaching stats fun. Topics covered include: bar graphs vs. histograms, box plots, stem leaf plot and more. In addition learn how to choose measures of central tendency, and use shape and spread to compare data.

**Speaker:** Dorothy Wintz

*Carondelet Catholic School - Minneapolis, MN*

**PreK-2 Harbor Side 202**

**Structuring Numbers-Strategies to Build Number Sense**

Using subitizing, ten-frames, bead racks, and other materials, participants will engage in a variety of activities and games to use in the classroom. These activities will focus on building number sense by composing and decomposing numbers up to 20, starting with using 5 and 10 as anchor numbers.

**Speakers:** Alison Ross & Courtney LaRoche

*Wayzata Public Schools - Plymouth, MN*

**6-12 Harbor Side 203**

**Problem Solving Lesson Design and Cooperative Learning**

Learning math through problem solving, cooperative learning, brain research and other instructional strategies that have been applied at Dover-Eyota Middle/High School to increase student achievement in math.

**Speaker:** Daniel Vrieze

*Dover-Eyota - Eyota, MN*

**3-8 Harbor Side 204**

**Part II - Mental Health in Children and Adolescents**

Learn about a variety of mental health concerns in children and what children's needs might look like in the classroom setting: learn a variety of ways to accommodate and support needs within your classroom. Presentation is done in a highly interactive manner with lots of practical applications that can be used right away.

**Speaker:** Heidi Hahn

*ISD 181 - Brainerd, MN*

**6-12 Harbor Side 205**

**Connecting Neuroscience and Education**

As educators we know certain practices help students learn and retain information. We'll take an informative look at neuroscience research of how the brain works and learns to assess the practices we currently use. We will also help develop an effective study cycle for students.

**Speaker:** Tammy Fitting

*MSU-Moorhead - Moorhead, MN*

**3-8 Harbor Side 301**

**Why Do We Do That?**

A look at how we’ve taught topics in the past, changes we’ve made, and why we made them. Discussion will include dividing fractions, finding intercepts to linear equations, multiplying polynomials, solving absolute value equations and others. Open dialogue welcome.

**Speakers:** Janine Goenner & Brian Nyholm

*St. Cloud State University - St. Cloud, MN*

**9-College Harbor Side 302**

**Playing with State Standards**

This session will explore various topics from the field of recreational mathematics. Mathematical games and puzzles, paper folding tricks, and mathematical magic tricks will be presented. Relevance to the Minnesota State Standards and Common Core State Standards will be discussed.

**Speaker:** Ashley Priem

*Mankato State University - Mankato, MN*

**3-8 Harbor Side 303**

**Decimal, Fraction, and Percent Equivalence Using Base-10 Blocks**

Do your students struggle with finding the equivalent fraction, decimal, and percent? This session will lead you through an investigation using base-10 blocks to discover how to find the equivalent representation. You will leave with a series of activities you can use with your students to build their conceptual understanding of fractions, decimals, and percents.

**Speaker:** Kathleen Wilson

*St. Paul Public Schools - St. Paul, MN*

**6-12 Harbor Side 304**

**What's Happening to x?**

Through the simple question "What's happening to x?", we can give students a deeper understanding of order of operations, simple equation solving, graph transformations, and inverse functions. Come explore this inquiry-based instructional technique!

