

Breakfast Keynote by Fawn Nguyen at 7:30 am (pre-registration necessary)

Sessions / Workshops

Sessions		14 8:00 am - 9:00 am	15 9:30 - 10:30	16 11:00 - 12:00	17 12:30 - 1:30
Clackamas Cs	# 151 Tamera Wilcox	# 156 Thomas Dick	# 168 Thomas Dick	# 184 Stefanic Hassan	
	K-8 Creating Engaging Family Math Events Engaging families can be challenging. Dynamically changing populations pose challenges where opportunities for families to partner in the educational process are necessary. This session provides practical examples of how local districts have successfully involved families.	9 - College Dynamic Proofs Without Words A picture is worth a thousand words. Some pictures can convey the essence of a mathematical proof without any words. We will illustrate several examples showing how dynamic computer algebra and geometry software can amplify that power!	6 - 10 Learning Slope via Rate Not Rote Slope is a mystery to students. Making sense of slope requires connections between rate, ratios, proportional relationships and similarity. Introducing slope as a rate, particularly a unit rate, allows the meaning of slope to emerge.		
Clark Ck	# 136 Chelsea Goin	# 152 Susan Wilson	# 169 Jeff Grabhorn	# 185 Jerry Johnson	
	K-5 Improve Achievement Through Mathematical Mindsets People have had math trauma and think they are not math smart. Mathematics needs a mindset makeover. Jo Boaler and others have helpful strategies and other tools to help do this. Smartness increases with hard work. The hard work needed comes through feedback (especially through mistakes), teaching methods, questioning, and groupings.	Pre-K - College Oregon Math Network: How can we connect beyond conferences? Did you come to the NWMC to improve your practice and connect with awesome math educators? Come learn existing resources across our state & brainstorm ways Oregon networks can be designed to meet your professional growth goals year round.	8 - College Development of the Application of Conceptual Knowledge Framework for Mathematics What goes into making a rich, engaging, authentic applied mathematics lesson? How do you incorporate such lessons in your classroom? We discuss our experiences working collaboratively to create and refine secondary mathematics lessons for the Oregon Math In Real Life project.	7 - College Mathematical Magic and Magical Mathematics: Mathematical Playing in 3+ Acts Standards are necessary, but often become the end-all at expense of exciting mathematics. We must share the magic in mathematics with students to make it alive. Session explores some "magic" used successfully with grade 7-14 students...with extensions!	
Multnomah Mh	# 137 Chris Shore	# 153 Barbara Soots	# 170 Amy Hancock	# 186 Bryan Toller	
	K-12 Reaching & Teaching Those Kids Learn proven strategies for reaching and teaching your most reluctant learners with the new 21st Century College and Career Readiness Standards. The 3 key components to accomplishing this are: No-Options Engagement, Boot Camp Numeracy and Higher Order Thinking Skills.	6 - 12 Locating and Using Open Mathematics Resources Open Educational Resources (OER) are free to share and adapt. Learn how to effectively search for comprehensive math OER. Understand how to vet, adapt, and distribute the materials and hear feedback from educators currently using open math curriculum.	7 - 12 From math losers to rock stars: The power of mathematical mindsets All kids really can learn math. Come hear my story of how mathematical mindsets have invigorated my high school Algebra classroom into a rock star manufacturing plant. Walk away with practical steps to bring mathematical mindsets to life in your students.	K-12 Formative Assessment for Students and Teachers Formative assessment is a process that when implemented by teachers can dramatically impact student achievement and student ownership in their learning. Effective implementation of formative assessment requires a significant change of practice. Participants will engage in activities and be introduced to resources that will deepen their formative assessment practice.	
