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Clackamas Ca	Steve Wytorney K-8 Math in Motion - Using Animated Thinking Models to Promote Mathematical Discourse Animated images and representations of student thinking rapidly promote rich discourse. During this highly interactive session, animated thinking models and strategies will be showcased and then given to participants for use in their own classrooms.	Melinda Schwartz Pre-K-K Building Pathways to Early Numeracy Success Children hear and see numbers in their daily lives and interact with them in many ways. Today, we will explore how using a research-based pathway, alongside a developmentally appropriate trajectory of the counting principles, can lead to early numeracy.	Catherine Fosnot Pre-K - College Making Moments Matter: Confering with Young Mathematicians at Work The way we question, celebrate and support has a dramatic effect on the way children feel about mathematics and what they learn. Via video, participants will have opportunities to analyze exemplars and examine characteristics of questioning that make the moments matter.	Kasey Ward 4-12 Mindset Activities for the Secondary Classroom In the session I will share activities and resources that I use to kick off the school year with the right mindset.	Kimberly Markworth 3-8 Differentiate Math Instruction with Math Menus Math Menus are collections of rich tasks that can be used as extensions or core curriculum. In this session, we will discuss how Math Menus have been used in intermediate and middle grades classrooms to differentiate instruction by providing extension opportunities to engage in problem solving and the Standards for Mathematical Practice.	Nicholas Restivo 6-8 Building Success in Problem Solving Real problems are challenging, have multiple solution paths, and lead to a better understanding of concepts. Using such strategies as drawing a picture, making a list, and observing patterns, participants will discover ways for students to become better problem solvers.	Lori Kiteala 6-12 SYTC-think outside the box, math success for all! Math education today, requires us to think outside the box in order to effectively reach a variety of learning styles. Innovative and creative approaches to curriculum and assessment formats, can greatly increase the level of confidence, competence and success in math for all students.							
Clark CK	Tyrene Holmes Pre-K-8 If Mathematics is the Universal Language, why do so few speak it? Developing rich mathematical discourse in the classroom is important for building mathematical reasoning and conceptual understanding. Join us for a discussion on how teachers and administrators can develop productive math discourse in the classroom through well-planned and well-sequenced discussions of student work.	Amie Fetter 6-10 Using Technology to Increase Conceptual Understanding in Algebra and Geometry Many topics in algebra and geometry are difficult to address conceptually. We'll explore tools that students "notice and wonder", discuss mathematical situations, and develop conceptual understandings of triangle properties, linear equations, and systems of equations. BYOD to play along.	Robert Rusk 5-8 Swimming Pool Division Swimming Pool Division uses hands on manipulatives as well as a comical story to assist students in converting fractions into decimals.	Michael Busch K-5 The use of assessment video to create a portrait of student understanding This session will explore video from assessment interviews with students that might be used to create a portrait of understanding and strategies of the students.	Paula Mueller Pre-K-2 Addressing Numeracy with the Struggling Learner K-2 How do we begin supporting numeracy development? This session focuses on how students learn to compose and decompose whole numbers. We will view student video, discuss how to manage their thinking towards fluency of composing, while focusing on game-keeping concepts that build habits back.	Kristi Coe K-12 WA State Mathematics Menu of Best Practices and Strategies Support the diverse needs of at-risk students using the Washington State Mathematics Menu of Best Practices. Participants will review assessments needed to support a multi-tiered system, learn how active implementation increases effectiveness, and identify evidence-based strategies to improve mathematics programs.	Gloria Ferguson 3, 4, 5 Grade 3-5 Preparing students for the Mathematics Smarter Balanced Assessment As a scorer for SBAC Open Response Items and an Item Reviewer of Items and Reasoning for SBAC, I have observed common problems and skills student need to be successful with these items. Come learn habits and big ideas to help prepare students for the Math SBAC, grades 3-5.							