**Speaker:** Mike Reiners

*Christ's Household of Faith School - Saint Paul, MN*
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<th>Session Title</th>
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| 11:00 a.m.–12:00 p.m. | Harbor Side 305 | **Strategies to Engage Struggling Learners**  
This session describes strategies that we have seen provide success for our struggling inner city high school students. We will talk about everything from intentional warm ups, infusing vocabulary, ALEKS, and engaging activities that are more than just a worksheet.  
Speakers: Sarah Prosko & Jessica Lind  
*MTS High School - Minneapolis, MN* |
| 11:00 a.m.–12:00 p.m. | Ballroom L      | **Hybrid Learning**  
Hybrid Learning is a carefully planned blend of both traditional face to face classroom instruction and online learning activities. Hybrid Learning helps students to improve writing and computer skills, also encourages self-directed learning, time management, problem-solving, and critical-thinking skills.  
Speakers: Krisanne Wessel, Kimberly Horst, Francine Frederickson & Barb Bengtson  
*Isanti Intermediate School - Isanti, MN* |
| 11:00 a.m.–12:00 p.m. | Ballroom N      | **Look What My Chrome Can Do**  
A look at how the Google Chromebooks purchased through the MCTM Incentive Grant program have impacted my classroom. Topics include: Flipped learning, Individualized Instruction, Standards Based Grading, and Google Apps/ Add-ons/ Extensions.  
Speaker: Bill Wietman  
*Albert Lea Area Schools - Albert Lea, MN* |
| 11:00 a.m.–12:00 p.m. | Ballroom O      | **MCA Update Grades 3-8 and High School**  
We will share the latest updates for MCAs and career and college readiness assessments.  
Speakers: Margarita Alvarez, Ann Page & Rosemary Heinitz  
*Minnesota Department of Education - Roseville, MN* |
| 1:30 p.m.–2:30 p.m.   | Harbor Side 203 | **Adding and Subtracting Fractions: Applying Whole Number Concepts to Rational Number Operations**  
Are you frustrated with students struggling to make sense of adding and subtracting fractions? Are you looking for strategies that allow your students to become efficient and flexible thinkers? Come find out how to help your students connect whole number and rational number operations in this hands-on, engaging session.  
Speaker: Michael Wallus  
*Minneapolis Public Schools - Minneapolis, MN* |
| 1:30 p.m.–2:30 p.m.   | Harbor Side 204 | **Panel Discussion: Developmental Math & Financial Aid**  
This panel discussion will be an opportunity to learn what several MnSCU schools have done this year to address the changes in financial aid eligibility of many developmental math courses. Come share any changes that your college made as a result of these financial aid issues and learn how other schools handled it this year, what kind of success they had, and what changes they plan on making for next year!  
Speaker: Carrie Naughton  
*Inver Hills Community College - Inver Grove Heights, MN* |
| 1:30 p.m.–2:30 p.m.   | Harbor Side 205 | **How to Write Good Word Problems & Test Questions**  
Have you ever wondered what goes into making a good word problem? Have you wondered why there wasn't a class on test writing in school? Come and find out the 'Dos and Don'ts' of writing word problems and test questions. There will be time for you to write your own word problems and evaluate them in groups.  
Speaker: Theresa Kohls  
*Community School of Excellence - St. Paul, MN* |
| 1:30 p.m.–2:30 p.m.   | Harbor Side 301 | **Finding Money: MCTM Grants & Scholarships**  
MCTM offers four grants or scholarships. Come find out requirements, how to apply and enhance your application, deadlines, and how awards can be used. Bring technology (phone, tablet, computer), with internet access, if possible.  
Speakers: Nancy Nutting & Amy Wix  
*MCTM Foundation* |
| 1:30 p.m.–2:30 p.m.   | Harbor Side 302 | **How Do Students Reason Proportionally?**  
A look at differences between developmental and college level proportion-related understandings and reasoning processes. The presentation will present results of a research study that ran for two semesters in a community college setting. Implications for teaching and learning in developmental contexts will be shared.  
Speaker: Megan Breit-Goodwin  
*University of Minnesota - STEM Education Center* |
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<th>Session</th>
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| 41      | 1:30 p.m.–2:30 p.m. | Harbor Side 303 | Using Discourse and Tasks to Uncover Student Thinking | Students today are required to construct viable arguments and critique the reasoning of others. In this session, strategies for uncovering student understanding through the use of academically productive discourse as well as tasks that allow for discourse are explored. | Speaker: Genni Steele  
*Math Solutions - Sausalito, CA* |
| 42      | 1:30 p.m.–2:30 p.m. | Harbor Side 304 | Flipped Learning: Positive Impact of Peer Instruction | Peer Instruction combined with flipped learning has created a powerful hybrid that has shown significant gains in student learning, student engagement, and relationships. This presentation will give an in-depth background of peer instruction, including what it is and its benefits. | Speaker: Troy Faulkner  
*Byron Public Schools - Byron, MN* |
| 43      | 1:30 p.m.–2:30 p.m. | Harbor Side 305 | Using Technology to Inform Instruction | In this session, we will cover a variety of technology resources that you can use to check understanding, get instant feedback and data, and differentiation ideas. These technology resources allow teachers and students to get instant feedback which will inform instruction during the lesson and for future lessons. If you have a mobile device or laptop, please bring to the session. | Speakers: Haley O’Byrne  
*Willow Creek Middle School - Rochester, MN*  
Laura Willis  
*Friedell Middle School - Rochester, MN* |
| 44      | 1:30 p.m.–2:30 p.m. | Ballroom L | Ensuring Success for All With Powerful Learning Tools | Hopkins received a grant to provide manipulatives for use in mathematics intervention programming for elementary school students. Intervention teachers receive professional development to maximize the effective use of manipulatives. We will share our model and activities used in our professional development. | Speaker: Teresa Van Batavia & Michele Luke  
*Hopkins Public Schools - Hopkins, MN* |
| 46      | 1:30 p.m.–2:30 p.m. | Ballroom O | Developing and Using Math Language Targets | Learn about the collaborative process our team of EL teachers and district math coaches used to create language targets that accompany trimester math targets in grades K-5. We will discuss the creation of language targets and the implementation of accompanying math professional development. | Speakers: Sara George, Ann Bernard & Brooke Barnard  
*ISD 196 - Rosemount, MN* |
| 47      | 1:30 p.m.–2:30 p.m. | St. Louis River | Transitioning Students From High School to College Math | The presenter describes beginning math courses in college and how new students fit in the picture. He then talks about ways for teachers to better prepare students for taking math in college. There will be Q&A's and group discussions following the opening presentation. | Speaker: Pangyen Weng  
*Metropolitan State University - Minneapolis, MN* |
| 48      | 1:30 p.m.–3:00 p.m. | Registration Area | Integrate Questioning Techniques, Problem-Solving, Interactive Technologies, Engaging Tasks | Hands-on experience: 3 activities that promote active student engagement - mapped to the NCTM standards and practices. Learn specific instructional strategies and obtain questioning techniques that stimulate deeper conceptual understanding. Discover, explore, investigate and analyze with appropriate technologies (iPad, handheld, software). | Speaker: Tom Reardon  
*Fitch High School / Youngstown State University-Youngstown, OH* |
| 49      | 1:30 p.m.–3:00 p.m. | French River 1 | Developing Number Sense | Come and explore number sense activities for the primary classroom. The session will focus on examining number ideas in various contexts such as the real world, children's literature, geometry, measurement, algebraic reasoning, and data analysis. | Speaker: Kay Wohlhuter  
*University of MN Duluth - Duluth, MN* |
| 50      | 1:30 p.m.–3:00 p.m. | French River 2 | Mindset, An Important Variable in the Equity Equation | The equation for successful math understanding/application is more than ‘You know how to teach’ + ‘All students have the ability to learn’. Our students have made significant growth in math from our use of mindset and neuroscience findings. Come see why. | Speakers: Sue Benhardus, Allison Rubin & Beth Lesenci  
*Minneapolis Public Schools - Minneapolis, MN* |
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<tr>
<td>1:30 p.m.–3:00 p.m.</td>
<td>Gooseberry Falls 1</td>
<td><strong>Hidden Mathematics in The Simpsons</strong>&lt;br&gt;Did you know that the writers of The Simpsons have cleverly woven mathematical creativity into the long running series? In this session, we will uncover and explore some of these numerical secrets and provide ways in which you can utilize them for lessons or recreation.</td>
<td><em>Megan Schmidt</em>&lt;br&gt;<em>St. Francis High School - St. Francis, MN</em>&lt;br&gt;<em>Christopher Smith</em>&lt;br&gt;<em>Augsburg College - Minneapolis, MN</em></td>
<td>9-College</td>
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<td>1:30 p.m.–3:00 p.m.</td>
<td>Gooseberry Falls 2</td>
<td><strong>Loads of Codes - Cryptography Activities for Your Classroom</strong>&lt;br&gt;Cryptography is the science of using mathematics to encrypt and decrypt data. In this workshop, we'll look at the mathematics involved in a few systems over the years. We'll study different types of systems that are based in algebra and a few others that require different types of reasoning and sense making to encrypt and decrypt.</td>
<td><strong>Paul Kelley</strong>&lt;br&gt;<em>Anoka High School - Anoka, MN</em></td>
<td>6-12</td>
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<td>1:30 p.m.–3:00 p.m.</td>
<td>Gooseberry Falls 3</td>
<td><strong>Mathematical Modeling for Middle School</strong>&lt;br&gt;This hands-on workshop will have participants actively engaged in different modeling activities that they can take back to their classroom. The content will be appropriate for the middle school classroom and will emphasize the mathematical practice standards.</td>
<td><strong>Denise Young</strong>&lt;br&gt;<em>KCATM - Kansas City, MO</em></td>
<td>6-8</td>
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<tr>
<td>1:30 p.m.–3:00 p.m.</td>
<td>Split Rock 1</td>
<td><strong>Decimals, Fractions, and...Dancing?</strong>&lt;br&gt;Come deepen your understanding of decimals and their relationship to fractions. In this interactive session, we'll use movement, stories, and manipulatives to dig deep into decimals. The activities presented will be geared towards deepening participants own decimal knowledge but could be adapted for classroom use.</td>
<td><strong>Christy Pettis</strong>&lt;br&gt;<em>University of Minnesota - St. Paul, MN</em></td>
<td>3-8</td>
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<tr>
<td>1:30 p.m.–3:00 p.m.</td>
<td>Split Rock 2</td>
<td><strong>Solving Equations with Algebra Tiles (and iPads)</strong>&lt;br&gt;Participants will explore the use of Algebra Tiles and Expression Mats to develop a deep understanding of solving equations. (iPad/tablet Algebra tile online tech tool will be demonstrated and available for use in this workshop)</td>
<td><strong>Lisa Fisher-Comfort</strong>&lt;br&gt;<em>AFSA High School - Vadnais Heights, MN</em></td>
<td>6-12</td>
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<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 202</td>
<td><strong>Developing Place Value Understanding K-2</strong>&lt;br&gt;This session will look at using multiplication and measurement division to develop place value understanding in the primary grades. Also the importance of speaking in value rather than digits will be explored.</td>
<td><strong>James Brickwedde</strong>&lt;br&gt;<em>Hamline University - St. Paul, MN</em></td>
<td>PreK-2</td>
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<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 203</td>
<td><strong>'High Growth' Ideas for Those Who 'Do Not Meet Standards'</strong>&lt;br&gt;Schools and teachers tend to have lots of ideas and give a ton of attention to nearly proficient students in math to become proficient. What about the students that are often defined as only a color - our 'red' students? Come hear some thoughts on ways to support all students not meeting standards to achieve 'High Growth' every year in Mathematics. There are no easy answers, but I have a few ideas for you to try with your students.</td>
<td><strong>Sara Van Der Werf</strong>&lt;br&gt;<em>Ramsey Middle School - Minneapolis, MN</em></td>
<td>6-8</td>
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<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 204</td>
<td><strong>The Homework-free Mathematics Classroom</strong>&lt;br&gt;Would you like to reduce your students’ load, without sacrificing the quality of their learning? With sufficient in-class practice and problem solving, we have virtually eliminated homework from some classes, and actually seen an improvement in testing! Come to this session to learn how.</td>
<td><strong>Andy Cantrell</strong>&lt;br&gt;<em>The Blake School - Minneapolis, MN</em></td>
<td>6-12</td>
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<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 205</td>
<td><strong>The Benefits of Working Together</strong>&lt;br&gt;This session will describe how I redesigned a large lecture college mathematics classroom to include group work and time for problem solving. We will discuss the time and resources required for initial implementation, the benefits to the students (data driven), and how other instructors can adopt similar strategies.</td>
<td><strong>Matthew Priem</strong>&lt;br&gt;<em>Mankato State University - Mankato, MN</em></td>
<td>College</td>
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<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 301</td>
<td><strong>How Pre-service Teachers Benefit Through Tutoring College Students</strong>&lt;br&gt;Three pre-service teachers share their experiences tutoring/working as teacher assistants (TA) for different college courses. One tutored for pre-service teachers, and the others for developmental math. They will discuss the benefits of the students being tutored and for themselves.</td>
<td><strong>Stephen Smith, Michelle McGuire, Courtney Olgren, Molly Smith</strong>&lt;br&gt;<em>Northern Michigan University - Marquette, MI</em></td>
<td>General</td>
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<td>61</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 302</td>
<td>The Quaternions: A Mathematical Detective Story</td>
<td>Tony Dunlop, Normandale Community College - Bloomington, MN</td>
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<td>62</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 303</td>
<td>Fostering STEM Education in the Math Classroom</td>
<td>Raphael Carlson, Christ's Household of Faith School - St. Paul, MN</td>
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<tr>
<td>63</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 304</td>
<td>Encouraging Student Inquiry and Dialogue with 1:1 Devices</td>
<td>Casey Rutherford, Shakopee High School - Shakopee, MN</td>
</tr>
<tr>
<td>64</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>Harbor Side 305</td>
<td>Using a Scientific Calculator to Enhance Test-Taking</td>
<td>Tracey Zak-Johnson, Fort Worth, TX</td>
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<td>65</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>Ballroom L</td>
<td>Problem Solving With Bar Models</td>
<td>Amy Olson, Wayzata Public Schools - Plymouth, MN</td>
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<td>66</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>Ballroom M/N</td>
<td>Shining a Light on Reducing Math Anxiety</td>
<td>Haley Scheldorf, Erin Waytas &amp; Todd Frauenholtz, Bemidji State University - Bemidji, MN</td>
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<td>67</td>
<td>2:45 p.m.–3:45p.m.</td>
<td>Ballroom O</td>
<td>Fluency Without Fear</td>
<td>Courtney LaRoche, Wayzata Public Schools - Plymouth, MN</td>
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<td>68</td>
<td>2:45 p.m.–3:45 p.m.</td>
<td>St. Louis River</td>
<td>Estimation, Motivation, Technology Integration</td>
<td>Seth Leavitt, Minneapolis Public Schools - Minneapolis, MN</td>
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<td>69</td>
<td>3:30 p.m.–5:00 p.m.</td>
<td>Registration Area</td>
<td>Equal Sharing Stories and Fraction Concepts</td>
<td>Sarah Moffett &amp; Nina Smith, Minneapolis Public Schools - Minneapolis, MN</td>
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<td>70</td>
<td>3:30 p.m.–5:00 p.m.</td>
<td>French River 1</td>
<td>Number Talks in Kindergarten Through Grade 2</td>
<td>Brooke Williams &amp; Margaret Williams, Anoka-Hennepin ISD 11 - Anoka, MN</td>
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</table>
Problem Solving - MacGyver Style!
How do you solve a problem when all you have is a laser, a protractor, a ruler, and of course, Duct Tape? You MacGyver it! Come solve hands-on math and science problems, problems that MacGyver would be proud of.