Crown Z Cn	# 138 Hannah Nieman	# 154 Tricia Gessele	# 171 Janca Maxfield	# 187 Elizabeth Peyser	
	5 - 8 Using Practical Measures to Inform and Improve Mathematics Teaching How might we use student voice to inform and improve our instruction? This session describes practical measures - measures that provide frequent, rapid feedback - in the form of quick student surveys aimed at understanding and improving small-group and whole-class discussion.	K-6 Structuring your math time...how does it all fit? Want to structure your math time with best practices in mind? How do you incorporate fluency? What are the components of a solid math lesson? How does math workshop fit? Leave with thoughts and reflections to try tomorrow.	K-5 Supporting Student Autonomy: Coaching Teachers in the Use of Visual Tools Promoting the use of visual tools is an accessible starting point when working with teachers. This practical work delivers meaningful change for student learning. Explore ways to coach teachers in creating classroom environments that serve as the "second teacher."	5 - 12 Re-thinking Acceleration Practices Where are our middle school Algebra 1 students going in mathematics? Is the question to ask ourselves: Combining data, research and the increased rigor in the math standards, there is a need for course analysis and correction. This session will provide an overview of ideas and options for districts to use to "re-think" acceleration routes. The Kansas State Department of Education white paper and other documents will be available to help districts start this conversation. [This is an encore of the 2017 NCSM annual conference presentation.]	
Jantzen Jn	# 139 Leslie Nielsen	# 156 Lisa Olin	# 172 Nicole Mito Ahern	# 188 Jill Brouillard	
	6-12 Implementing Mathematically Productive Instructional Routines to Support Learning for ALL Students This session provides an overview of Mathematically Productive Instructional Routines (MPIRs). Participants will have the opportunity to experience MPIRs, analyze how MPIRs can be used regularly to support all students, and leave with resources so they can incorporate MPIRs into their practice.	6-9 Tape Diagrams! See meaning in Equation Solving! Equations become less abstract and more meaningful with the visual that Tape Diagrams provide. Used as an alternative to traditional steps, or an introduction, students will solve one and two-step equations intuitively. See it to believe it!	4-7 Engagement Strategies for Reluctant Learners: Everyone Can Learn Math Every educator asks themselves, "How can I engage all learners even the reluctant ones?" During this presentation you will hear about one educator's journey to uncover ways that help all learners understand and know that math can be accessible for everyone.	6-12 Expand Your Tool Box: Engaging Review Activities This interactive session will introduce you to a variety of review activities. Each activity offers high levels of student engagement and formative teacher feedback.	
White Stag We	# 140 Angeliki Hibbard	# 157 Nicholas Hagemann	# 173 Virginia Pong	# 189 Jacqueline Cooke	
	4-8 Everyone can learn math to the highest level All kids really can learn math. Come hear about how Mathematical Mindsets, current research and math tasks have impacted my special education classroom and empowered my students.	3-7 Going Beyond "How do you know?" Do you always ask the question "How do you know?" In this session, we will explore, test and practice questioning strategies that elicit students to describe their thinking, build argumentation and lead to reflection. We will present our learning from techniques used in a 5th grade	3-8 Master those Multiplication Facts. A Year-Long Program Eliminate student calculation errors of multiplication facts in numerical operations using practice involving every student every time...a system in which students are eager to participate. They can and will learn those facts! Bring two pens/pencils and writing surface. A hands-on experience. www.intrixUSA.com	K-5 A Video Lesson Study Project There is a multitude of research on the value of Lesson Study. How to do this in an age of limited budgets causes many to think Lesson Study may not be possible in their district. This session will explore lesson study built around using classroom video clips.	
Workshops		18 8:00 - 9:30	19 10:00 - 11:30	20 12:00 - 1:30	
Washington Wn	# 142 Robert Kaplinsky	# 159 Andrew Stadel	# 175 ART MABBOTT	# 185 Mark Cote	
	6-12 Challenging Problems Worth Solving In this session, you will learn about math problems that challenge your students to think deeply while remaining accessible to all students. Come ready to do mathematics that you'll be using with your students when you return to your classroom.	6-12 Lessons that Make Math Stick Ever wonder why many math concepts do not stick with students? Come experience the structure of a sticky math lesson. Leave with a lesson design template and tools to make the math you teach stickier with your students.	7-12 Exploring Geometric Congruences Using Transformations Join us to explore using the NSPIRE app on the iPad to discover the connection between Congruence and Transformation of Triangles. This a hands-on session.		