Multnomah Mh	Christina Tondeveld 1-5 3 Parts to a K-5 Student Centered Math Intervention Are you using the 8 research-based recommendations for math intervention? In this session we will explore the 8 recommendations from the Institute of Educational Sciences about what research says makes for an effective intervention program.	Virginia Nelson Pre-K-5 STEAM and Mindset Trending Now STEAM and an emphasis on a growth mindset are in vogue. That's good news for English learners! This session will address both STEAM and a growth mindset as they serve English learners. Included activities you can bring into your classroom on Monday.	Thom O'Brien 1-6 Math Fact Fluency - The Building Blocks for Math Concept Success Students with automatic recall of math facts are more capable problem solvers, learn new math skills more quickly, and are more likely to succeed in all math courses. Implementing targeted fluency instruction along with fluency development games increase student confidence and renew excitement for math.	Mark Roddy Pre-K-3 Grow Beasts: Growing understanding of measurement and inquiry in the primary grades Want to get your K-2nd graders actively engaged in measurement and data? centimeters and inches? tables and line graphs? creating their own experiments with their own dinosaurs? Three teachers show you how. Leave with a Grow Beast and a plan!	Francie Bostwick 3-10 Building Connections With Students Through Reflection Participants will engage in reflective practices regarding their teaching of mathematics and how they can model and use reflective practices with their students. Teachers will come away with ideas for effective reflective practices for their students.	Janice Novakowski K, 1, 2 Playful Mathematical Inquiry How do provocations engage young learners in rich mathematical thinking and discourse? In this session, examples will be shared from a BCAMT affiliated district collaborative inquiry. The mathematical areas focused on are number sense, patterning, spatial reasoning and measurement.	Keith Adolphson K - College Mathematically Productive Instructional Routines Mathematically Productive Instructional Routines (MPIRs) are brief, routine activities. MPIRs surface students' mathematical thinking and can be used across content and grade levels. Attendees will experience several MPIRs that enable teachers to elicit, build on, and respond to student thinking and measurement.							
Crown Z Cn	James Burnett 1-5 Making the Most of Meaningful Models Versatile models and tools support coherent progression of content as they can be used across many grades. This session will examine the models of number, including common and decimal fractions that are used to develop deep conceptual understanding.	Steven Leinwand 1-9 Crafting Lesson Quality and Magic with +/- 8 Side Lesson Guides Most of us find it a challenge to implement consistently the CTM P2A 8 Mathematics Teaching Practices. To address this challenge, I've been working with scores of teachers to discuss, create, implement, debrief and revise sets of lesson slides that enable us to strengthen the quality of our instruction and student learning. We'll look at the process and a range of examples from real classrooms.	Jim Libby 8-12 Where Are We Ever Going to Use This? Presenting the value of showing students real world applications of the math they have learned, and ways teachers can do this with a minimum of time and effort.	Dennis Ortman 5-12 Connecting Math Understanding to Careers Thru a Growth Mindset For students who don't believe they will ever understand math, a mindset change is critical. Find out how math 180 can model and use reflective practices with their students. Teachers will come away with ideas for effective reflective practices for their students.	Dennis Ortman K-5 How is 'What Added to 5 Equals 16' Connected to Algebra? This session will show a number of connections of basic arithmetic concepts to algebraic thinking using strategies from Marilyn Burns' Do The Math.	Linda Griffin Pre-K-2 The Lost Art of Estimation Students' mathematical identity, affinity toward mathematics, and mathematical mindsets are as important as their scores on the SBAC. We discuss our efforts to develop and utilize assessments of these constructs in the Oregon Math in Real Life project.	Andrew Byrns 6-12 3-Act Math: Incorporating Modeling into Instruction Moving Towards Modeling Participants will examine a continuum for math tasks, from computational problems to word problems to problem solving to modeling, and learn how to adjust tasks to increase the modeling potential.							
Weyerhaeuser Wv	Jachoon Yim 5-8 Visual representations to improve proportional reasoning We will present our classification of story problems that require proportional reasoning and discuss the potential of the double number line and the double tape diagram to help reason proportionally from two perspectives of proportional reasoning, multiple teachers and variables.	Rachel Harrington K-8 What Does it Mean to Be a K-8 Math Leader? Are you passionate about math? Do you love working with colleagues? We will discuss what leaders need to know and what opportunities are available for professional growth. There are ways to advance in the profession beyond just becoming a principal!	Sarah Wolfgang Pre-K-5 Number Talks: Instructional coaches supporting teacher implementation across a school. School wide implementation of a new strategy requires support. In this session see how a coach uses a Number Talk launch with common vocabulary and learning targets, tools to support recording student thinking, increasing student thinking and supporting English Language Learners.	Eva La Mar 3-7 Long Division: Hargman Gamification Style 5th grade long division is fun to teach when using 'hargman' as a gamified approach. See how to approach the conceptual element of the standard and how to emphasize strategies used in video games.	Linda Griffin Pre-K-2 The Lost Art of Estimation Have you wondered why the word 'estimation' has almost disappeared from our K-2 CCSS standards? How can we work estimation into our teaching of numeracy in the primary grade? Learn techniques to incorporate this vital math skill into daily mathematics lessons.	Andrew Byrns 6-12 3-Act Math: Incorporating Modeling into Instruction How are you teaching modeling to prepare your students for middle and high school math standards? Would you like to get ideas on incorporating real-world modeling and ENGAGING problem solving? Join us for ideas on accomplishing this in your classroom.	Elissa Farmer 9-12 Moving Towards Modeling Participants will examine a continuum for math tasks, from computational problems to word problems to problem solving to modeling, and learn how to adjust tasks to increase the modeling potential.							