Speakers: Dan Butler  
Mounds View Public Schools - Arden Hills, MN  
Michael Huberty  
University of Minnesota - Minneapolis, MN

Google + Math = BFF 4 Eva
Google Apps for Education is being used to engage students in deeper math discussions. Learn how to use Forms, Docs and Classroom to make your math class easy to manage and give a voice to each student. Bring your device to participate.

Speakers: Meghan Haselbauer  
Edina Public Schools - Edina, MN  
Susan Herder  
Mounds View Public Schools - Arden Hills, MN

Computer Password Construction-Based on a Geometric Series
A hands-on workshop based on Mathbits Summer 2014 How Geometric Series could keep the Zombies away.

Speaker: Porter Coggins  
Bemidji State University - Bemidji, MN

Achievement Level Descriptors –Hard, Harder, and Hardest??
Most state departments of education produce achievement or performance level descriptors to help teachers and administrators interpret student performance on a large scale standardized test. We will take a look at what these standards-driven documents mean in terms of assessment and how you can use these documents to drive instruction.

Speakers: Angela Hochstetter & Eric Jenson  
Data Recognition Corporation - Maple Grove, MN

EXHIBITOR SESSION

The Right Tools for the Math Job
As children develop early numeracy skills, choosing from among many simple tools for reading, writing, sequencing, and structuring numbers can strengthen early foundations. Participants will receive tools and view video clips of how they are used to facilitate numeracy development.

Speaker: Carolyn Olijnek  
US Math Recovery Council - Apple Valley, MN

The Power of Quick Formative Assessments in Action
Taking the mystery out of formative assessments by checking for students’ understanding. Are you looking for ways to quickly gauge student learning and understanding? We will define formative assessments, specifically for checking for understanding, as they relate to daily lesson design and how they are used by teachers to adjust instruction based on student learning needs. Participants will leave with practical methods for formatively assessing student learning to increase achievement through checks for understanding.

Speaker: Kathleen Wilson  
St. Paul Public Schools - St. Paul, MN

Getting N’spired
The Basics With TI-n’spire Graphing Calculator
This session will introduce participants to the basics of how to use the TI-nspire graphing calculator. Participants will learn why this calculator is so nspiring!

Speaker: Lisa Conzemius  
Detroit Lakes High School - Detroit Lakes, MN

Engaging Community with Math Study Evenings
Parental involvement in education can be key to students’ success. This session will explain how study evenings were implemented to engage the community in math, as well as share the positive impact these events had on student learning.

Speakers: Jenny Marshall & Julie Hoeve  
Dodge Middle School - Farmington, MN

Ignite!
Up to 12 speakers will make information-packed, five-minute presentations as their Powerpoint slides are automatically advanced every 15 seconds. Come join the fun and hear your colleagues pitch their great ideas at the pace of a speed date!

Speaker: Nicole Lang  
North Hennepin Community College - Brooklyn Park, MN

Providing Productive Struggle in Mathematics Classrooms
NCTM’s Principles to Actions encourages teachers to support students’ productive struggle in learning mathematics. Using examples from secondary classrooms, I will describe what productive struggle entails, how to provide such struggles for students, and why it’s critical for their learning.

Speaker: Ryota Matsuura  
St. Olaf College - Northfield, MN
Year Two with Quantway!