Flanders Fs	# 143 Claire Gibbons	# 160 Kerry Morton	# 176 Linda Barney Ridgway		
	8 - College Exploring the Mathematical Richness of Quadratic Functions and Inequalities We will share activities that have students investigate quadratic functions and inequalities. We will explore the richness of quadratic functions and inequalities by making connections to students' prior knowledge and between different representations (numerical, graphical, symbolic).	1-5 Comprehending Story Problems While Maintaining a High Cognitive Demand Task. Teachers will experience routines to help students comprehend story problems while maintaining a high cognitive demand of the task. Three Reads, Get Lines, Graphic Organizers, etc. The routines are designed to develop habits in students so they approach all story problems in these ways.	6, 7, 8 Reach and Teach All Students: Strategies to Help Special Needs and ELL Students Access Standards This interactive session will provide practical strategies focused on differentiated access to math standards. Includes: -Why learning progressions drive differentiation and how they identify key prerequisite skills -Pre-loading math vocabulary -Designing student routines to boost discourse		
Lovejoy Ly	# 144 Daniel Finkel	# 161 Algebra Tiles - From Polynomials to Factoring Learn how to make factoring a concrete visual (and geometric) experience for your students. Participants will explore algebra tiles and learn how to use them to show both algebraic multiplication and factoring using area models.	# 177 Mark Cote		
	K-5 Mathematical Openers Starting class with a 5 - 10 minute opener is a simple change, but can have profound consequences. Learn how Number Talks, Teacher-led games, Unit Chats, Counterexamples, and other routines can encourage students to begin thinking the moment they walk into the room.	8-11 Algebra Tiles - From Polynomials to Factoring Learn how to make factoring a concrete visual (and geometric) experience for your students. Participants will explore algebra tiles and learn how to use them to show both algebraic multiplication and factoring using area models.	8-12 Looking at Proof Logically Participants will engage in instructional activities and simple games as they investigate a developmental plan for teaching and assessing proof.		
Pendleton Pn	# 145 Meghan Ohumukini	# 162 Debbie Bower	# 178 Jamic Nordstrom		
	Pre-K - 12 Blogging: A Tool that Promotes Collaboration in our Schools Learn how teacher leaders turned to blogging as a professional development tool in a suburban school district. In this session, we will look at setting up a blog that facilitates discussions through social media that can be accessed anytime, anywhere.	6-12 Anticipatory Do-Nows Participants will consider a learning trajectory and identify possible misconceptions and required prior knowledge. Based on these components, participants will develop anticipatory do-nows to clear up a misconception or fill a gap in prior knowledge.	9 - College Arrow-Diagrams: the next step We will practice using the arrow-diagram representation to demonstrate its utility in transformations, building inverses, performing the chain rule and more.		
Glisan Gn	# 146 Shari Hartwig	# 163 Joyce Frost	# 179 Kristie Donovan		
	3-7 Using the Smarter Balanced Item Specs to Enhance your Assessment Program Explore how to use item specs to construct unit-based assessments with a balance of claims and item types. Investigate the structure of performance tasks. See how our district has re-constructed assessments for the Eureka math program.	7-12 Understanding Important Algebra and Geometry concepts Through Paper Folding Come and explore paper folding as a tool to help your students understand important algebra and geometry concepts. Take away a selection to use from Algebra 1 through Pre-Calculus.	6-12 Linear functions roadmap: Making connections across grades. The key to deep understanding is connecting to prior and future knowledge. We will explore linear functions from proportional relationships in 6th grade to interpreting linear models in 9th to comparing with other function families in higher grades.		
Hayden Hn	# 147 Kim Sutton	# 164 Elizabeth Peyser	# 180 Patty Lofgren		
	Pre-K - 2 Get In Line! Primary Number Sense Strategies! This workshop will include strategies for developing strong number sense by creating routines of practice! Kim Sutton will share songs, dances and hands on activities for creating a learning environment for primary peeps! You will recharge your battery for teaching mathematics and leave with ready to go activities!	K-12 Investigating the Arc of Arithmetic to Algebra Investigating the K-HS progression from subitizing to decomposition to area model to algebra tiles. Participants will use a variety of manipulatives and tools, along with parts specific math lessons showcasing the connections.	K - College Transforming Mathematics Classrooms Through Number Talks Number Talks are a daily practice where students mentally solve computation problems, share their strategies, create mathematically convincing arguments, and critique and build on the reasoning of others. Number Talks change participants' mathematical dispositions, their relationships with mathematics and with each other.		