Jantzen Jn	Tiffany Byrd 3-6 Math Tasks: Tales from a transformed teacher Come hear about how I've transformed my 4th grade classroom around productive math tasks. Find out how my students became rock stars of math. Walk away with practical steps to implement rich tasks in your class.	Molly Daley Pre-K-2 Math Anywhere! Noticing Opportunities to Engage Young Mathematicians Opportunities to immerse children in language and text are easily recognized. How can educators and parents notice and create opportunities to engage children in mathematical thinking? Doing so can help cultivate positive dispositions and make math reasoning more routine.	Jessica Cohen 6 - College Meaningful Integration of math and science: Is it possible? Models for teaching integrated math and science often either focus on using preexisting mathematical knowledge to learn new science, or applying recently learned mathematics to problems in a science context. This presentation will explore strategies for integrating math and science so that meaningful learning of both subjects can occur.	John Blater 7-12 Miscellaneous in Mathematics Presentation will cover many misconceptions about mathematics and how teachers can overcome them. (i.e. math has too many rules, 1+1 is always 2, a ball bouncing off a wall is true. None of these are truly math.)	Laura Nelson K-12 Improving Number Sense in Struggling 2nd - 5th Grade Students Older elementary students struggling with math often lack number sense, which affects comprehension of grade-level work. This session will highlight a variety of low-prep, research-based strategies that can be integrated throughout the school day to strengthen these basic skills.	Annette Mulligan K-12 Want 5-9 hours more per week of teaching time with less work? Session provides strategies and techniques which reduce low-level discipline behaviors. You will gain an understanding of why classroom conflict happens and how to solve it quickly. The end result is that you can gain back 5-9 more hours of teaching time each week.	Cynthia Hockman-Chupp K - College Math Coaching Matters Explore the benefits of collaboration among coaches, following the journey of leaders who participated in an online math coach cadre. Take away tips to build successful coaching in your district.							
White Stag We	Danielle Maletta 6 - College Actionable Feedback Formative assessment should give students actionable feedback. This is harder than it sounds. I have found a simple and effective application that has revolutionized my ability to achieve this. Student buy-in, homework effort and completion, and summative assessment scores have drastically improved!	Jamie Nordstrom 7-12 Arrow Diagram Representation Introduction An introduction to a representation that stretches the old function-machine diagram to its limits - which are farther than you might think.	Tamara Anderson 7 - College Demos for Discovery, Discussion, Demonstration and Daily Work Looking for a resource that will increase student learning through truly engaging activities? Demos is it! Participants will access existing activities and will learn to create custom activities through the Demos website. Bring a computer/device for maximum participation.	Brad Fulton K, 1, 2 Engaging Young Learners in Mathematical Argumentation Fast Facts and Fractions Four out of three students struggle with fractions! And the other 30% struggle with their times tables. See how we've helped my intervention students master all fraction operations and learn their multiplication facts. Great handout included.	Kendra Lonax K, 1, 2 Mathematical Modeling in the Primary Grades with Three-Act Tasks Three-Act Tasks (created by Dan Meyer) is a lesson structure designed specifically to engage children in modeling with mathematics. In this session, participants will explore Three-Act Tasks designed for primary students and consider the rich opportunities they provide for modeling.	Joe Frost 9 - College The Uncivil War of Calculus Isaac Newton and Gottfried Leibniz were each convinced that he alone should be given the credit for inventing the Calculus and that the other had stolen his ideas. Enjoy a look into some of the participants in this very uncivil battle for glory.								