I will describe what we have learned the second year that we are teaching Quantway at Ridgewater, both what we have learned on campus and online. Carnegie tried a new platform which did not work out and we are trying another platform, Canvas. I will include analyses that have been given to our college as well as data nationwide on how Quantway students have performed.

Speaker: Mel Taylor
Ridgewater Community College - Hutchinson, MN

Intro Stats Evolves into Undergraduate Research

This session will present the results of an undergraduate research project analyzing data from a non-profit organization in the Twin Cities. The process of engaging a course in service learning and morphing projects into Undergraduate Research Opportunities will be presented along with the results of the study.

Speakers: Irene Duranczyk & Sean Jang
University of Minnesota - Minneapolis, MN

Creating A Wall of Math Mastery

Ignite students desire to reach mastery for your learning targets. Creating a "Wall of Mastery" display in your classroom based on standards-based grading principles helps create a student centered learning environment. I will share tips on how I have used this idea in a junior high math classroom over the last 2 years. This is a simple idea that can be implemented in any classroom at any age level.

Speaker: Chris Sieling
Lakeview - Cottonwood, MN

Teaching Integers

We will be sharing hands-on ways to teach integers to your students and sharing a few integer games using decks of cards.

Speakers: Shannon Essler-Petty
College of St. Benedict-St. John's University - St. Joseph, MN
Jesus Sandoval
Kennedy Community School - St. Cloud, MN

Reading & Writing Literacy? But I'm a Math Teacher!

Many of the process skills needed for mathematics are similar to reading skills and, when taught together, these skills reinforce each other. Participants will learn how to appropriately align the 2010 Literacy in History/Social Studies, Science, & Technical Subject standards with their mathematics content.

Speaker: Christy Hemp
St. Olaf College - Northfield, MN

Be sure to stop by and visit with the exhibitors in the Exhibit Hall
Saturday, May 2

90 8:15 a.m.–9:15 a.m.  Harbor Side 202
General

Teaching Racial Profiling in Elementary Math?
Two professors along with pre-service teachers share strategies using social justice contexts such as racial profiling, poverty, and nutrition to teach math to elementary students. Challenges from urban and suburban perspectives will be revealed through video, lesson plans, and discussion.

Speakers: James Clayton
St. Peter's University - Jersey City, NJ
Dr. Joan Kwako
University of MN - Duluth, MN

91 8:15 a.m.–9:15 a.m.  Harbor Side 203
6-12

Desmos for Dummies
Ok, we know you’re not a dummy; however, maybe you’ve never heard of Desmos or have little experience using it. This session will give you the full tour of all of the features of this graphing utility, how Team Desmos will change your teaching, and an example of an actual classroom project that used Desmos. Bring your own device (laptop preferred) and a willingness to see your classroom changed.

Speakers: Derek Johnson; Mora High School - Mora, MN
Stephen Larson; Saint John's Preparatory School - St. Joseph, MN

92 8:15 a.m.–9:15 a.m.  Harbor Side 204
College

LYNC-ing as a Real-Time Online Educational Tool in Math
LYNC can be effectively used to create a true “online” classroom, integrating (1) traditional lecture, (2) interactive group discussion, and (3) individual assistance. In this presentation, LYNC is demonstrated in a mock e-classroom setting, using a classical mathematical discussion topic…solving a quadratic equation by various methods.

Speakers: Mark Loken & Meg Hatalla
Century College - St. Paul, MN

93 8:15 a.m.–9:15 a.m.  Harbor Side 205
General

Using Web-Based Software in a Traditional Class Setting
This session will explore using a web-based software in a traditional class setting. We will discuss how we teach developmental college courses and how technology is incorporated both within and outside the classroom using ALEKS.

Speaker: Sara Asten
North Hennepin Community College - Brooklyn Park, MN

94 8:15 a.m.–9:15 a.m.  Harbor Side 301
College

Subsequent Course Pass Rates for Developmental Mathematics
Developmental mathematics has a goal of preparing students for college level mathematics. One measure of success of mathematics courses is how well students do in the subsequent course. Subsequent course pass rates of developmental mathematics is compared to non-developmental courses.

Speaker: Amy Barnsley
Northern Michigan University - Marquette, MI

95 8:15 a.m.–9:15 a.m.  Harbor Side 303
3-8

Write All About It
Children deepen their understanding when they have to explain their thinking to others. They take pride in their work when they share it with the public. In this session, I'll talk about ways to have children write about math. I'll show some simple ways of creating classroom displays for the hallways as well as some simple journals that could be used in conferences as portfolios, etc. Participants may want to bring a laptop with photos of students at work, as we'll talk about quick ways to incorporate these into posters.

Speaker: Sarah Currier
Minneapolis Public Schools - Minneapolis, MN

96 8:15 a.m.–9:15 a.m.  Harbor Side 304
College

Connecting Mathematics Teacher Educators Across Minnesota
If you work with pre-service candidates, teaching mathematics methods, content courses, or supervising field experiences, then please join us for conversation and connections. Let’s get to know each other and explore opportunities for networking across institutions, sharing experiences, addressing common challenges and possibly organizing an AMTE affiliate.

Speakers: Teresa Gonske
University of Northwestern - St. Paul, MN
Sonja Goerdt
St. Cloud State University - St. Cloud, MN

97 8:15 a.m.–9:15 a.m.  Harbor Side 305
9-12

Mad Libs, Talky Talky & Other Activities to Support ELs
We will discuss specific strategies that build academic vocabulary for ELs and all students. These tasks set high expectations for students, but allow differentiation on both math level and language ability. We will learn a strategy, then have brainstorming time for you to plan how to use it in your classroom. We intend to learn 3-4 new strategies!

Speaker: Ole Rapson
Minneapolis Public School - Minneapolis, MN

98 8:15 a.m.–9:15 a.m.  Split Rock 1
6-8

What’s in a Line
Participants will experience real world linear problems that develop connections between ratios, pattern, table, graph and rules.

Speaker: Dorothy Wintz
Carondelet Catholic School - Minneapolis, MN

99 8:15 a.m.–9:15 a.m.  Split Rock 2
9-College

Parametrics for Beginners
Parametric representations on the graphing calculator including functions and their inverse, projectile motion in three different “physics” applications, baseball, classic train problem, Lissajou figures, complex roots and powers, rose curves, and conics will be explored. The exploration handout will include step by step solutions and screen shots.