Overton On	# 148 Karen Kennedy	# 165 Pha Hansen	# 181 Lana Hansen		
	6 - College It's Not Just a Cupcake: Preparing Secondary Teacher Candidates for the edTPA To most of my teacher candidates, edTPA appears to be a formidable and overwhelming practicum to complete for their teacher licensure in Oregon. So, to help them build their efficacy around edTPA, I designed and implemented several tools, tasks, and activities in my methods courses that complemented Tasks 1-3 and shifted my TCGs thinking to understand that the process is all about developing effective teaching practices. In this workshop, I will share these elements with participants so that they can apply them in their classrooms.	K, 1, 2 Performance Tasks & Rubrics for Primary Grades Primary students can engage in rich tasks that promote problem solving and reasoning and allow for multiple entry points, representations and solution strategies. Come hear about the possibilities, look at students work along with rubrics aligned to the cognitive demand of the standards.	K-2 LET'S GET PHYSICAL - with Math on the Floor! Prepare to engage in a highly interactive session that will use a large 100 square foot grid to bring curriculum concepts to life! Get great ideas to build number sense, non-standard measurement, geometry, graphing, and mapping for immediate classroom use.		
Pettygrove Pe	# 149 Susie Hakansson	# 166 Krista Strand	# 182 Tessa Burchardt		
	3-7 Equity and Excellence: Fractions on the Number Line for ALL Students Increase conceptual understanding of fractions using the number line approach! Have fun learning and interacting with others about fraction sense! Bring ideas back for your classroom! Use best practices for working with English learners!	K-5 "Low floor, high ceiling" fact families tasks with manipulatives Experience classic manipulatives from a modern perspective! This workshop features colorful hands-on tasks about fact families and equation-writing, with built-in differentiation.	6-8 How to double-dip without double-dipping Our educational system fails many students in math. We will share the structure, philosophy and resources for a powerful second class for 6th graders that kids are excited about-- focused on sense-making, pre-teaching, conceptual understanding and developing a growth mindset.		
Salon 4 Sn	# 02 Fawn Nguyen	# 167 John Felling	# 183 Graham Fletcher		
	Saturday Breakfast, 7:30 am - 9:00 am What If We've Been Teaching Mathematics All Wrong? One of the biggest myths is that mathematics is all about computation. John Allen Paulos wrote in his book Innumeracy, "... mathematics has as much to do with computation as writing has to do with typing." Yet, school mathematics continues to focus heavily on computation and arithmetic and not nearly enough on critical thinking and problem solving. What the Common Core gets right is the 8 Mathematical Practices, and these competencies depend on instruction and curriculum that expose students to mathematics as a way of thinking and solving problems.	5-9 They Should Know This - Middle Years Math Games Math games help students understand and master math concepts. Participants will attain the knowledge, skills and understanding to implement the games and strategies in their classrooms. Concepts include: Place Value, Rounding, Facts Fluency, Mixed Operations, Order of Operations, and Graphing.	1-5 Harnessing the Power of the Purposeful Task In this session, we'll explore the power of problem-based lessons as a formative assessment tool. In specific, we'll look at the structure of 3-Act Math tasks and how these tasks can be used to build conceptual understanding.		
Weyerhaeuser Wr	# 141 Brandon Dorman	# 158 Lynn Adsit	# 174 Jeff Crawford		
	K - College Open Educational Resources Open Educational Resources are gaining popularity with educators. Let's have students publish OER as part of demonstrating their understanding! This session will teach participants how to publish with a variety of media types and Creative Commons licenses.	6 - College Captivating Review Ideas Students Can't Resist Is review time a deadly bore for you and your students? Get and give ideas to spice up reviews, revive interest, and ensure retention! We will explore both tech and non-tech engaging for every student for any type of review setting.	6 - College Visual Algebra: Current research and practical applications Come see equations, expressions, functions—the heart of Algebra—unfold before your eyes. Experience various tasks that intertwine our neural networks together. Walk away with an overview of current research and various tasks to take back to your classroom.		
JB Club jb	# 190 Martha Rodriguez				
	K-6 Is math really a universal language? Bilingual (Spanish & English) session focusing on promoting math as a subject rich in context, language, and meaning in order to increase productive math discourse for all language learners.				