Workshops														
Washington Wn	Ann Sipe 3-11 Using SBA Item Specs to Create Assessments Resources and "lessons learned" in developing assessments for your curriculum that not only test content knowledge but mimic the format of the SBA summative assessments for mathematics. Leave with resources that model the work.	Megan Ary 6-12 Make Sense and Teach the Mathematical Practices Using Routines for Reasoning Participants will learn about the math practices by doing math through a "routine for reasoning", based on the work of Kieran, Laccina and Creighton. Presenters will share their in-class experiences, successes, and lessons-learned from implementing the routine in secondary schools.	Karen Kennedy 6 - College Give Students Something to Talk About: The Role of Groupworthy Tasks Academic discourse including argumentation is central for our students to gain the skills to navigate advancing concepts in math. In this workshop, participants will discuss and solve groupworthy tasks to stimulate and embrace these habits of mind in their classrooms.	Jennifer Wyld 6-8 Calculating Our Future: Math Lessons on the Environment and Society Show students how to apply math skills to understanding and solving real-world challenges. Engage in interdisciplinary hands-on activities that address social and social studies themes - population growth, resource use, climate change - while working on measurement, algebra, and more.	Elizabeth Peysner 4-10 Exploring Angles in Three Ways Shape, fraction, turning! We will explore these perspectives of angles in the 4.MD.5 standard, and apply this understanding to MERS topics: geometry, algebra and trigonometry. Participants will use various tools to sign an art of understanding through grades 4-10.	Mary Linds Adams 7-11 Intentional Design and the Power of Engagement in STEM/CTE Lessons Hear how the Math in Real Life Grant changed math classrooms and students' perspectives on learning in the High Desert. Participate in a riveting CTE and STEM math lesson that engages middle and high school students.								
Flanders Ff	Elizabeth (Liz) Barrett K-4 Developing Early Numeracy and student confidence Get your class all in "Love Math!" Build excitement with patterns and games. Join me to explore ideas on how to build confidence and fluency using the JUMP Math teacher resources found online at www.jumpmath.com	Kathy Anderson 1-12 Using Number Strings to Support Systemic Teacher and Student Learning Taking a systemic approach, we supported elementary and secondary teachers in creating Number Strings, which expanded students' and teachers' understandings of mathematics, improved sense-making and reasoning, built confidence and connected the teaching and student mathematical practices.	Kellie Patrick K-6 Productive Math Discourse Always "Belongs" Using Which One Doesn't Belong (WODB) capitalizes and builds upon the learning needs of students' academic background and opportunities to apply language for purpose. Students learning English can flourish and grow in effective language rich environments.	Ann Anderson Pre-K-3 Building bridges: young children's mathematics experiences at home and school! Inspired by (videos of three different parent-preschooler's at-home activities (e.g. "Playdoh pizza", "Lawn sprinkler", and "Family photos"), we will explore how each everyday experiences might/should impact related math topics in the early years classroom.	Mark Roop-Kharasch 5-12 Finding Deep Math in Simple Games How to get people interested in math? Simple games get them started. And once they start discovering what amazing operations and discoveries can arise from these games, they become interested!	Mary Beisiegel 10 - College Exploring the Mathematical Richness of Rational Functions In this session, we will share activities that have students investigate rational functions. We will explore the richness of rational functions by making connections to students' prior knowledge and between different representations (numerical, graphical, symbolic), while also emphasizing conceptual understanding.								
Lovejoy Ly	Kim Schjelderup 9-12 Remember the M in STEM - encouraging students to think through This session will explore techniques to turn routine activities into opportunities for deeper thinking through investigations that allow students to reason mathematically, solve problems and explore concepts in real contexts. Technology and other resources will be used to provide the stimulus for deeper mathematical investigations.	Mary Ellen Huggins K-8 Integrating Math and Science to Access Modeling Northwest Educational Service District will share professional learning which recently developed for K-8 teachers in the northwest region. We will focus on the integration of the Next Generation Science Standards and the Common Core Math Standards, throughout the practice of modeling.	Elise Lockwood 5 - College Don't Count Them Out: Helping Your Students Successfully Solve Counting Problems Combinatorial (or "counting") problems are accessible yet challenging for students at all ages. In this workshop, we present a framework that identifies key combinatorial concepts, explore the teaching and learning of counting problems, and connect these ideas to important mathematical practices.	Susan Robinson 11 - College Computer Generated String-Art: Implicit Curves and Tangent Lines Using the computer program Geogebra to generate tangent lines, participants will explore string-art as an introduction to the derivative of implicit equations and the beauty of mathematics. This is a hands-on workshop that will require a device able to run Geogebra.	Micaela Newman 7-12 Increasing Student to Student Discourse Rich student discourse can increase academic achievement, build strong support systems, and get students ready for post-secondary environments. Getting students to have productive communication can be a challenge. In this workshop, we'll discuss and create strategies to build effective peer discourse.	Melissa Kincad K-6 Building Mathematical Fluency with Classic Card Games What do Spoons Old Maid, Rummy, and I Declare War have to do with Mathematical Fluency? Come learn how to use these classic card games, AND MORE! to help students see mathematical relationships and develop fluency.								