Speaker: David Kapolka
Forest Hills Northern High School - Grand Rapids, MN
### Saturday, May 2

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<td><strong>100</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Ballroom L</td>
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<td><strong>6-12</strong></td>
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<td>Forced Developmental Math Shake Up: What's Your Experience?</td>
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<td>In this discussion session we explore factors precipitating a forced shake up in our developmental math curriculums. To what extent were these changes engineered/enforced by administration? What has been the impact statewide? What can we do to ensure that our curriculums agree with our best judgment as faculty?</td>
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<td>Speaker: Clyde Eklund</td>
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<td>Minnesota State Community-Technical College - Minneapolis, MN</td>
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<td>8:15 a.m.–9:15 a.m.</td>
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<td><strong>6-12</strong></td>
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<td>A Flipped Classroom Model in Middle School</td>
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<td>A flipped classroom is an instructional framework that helps to differentiate instruction and support student learning. The lecture will focus on the implementation of the flipped classroom strategy and how to meet the needs of each student. Please bring an iPad to the session.</td>
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<td>Speaker: Abir Ismail</td>
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<td>Minneapolis School District - Minneapolis, MN</td>
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<th>Session</th>
<th>Time: 8:15 a.m.–9:15 a.m.</th>
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<tr>
<td><strong>102</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Ballroom O</td>
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<tr>
<td><strong>PreK-5</strong></td>
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<tr>
<td>MASK (Math Application Skills &amp; Knowledge)</td>
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<tr>
<td>MASK is a program to help improve children’s math skills. All children have two wonderful resources for learning – imagination and curiosity. We will engage in games to help learn math facts and problem solving skills.</td>
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<tr>
<td>Speaker: Judy Hansen</td>
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<tr>
<td>Retired - Pipestone, MN</td>
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<tr>
<td><strong>103</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>French River 1</td>
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<tr>
<td><strong>3-5</strong></td>
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<tr>
<td>Math Games: Powerful Instructional Practice</td>
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<tr>
<td>Math games are a fun and engaging Instructional Practice that will be an asset to your math class no matter what curriculum you are using. Explore and play some games for grades K-6 and take some games home and play them next week with your children. FREE resources will be handed out.</td>
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<tr>
<td>Speaker: Barbara Kotzer</td>
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<tr>
<td>Metro - Bloomington, MN</td>
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<tr>
<td><strong>104</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>French River 2</td>
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<tr>
<td><strong>6-8</strong></td>
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<tr>
<td>Getting to Know CMP3</td>
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<tr>
<td>An introduction to the Connected Mathematics Project 3 (Pearson) curriculum with a comparison to Connected Mathematics Project 2 and information about the implementation in Hopkins.</td>
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<tr>
<td>Speaker: Michele Luke</td>
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<tr>
<td>Hopkins Public Schools - Hopkins, MN</td>
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<tr>
<td><strong>105</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Gooseberry Falls 1</td>
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<tr>
<td><strong>3-8</strong></td>
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<tr>
<td>Math Rubrics - Proficiency Scales for K-12</td>
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<tr>
<td>This session will focus on proficiency scales for math - Rubrics for K-12. I will use Robert J Marzano’s proficiency scale template and adapt it to all MN standards/benchmarks for grades K-12. I have developed a Rubric for all benchmarks K-12 which include a complex learning goal for the high achiever (4.0), target learning goal/mastered benchmark at grade level, and simpler learning goal (2.0 &amp; 1.0) for the struggling learner. I will share this information via email.</td>
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<tr>
<td>Speaker: Russ Davidson</td>
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<tr>
<td>NESC - Mt Iron, MN</td>
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<tr>
<td><strong>106</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Gooseberry Falls 2</td>
</tr>
<tr>
<td><strong>3-8</strong></td>
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<tr>
<td>Go Fly A Kite!</td>
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<tr>
<td>Spring is a great time to tie the geometry of Kites with a hands on lesson in building and flying Kites. You will leave this session with a lesson plan ready for your classroom after a stop at a nearby dollar store on your way home for a few supplies. We will learn the history of kites, geometry terms specific to kites, build a kite and fly your kite.</td>
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<tr>
<td>Speaker: Sherri Kruger</td>
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<tr>
<td>Badger School Dist 676 - Badger, MN</td>
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<tr>
<td><strong>107</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Gooseberry Falls 3</td>
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<tr>
<td><strong>General</strong></td>
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<tr>
<td>Effective Teaching With Mathematica by Examples and Projects</td>
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<tr>
<td>Effective teaching with Mathematica (Wolfram Language version 10) using examples and projects. By clarifying and illustrating the mathematical concepts via visualization with Mathematica in addition to creating different assignments, students can master and practice the concepts.</td>
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<tr>
<td>Speaker: Abraham Gadalla</td>
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<tr>
<td>Retired - Maple Grove, MN</td>
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<tr>
<td><strong>108</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>St. Louis River Room</td>
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<tr>
<td><strong>General</strong></td>
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<tr>
<td>Engagement: The Key to Success</td>
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<tr>
<td>He walks attendees through how to evolve to creativeness, defined as the necessity to create a culture that can compete and thrive in this new era. Andy connects this message to help understand the real drivers of engagement, and why taking effective measures to enhance them, should be at the top of any professional agenda.</td>
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<tr>
<td>Speaker: Andy Thomas</td>
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<tr>
<td>Andy Thomas Careers Now - Charlotte, NC</td>
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<td><strong>109</strong></td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Harbor Side 302</td>
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<tr>
<td><strong>6-12</strong></td>
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<tr>
<td>Sharing First Year Teaching &amp; Mentoring Experiences</td>
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<td>A panel of middle and high school teachers will share their experiences from their first year of teaching and resources that have helped them and their students succeed.</td>
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<tr>
<td>Speakers: Tim Harms</td>
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<tr>
<td>Minnesota State University Moorhead - Moorhead, MN</td>
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<tr>
<td>Andrea Kelly</td>
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<tr>
<td>Eagle Valley Public Schools - Eagle Bend, MN</td>
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<td>110</td>
<td>8:15 a.m.–9:15 a.m.</td>
<td>Registration Area</td>
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<td>111</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Harbor Side 202</td>
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<td>112</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Harbor Side 203</td>
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<td>113</td>
<td>9:25 a.m.–10:25 a.m.</td>
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<td>114</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Harbor Side 205</td>
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<td>115</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Harbor Side 301</td>
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<td>116</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Harbor Side 303</td>
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<td>117</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Harbor Side 304</td>
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<td>119</td>
<td>9:25 a.m.–10:25 a.m.</td>
<td>Split Rock 1</td>
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| 120 | 9:25 a.m.–10:25 a.m. | Split Rock 2 | **Are You Ready for Some Football?**<br>Football statistics for quarterbacks and running backs in the NFL will be examined. Participants will practice analyzing this data using a TI nspire graphing calculator. These ideas come from an activity done in AP statistics.<br><br>**Speaker:** Lisa Conzemius<br>*Detroit Lakes High School - Detroit Lakes, MN*
| 125 | 9:25 a.m.–10:55 a.m. | French River 2 | **Help Build the World's Largest Fractal**<br>A Menger Sponge is a three-dimensional fractal, which can be made by taking a cube and cutting out a square section through the center in each of the three directions. Join us to start building. Standard business cards are the building material. They will be provided - bring some if you have them.<br><br>**Speaker:** Seth Leavitt<br>*Minneapolis Public Schools - Minneapolis, MN*
| 121 | 9:25 a.m.–10:25 a.m. | Ballroom L | **Mathematics and the Card Game SET**<br>The card game SET has been enjoyed for more than 30 years now. It is very mathematical in nature, and in this talk we will discuss some interesting mathematics inspired by the game.<br><br>**Speaker:** Kathryn Wijesinghe<br>*Normandale Community College - Bloomington, MN*
| 126 | 9:25 a.m.–10:55 a.m. | Gooseberry Falls 1 | **Models to Support Subtraction with Regrouping**<br>This session will provide ideas to teach the progression of Subtraction with regrouping using Base Ten Blocks and a Math Notebook. Four different types of subtraction problems will be used in context. An App will be shared for additional practice.<br><br>**Speakers:** Betty Wendorff, Sarah Miziorko & Terry Meryhew<br>*St. Paul Public Schools - St. Paul, MN*
| 122 | 9:25 a.m.–10:25 a.m. | Ballroom M/N | **Free & Easy Math Assessment with Google Forms**<br>Participants will receive guided practice on creating & using Google forms as assessment tools in their classroom. These tools will be standards-based & will collect data for us! A great way to gather student achievement data without adding extra scoring work for the teacher. Participants are recommended to bring a laptop or tablet. A Google account is beneficial, but not required before attending this session.<br><br>**Speaker:** Christy Hemp<br>*SW/WC Service Cooperative - Marshall, MN*
| 127 | 9:25 a.m.–10:55 a.m. | Gooseberry Falls 2 | **Extending Middle School Math Standards for Advanced Learners**<br>Join us for an interactive session to explore activities and instructional strategies that enhance the depth and complexity of math standards for advanced learners in the middle grades. Issues of student motivation and assessment will also be discussed.<br><br>**Speaker:** Jerry Burkhart<br>*Mankato Area Public Schools - Mankato, MN*
| 123 | 9:25 a.m.–10:25 a.m. | Ballroom O | **Mindset and the Adolescent Brain**<br>An activity you can bring to your classroom to teach students about mindset and their brain.<br><br>**Speakers:** Suzanne Horne<br>*Humboldt High School - St. Paul, MN*
| 128 | 9:25 a.m.–10:55 a.m. | Gooseberry Falls 3 | **8+8=17 Explain Your Answer**<br>Whether kindergarten or advanced fifth grade math learners, when it comes to students explaining their answer, saying “I just know it” or “I know it from my brain” doesn’t cut it for describing math thinking at a high level. In this workshop, we will learn five keys to help your students explain their thinking.<br><br>**Speaker:** Lisa Monson<br>*Minneapolis Public Schools - Minneapolis, MN*
| 124 | 9:25 a.m.–10:55 a.m. | French River 1 | **If They Build It, They Will Understand**<br>Engage in hands on activities that connect real-world situations with algebraic expressions. Participants will learn about and engage in activities that bridge concrete understanding to abstract reasoning, by using the CRA model.<br><br>**Speakers:** Melissa Fox & Heather Evjen<br>*St. Paul Public Schools - St. Paul, MN*
| 129 | 9:25 a.m.–10:55 a.m. | St. Louis River | **Graphing Calculator Activities that Engage Students**<br>This hands-on workshop will have participants actively engaged in different modeling activities that they can take back to their classroom. The content will be appropriate for an Algebra classroom and will emphasize the mathematical practice standards.<br><br>**Speaker:** Denise Young<br>*KCATM - Kansas City, MO*
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| 9:25 a.m.–10:55 a.m. | 7-12 Harbor Side 302 | **From Algebra Tiles to Area Models**  
   This session uses Algebra Tiles and generic rectangle area models to build understanding of combining like terms, multiplying, factoring, completing the square and dividing polynomials. Paper algebra tiles will be provided or for those with technology a web-based Algebra tile tech tool will be demonstrated for use on laptops and/or tablets.  
   **Speaker:** Lisa Fisher-Comfort  
   **AFSA High School - Vadnais Heights, MN** |
| 10:35 a.m.–11:35 a.m. | 9-College Harbor Side 205 | **Changes for AP Calculus: 2017**  
   The College Board has announced changes to the AP Calculus AB and BC exams starting in 2017. Learn about the big ideas from the new standards and changes in assessment from a veteran AP test grader and exam writer.  
   **Speaker:** Karen Hyers  
   **Tartan High School - Oakdale, MN** |
| 10:35 a.m.–11:35 a.m. | 6-12 Harbor Side 301 | **Raising Calculus to the Surface**  
   Surface manipulatives and group-based activities allow students to discover the key ideas in multivariable calculus. Come explore ideas like gradient, level curves, Lagrange multipliers, and integration using dry-erase surfaces in this interactive, hands-on session. This session is appropriate for instructors and students! Supported by NSF-DUE #1246094.  
   **Speaker:** Aaron Wangberg  
   **Winona State University - Winona, MN** |
| 10:35 a.m.–11:35 a.m. | PreK-5 Harbor Side 203 | **Let’s Get Talking About Math!**  
   Even though teachers model academic math vocabulary, students often fail to use it in conversation. Teachers of English learners and elementary math coaches will demonstrate strategies to help students in grades K through five use academic math vocabulary.  
   **Speakers:** Sara George, Brooke Barnard, Ann Bernard & Rachel Kielyka  
   **ISD 96 - Rosemount, MN** |
| 10:35 a.m.–11:35 a.m. | PreK-2 Harbor Side 202 | **All About Interactive Math Notebooks**  
   Are you using INTERACTIVE MATH NOTEBOOKS in your classroom? You really should be! My students love them, create them, reference them, and will take them home at the end of the school year where they will continue to learn from them! They can be used in either a whole group or small group setting. This session will explain what Interactive Math Notebooks are, how to organize them, how to grade them, and how to use them to help with differentiating instruction in your classroom!  
   **Speakers:** Angie Olson & Brandon Olson  
   **ISD #23 - Frazee, MN** |
| 10:35 a.m.–11:35 a.m. | General Harbor Side 303 | **That Really Bothers Me!: Math Bloopers**  
   Do you ever see mathematics errors outside of your classroom? This session will share examples of mathematical boo-boos - some classic, some trivial - but all with the potential to provide learning opportunities for your students. Come to share your examples, your ideas and a few belly laughs.  
   **Speaker:** Bill Tomhave  
   **Concordia College - Moorhead, MN** |
| 10:35 a.m.–11:35 a.m. | 6-12 Harbor Side 204 | **Does Homework Really Work? Part 2**  
   Last year, this homework session focused on thinking critically about why we give homework. For part 2, we will look much deeper into some of the practical ways we can use homework for differentiation and as a true assessment.  
   **Speaker:** Dan Bungert  
   **Rosemount High School - Rosemount, MN** |
| 10:35 a.m.–11:35 a.m. | 3-8 Harbor Side 205 | **Fraction Addition & Subtraction Strategies**  
   This session will link strategies used for whole number addition & subtraction with how the same strategies can be used when working with fractions. Being flexible in strategy usage builds a stronger general number sense.  
   **Speaker:** James Brickwedde  
   **Hamline University - St. Paul, MN** |
**Project Based Learning in Middle School Math**

In this session we will connect the standards to hands-on, project based learning. We all know there are more ways to assess student learning than tests, and this is where incorporating projects into the curriculum works wonders. I will share our process, results, challenges, successes, and share many examples.

**Speaker:** Regina Goldner  
*Avalon School - St. Paul, MN*

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**Understanding Algebra I Through Graphing Technology**

This session will be filled with many different ways to help students really learn the concepts of Algebra I using color graphing technology. Strategies will be taught that teachers can bring back to their classrooms to help students perform better in Mathematics. This is a hands on session where each teacher will be able to use a graphing calculator during the session.

**Speaker:** Tracey Zak-Johnson  
*Consultant - Fort Worth, TX*

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**MinnMATYC Open Forum**

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**Building a Classroom Environment Around Equitable Group Work**

The focus of this session is to provide ideas for setting up a group and activity based classroom. We will provide a sample activity that helps students and teachers transition into this mindset.

**Speakers:** Erica O'Hara, Jillian Miller & Emily Cook  
*Mounds View Public Schools - St. Paul, MN*

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**How Can Teachers Make the Most Effective Use of MCA Test Preparation Materials**

**Speakers:** Ann Page, Margarita Alvarez & Rosemary Heinitz  
*Minnesota Department of Education - Roseville, MN*

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**Klein Bottles and Pottery**

In this STEAM-inspired session, we explore the Klein Bottle as a geometric object and an artistic form. We will share how our different backgrounds informed our understanding of the object and how you can share this idea in your classroom.