Pendleton Pn	Kathleen Burbank 2-8 Making Group Work, Work! Complex Instruction Based on the book "Smarter Together", in this workshop, find new ways to structure the class to work together to solve all students involved in group work - make word-problems become group-worthy tasks. Walk away with a lesson ready to go!	Jennifer Robbins 3-8 Math in a Chromebook Lab? This session is an opportunity to explore the possibilities of a tech-enhanced math class to promote mathematical discourse and problem-based learning. Tech tools combined with high leverage tasks will support the ability of all students to engage in mathematical discourse.	Dev Sirna 6, 7, 8 A super high-quality, shiny, new, complete, openly available middle school curriculum! Open Up Resources Middle School Math is a new, open, free, problem and discourse-based math curriculum authored by Illustrative Mathematics. We've taken the "I do, we do, you do" out of learning mathematics. We built the curriculum from the ground up, with the help of two pilot sites in the Northwest.	Deborah Lane 3-7 Models for Success Students can make meaning of word problems by using 3-Reads for comprehension and comparative linear models to give evidence of understanding. Matching responses to models boosts confidence.	Jana Sanchez Pre-K-5 Keeping Sense-Making at the Heart of Mathematical Instructional Routines Supporting teachers in implementing mathematical instructional routines that focused on sense-making, reasoning and critical thinking connects teaching and student practices. This work created space for joy in mathematics, and students' thinking guided the work of teaching problem solving and built on students' strategies.	Mary Kayana 6-10 Irrational Thoughts (for Rational Teachers) Hands-on activities designed to push the copy between thinking "rationally" and thinking "irrationally". Come explore how Geobards, Fibonacci's sequence, and Pi's K-Theory emerge naturally from the fractal of reality. Easy differentiation to a variety of levels.								
Salon 4 Sn	Jasson Zimba K-12 From Fractions to Functions and Back Again Where is it all going? What is the big picture? Teachers and instructional leaders all at grade levels will better understand how one of the primary stories of K-12 math unfolds.	Craig Willmore K, 1, 2 Great Games Lead to Great Gains Teachers will be shown a variety of strategies and engaging games that focus attention on learning and maintaining basic addition facts. Participants will be able to take strategies directly to their classrooms, use appropriate language, and reinforce with games.	LaMar Queen 3-12 Songwriting 101: Lesson Plans in a Song Format Writing leads to deeper understanding. Learn how to facilitate a fun songwriting workshop with your students. Seeing writing leads to deeper learning, students that engage in standards based song writing will further their understanding of specific content.	Tom Reardon 8 - College Transformational Geometry - Immediate Interactive Investigations in 15 Seconds for Grades 8-11 Creatively integrate discovery, reasoning, technology, and pedagogy. Investigate Explore/Discover/reflection, translation, rotation, and dilations. Your students will become engaged quickly (15 seconds or less) and deeply by interacting with the geometry. Obtain all free materials.	Kim Sutton Pre-K-2 Games for Place Value Understanding Need some new games for practice of place value understanding? You are at the right spot! Kim Sutton will share how to create motivation for practicing place value in the primary classroom! Always hands on, you will leave with ready to go games!	Shannon McCaw 6-12 Creating Classroom Culture in the Secondary Math Classroom In this session, secondary math teachers will learn strategies to create a classroom culture that is built upon the mathematical practices. Teachers will learn techniques that lead to an environment that allows students to make sense of problems, persevere in problem solving and construct and critique arguments while also attending to precision.								