**Speakers:** Christopher Smith  
*Augsburg College - Minneapolis, MN*  
Jane Pare  
*Chanhassen High School - Chanhassen, MN*

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**A New Approach to Calculus**

This presentation will summarize a new curriculum developed by Dr. Cantrell. We will focus on various activities and problems which help students gain an intuitive understanding of Calculus, and which are ready for use in your classroom.

**Speaker:** Andrew Cantrell  
*The Blake School - Minneapolis, MN*

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**Making Every Minute Count**

Closure of a lesson may take many forms. Students should not be left unsure of what has been settled and what remains to be determined in their lessons. Several ideas of what this can look like will be shared.

**Speaker:** Cheryl Tucker  
*Minneapolis Public Schools - Minneapolis, MN*

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**GCF, LCM, and Divisibility**

Real-world problems in GCF, LCM, and divisibility rules.

**Speaker:** Porter Coggins  
*Bemidji State University - Bemidji, MN*
**Flexible Strategies to Add & Subtract -- How?!**

An important part of the mathematics curriculum through second grade involves developing flexible non-count by ones strategies for addition and subtraction up to 20. The 20 bead rack is a great tool for supporting children's development of these strategies! This workshop will include hands-on practice with the bead rack that participants will be able to use in the classroom right away.

**Speakers:** Christina Miller  
*University of Minnesota - St. Paul, MN*

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**Building a Better Shapes Book**

Finally, there's a shapes book that makes young children think! In this session, we'll think about a few pages from the book, then make our own pages. All resources in this session are free, classroom-tested and classroom-ready!

**Speaker:** Christopher Danielson  
*Normandale Community College - Bloomington, MN*

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**Becoming Skilled Improvisers - Leading High Level Mathematical Discussions**

How do we elicit higher level student thinking? Problem solving strategies are often given to students on a silver platter. Teachers will leave with a plan for developing concept based lessons which scaffold responses to deepen reasoning and meet learning objectives.

**Speakers:** Scott Stillman & Teresa Van Batavia  
*Hopkins Public Schools - Hopkins, MN*

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**Human Bar Graphs + Other Strategies for Making Statistics Real**

Come and experience simple ways to make learning data and statistics engaging and active for all students. This session will show how to use culturally responsive teaching practices while embedding rigor, relevance, relationships and realness into data and statistics activities. Participants will leave with several activities they can use immediately with their students.

**Speaker:** Kathleen Wilson  
*St. Paul Public Schools - St. Paul, MN*

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**Let's Give Them Something to Talk About!**

Learn how to plan and implement Frequent, Small-Group Purposeful Talk in your daily lessons. This session will give you simple steps you can immediately use to increase and improve student discussion, understanding, and retention of the learning. Research shows the more kids talk and do, the more they learn!

**Speaker:** Mary Jo Hughes  
*Jackson Middle School - Champlin, MN*

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**Educating in the Fantastical World of the Future**

In a few years your students will have access to all necessary knowledge and calculations via their brain waves. Come learn about the brain research supporting this claim and consider some implications for your career in education.

**Speaker:** Larry Copes  
*Institute for Studies in Educational Mathematics - St. Paul, MN*

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**An Accelerated Pathway for Non-STEM Students**

At state and national levels, momentum is building to offer alternative pathways through developmental math. Attendees will learn about a Math Literacy course that allows non-STEM students who place at the beginning algebra level to reach college level math in one semester.

**Speaker:** Brian Mercer  
*Parkland College - Champaign, IL*

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**Effective Games in the Math Classroom**

How can we effectively use the power of game-based learning in the mathematics classroom? Participants will evaluate board and card games, play games, and have access to materials to be used with games.

**Speaker:** Jeffrey Jones  
*Cass Lake Bena High School - Cass Lake, MN*

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**What's My Distribution?**

In this session we’ll explore probability using distributions and discuss important features, such as discrete vs. continuous, and replacement vs. non-replacement. Examples will include geometric, binomial, hypergeometric and normal. Additional examples will provide an introduction to negative binomial and Poisson.

**Speaker:** John Diehl  
*CTAC - Plano, TX*
Finding Algebra in Problem Solving

Algebra is everywhere. Where is algebra in the standards? Where is it in your curriculum? Before we can help kids see meaning in algebra, we must understand how it connects to the curriculum and to problem solving in the real world. You will walk away with meaningful algebra-based problems to try in your classroom on Monday.

Speaker: Sue Strom
Wayzata Public Schools - Plymouth, MN

Making Math Fun: Statistics Activities for the Classroom

Engage your students using the 3 Fs: Food, Friendship and Fun. Research-based, hands-on group activities to help students understand both basic and complex statistical concepts. Activities may be adapted for diverse ability levels.

Speakers: Dr. Heidi Hansen & Lindsey Nelson
Bemidji State University - Bemidji, MN

“Drill and Practice” of Reasoning: Assessment Tasks for Building Connections

Create assessment tasks where students both practice skills and enhance reasoning abilities through connections among representations. Work through and analyze several classroom tested tasks and then make your own using a template and topic list. Example tasks include rational numbers, quadrilaterals, linear relationships, and types of functions.

Speaker: Teresa Gonske
University of Northwestern - St. Paul, MN

Growing Letters to Model Linear Equations

Participants will model linear equations with pictorial representations. From these pictures we will develop tables, equations (both recursive and explicit), graphs, and verbal descriptions to complete NCTM’s five algebraic representations.

Speakers: Maranda Pula & Todd Frauenholtz
Bemidji State University - Bemidji, MN

Teacher Incentive Grant Information

Have an INNOVATIVE idea? Need some funds to implement the idea?

MCTM Teacher Incentive Grants of up to $1500 are available for current members to help with implementing unique programs in their math classes.

For all of the details go to http://mctm.org/incentivgrant.php or scan the QR code.

Previous grants have been awarded for Polydron Frameworks sets for grades 3-6 classrooms, one year of sheltered instruction for newly arrived Somali refugees in grades 3-8 to jumpstart their learning, Daily Data: Teaching Geometry and Measurement and Data Analysis to New-to-Country Refugee Students and graphing calculators for students in a year-round corrections program.
MCTM is transitioning to electronic communication with the membership. In order for you to receive information, MCTM needs to have your current email address on file. You may update your email address by sending a message to Tom Muchlinski at mctm@mctm.org.

The goals of MCTM are:

- To develop an active interest in the science of mathematics.
- To help provide opportunities for the exchange of ideas and materials regarding instruction in mathematics.
- To further the study of problems relating to the teaching of mathematics at the elementary, secondary, and college levels.
- To work for the improvement of mathematics instruction at the elementary, secondary, and college levels in Minnesota.
- To work for the improvement of employment and service of members of the Council and members of the profession in general.

MCTM publishes its newsletter, Mathbits, throughout the year and sponsors the spring conference. Visit MathBits at www.mctmmathbits.org.

Follow MCTM on Twitter at #mctmduluth and like the Minnesota Council of Teachers of Mathematics page on Facebook.

MinnMATYC is the Minnesota affiliate of AMATYC (American Mathematical Association of Two-Year Colleges). MinnMATYC was formed in 1990 through the efforts of Minnesota two-year college faculty. MinnMATYC has three objectives:

- To provide the two-year college mathematics instructors with a means of identifying and solving problems of mutual concern
- To work cooperatively with other professional associations and institutions concerned with mathematics at all levels in the state of Minnesota
- To promote improved teaching and understanding of mathematics

The website for MinnMATYC is www.minnmatyc.org

Future Mathematics Conference Dates

**MCTM Spring Conferences**
- Duluth, MN • April 29-30, 2016
- Duluth, MN • April 28 -29, 2017

**AMATYC Conferences**
- New Orleans, LA • November 19-22, 2015
- Denver, Co • November 17-20, 2016

**Edcamp Math Science Minnesota**
- Location TBA • October 16, 2015

**Future MinnMATYC Conference**
MinnMATYC will hold next year’s spring conference in conjunction with MCTM.

**NCTM Annual Meeting and Expo**
- San Francisco, CA • April 13-16, 2016
- San Antonio, TX • April 5-8, 2017

**NCTM Regional Conferences**
- Atlantic City, NJ • October 21-23, 2015
- Minneapolis, MN • November 11-13, 2015
- Nashville, TN • November 18-20, 2015
- Phoenix, AZ • October 26-28, 2016
- Philadelphia, PA • October 31-November 2, 2016
- St. Louis, MO • November 16-18, 2016
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Continuing Math Excellence by Supporting Professional Development For Teachers of Mathematics

Stop and visit the MCTM Foundation table near the Registration Area and the Book Sale

Did you spend your own money to come to the Spring Conference? Want to get some support next year?
Awards of up to $500 can be used to pay for expenses such as registration, mileage, substitutes, and lodging. The deadline for submitting applications for next year’s meeting is Feb. 10, prior to the conference.

Are you a middle school teacher taking a mathematics course? Want some help with expenses?
The Arnie Cutler Scholarship for Mathematics Course Work for Middle Grades Teachers provides up to $1200 for tuition, books, or other expenses to allow middle school teachers to enhance their mathematical understandings. Deadlines are March 31 and October 31 each year.

Looking for a good bargain on professional books?
Visit the BOOK SALE featuring slightly used professional books, available for $1, $2, $5 or $10 donations to the Foundation. First come, first served during the Spring Conference only.

Think these are good ideas?
Tax deductible donations are welcome at any time.
Spring Conference Support and Scholarships are supported by MCTM members and others who contribute online, along with their registration, or in person at the MCTM Foundation table in the Registration area.
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CPM Educational Program
Curriculum Association
Educators Personal Insurance Company
Hooda Math, LLC
Lego Education
Math Teachers Press, Inc
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McGraw-Hill School Education Group
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National Geographic/Cengage Learning
NCTM Booths/NCTM Materials
Pearson
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<td>Zak- Johnson, Tracey</td>
<td></td>
</tr>
</tbody>
</table>
Agranoff, Paul 15
Ahrendt, Sue 17
Alvarez, Margarita 34, 88, 144
Andareade, Azucena 137
Bacon, Michelle 3
Barnard, Ann 46, 137
Barnard, Brooke 46, 137
Barnsley, Amy 94
Benhardus, Sue 50
Breit-Goodwin, Megan 40
Bridge, Nicole 13, 56, 134
Buhl, David 45
Bungert, Dan 139
Burkhart, Jerry 127
Butler, Dan 16, 71
Cantrell, Andy 58, 146
Carlson, Raphael 62
Currier, Sarah 113
Dolensek, Kiersten 113
Frauenholtz, Todd 66, 113, 164
Frederickson, Francine 32, 118
Gadalla, Abraham 107
George, Sara 46, 137
Gist, Leslie 21
Goenner, Janine 27
Goerdt, Sonja 96
Goldner, Regina 140
Gonske, Teresa 96, 162
Grotta, Kathy 87
Groseth, Becky 6
Hahn, Heidi 4, 25
Hansen, Judy 102
Hansen, Heidi 161
Harms, Tim 109
Haselbauer, Meghan 72
Hatala, Meg 92
Heinitz, Rosemary 34, 88, 144
Hemp, Christy 85, 122
Herder, Susan 72
Hochstetter, Angela 74
Hoeve, Julie 78
Horne, Suzanne 123
Horst, Kimberly 32, 118
Huberty, Michael 16
Hughes, Mary Jo 153
Hunter, Sarah 21
Hyers, Karen 135
Ismail, Abir 101
Jang, Sean 82
Jensen, Eric 74
Johnson, Derek 91
Jones, Jeffrey 158
Kapolka, David 35, 99
Kelley, Paul 52
Kelley, Andrea 109
Kieltyka, Rachel 137
Kohls, Theresa 38
Kotzer, Barbara 89, 103
Krasean, Sonja 133
Kruger, Sherri 106
Kwako, Dr. Joan 90
Lambrecht, Mary 21
Lang, Nicole 79
LaRoche, Courtney 23, 67, 119
Larson, Stephen 91
Leavitt, Seth 68, 125
Lescenski, Beth 50
Lind, Jessica 31
Loken, Marc 92
Luck, Larry 7
Luke, Michele 44, 104
Marshall, Jenny 78
Matsuura, Ryota 80
McDonald, Carissa 45
McGuire, Michelle 60
McTavish, Connie 157
Mener, Brian 156
Meryhew, Terry 20, 126
Miller, Christina 150
Miller, Jillian 143
Miziorko, Sarah 20, 126
Moffett, Sarah 69
Monson, Debra 17
Monson, Lisa 128
Mueske, Kim 137
Naughton, Carrie 37
Nelson, Lindsey 161
Nutting, Nancy 39
Nyholm, Brian 27
O'Byrne, Haley 43
O'Hara, Erica 143
Olgren, Courtney 60
Olijnek, Carolyn 75
Olsen, Amy 65
Olsen, Angie 132
Olsen, Brandon 132
Omdt, Mark 115
Osters, Jonathan 8
Page, Ann 34, 88, 144
Pare, Jana 145
Pethan, Andy 10
Pettis, Christy 9, 54, 112
Priem, Ashley 28
Priem, Matthew 59
Prososki, Sarah 31
Pula, Maranda 164
Rapson, Ole 97
Reardon, Tom 14, 48, 131
Reiners, Mike 30
Rice, Jessica 11
Robinson, Chris 111
Rockswold, Gary 114
Ross, Allison 23
Rubin, Allison 50
Rutherford, Casey 63
Sandoval, Jesus 84
Scheldorf, Haley 66
Schmidt, Megan 51
Schott, Linda 93
Siegel, Chris 83
Smith, Christopher 51, 145
Smith, Molly 60
Smith, Nina 69
Smith, Stephen P 60
Smoody, Jaime 116
Steele, Genni 41
Stillman, Scott 151
Storhaug, Cindy 165
Strom, Sue 160
Sucher, Mary 2
Sukow, Jason 45
Taylor, Mel 81
Thomas, Andy 108
Tomhave, Bill 138
Totushek, Thomas 19
Tucker, Cheryl 18, 148
Van Batavia, Teresa 44, 151
Van Der Werf, Sara 1, 57, 133
Vrieze, Daniel 24
Wallus, Michael 21, 36, 117
Wangberg, Aaron 136
Waytas, Erin 66
Wendorff, Betty 20, 126
Weng, Pangyen 47
Wessel, Krisanne 32, 118
Vietman, Bill 33
Wijesinghe, Kathryn 121
Williams, Brooke 70
Williams, Margaret 70
Willis, Laura 43
Wilson, Kathleen 29, 76, 152
Wintz, Dorothy 22, 98
Wiz, Amy 39
Wohlhuter, Kay 49
Wyberg, Terry 7, 112
Young, Denise 53, 129
Zak-Johnson, Tracey 64, 110, 141
Zieffler, Andrew 16
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<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>ASSESSMENT</th>
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