Gisan Gn	Carrie Black Pre-K-8 EngageWA-Resources to Support Teachers Using EngageNY During this presentation, teachers will be introduced to online resources which support teachers who are trying to implement EngageNY or Eureka Math curriculum. A laptop or tablet would be beneficial to access resources shared.	Lori MacKinder Pre-K - College Student Identity and a Growth Mindset Mindset is the new buzz word in math education. How do students get themselves into an open-willing to take a challenge-make mistakes and grow mindset? Join us for this informal presentation on student identity and mindset. Hear the latest research and bring your questions.	Sandra Coulson 3-5 I'm Game! Are You? Helping students construct meaning, develop strategies, incorporate reasoning and discourse as they make sense of mathematics can be challenging. Games have proven to be an effective way to teach concepts while engaging students and differentiating instruction. Join us to learn more: 'I'm game! Are you?'	Jane Felling 1-5 Number Line Math games for Elementary - Box Cars Favorites Number lines for teaching place value, rounding, all operations and more. This workshop will also incorporate place value dice and cards. Participants will learn strategies for differentiation and journal response extensions. Get ideas for teaching expanding, comparing and ordering numbers. Gamesboards provided.	Rachel Harrington K-8 What's New in K-6 Mathematics Education This workshop will consist of short, hands-on sessions led by Oregon Elementary Mathematics Instructional Leaders. Drop in for some or all of the workshops and learn about the latest instructional strategies and CCS resources for K-6 math teachers.	Susan Cedar 6 - College Using Words - Teaching Reading and Writing in Math A hands-on workshop, using techniques developed for ELL populations, we will practice reading and writing math content. You will have the opportunity to create pictorial representations, "color chunking," and facilitate writing development for all levels of math learners.								
Hayden Hn	Darrell Trussell 3, 4, 5 Exciting Exponential Explorations Experience creative problems and investigations around exponential equations. The problems lead to a better understanding of exponential growth using data collection, connections to geometric sequences, and multiple representations. Many of the mathematical practices for students are embedded within each activity.	Barbara Novelli 3, 4, 5 Math Success for All Students Grades 3-5 This seminar will focus on 5 changes a teacher can make in the classroom to respond to the diverse needs of all your students. These changes can help your students be successful in math as well as writing and reading. Barb will share ideas that can increase student achievement and make learning fun!	Denise McDowell Pre-K-2 Eye the Prize Experience the delight of math through a child's eyes using activities to develop conceptual and perceptual subverting skills. Activities focus on counting skills, operations and algebraic thinking, cardinality, and numbers and operations in base ten. The prize is your students' understanding!	Keelin Brubaker 3-12 Building a Better Math Notebook...One Fold at a Time Recharge your students' notebooks and turn on the motivation factor via 3-D graphic organizers, also known as Notebooks, Foldables, Depart with a mini-composition book filled with ideas ready to use on Monday.	Andrew Stadel 6-12 Boost Conceptual Understanding and Procedural Fluency with Rich Number Sense Tasks Ever wonder why so many math concepts do not stick with students? Come experience the structure of a sticky math lesson. Learn with lesson design tools that will make the math you teach stickier with your students.	Melissa Kincad K-6 Building Mathematical Fluency with Classic Card Games Participants will learn the importance of playing relevant math games during instruction that will engage their students as well as help them benefit their students' skills. Math games should not be left to the fast finishers. ALL students can benefit.								
Overton On	Enna Oliver 6 - College Standards Based Grading in a Traditional Gradebook Our team will share practical ways to implement standards based grading after years of progress. Standards-based grading has also opened up new ways of looking at re-do and retake policies and started discussions around assessments and common practices.	Sally Wood 6, 7, 8 Math Fun and Games We will share some of our favorite games and fun activities. These can be used when you have a few minutes at the end of a class period or for Math Nights.	Cynthia Townsend 3-12 Productive Struggle and Supporting All Learners Productive struggle can be challenging for all, especially students with special academic and language needs. Come learn what productive struggle looks like in the classroom and ways to encourage and support all students in this important practice.	Ann Knight 9-12 Grade 9-12 Student Awesome Performance Tasks Delaware's 'Punkin' Chunkin', Mounds of Sand Challenge, Your Favorite Coffee Half-Life and More! Bring FUN and RELEVANCE to your Smarter Balanced performance task practice and Essential Skills Work Samples Practice.	Molly Hill 3-5 Explore the Core with Math on the Floor Gain strategies for immediate classroom use! Many math concepts can be demonstrated on a large floor grid. Let's MOVE! through the operations, discover basic fractions, design patterns, explore area and perimeter, experiment with geometry, play with time and money, and change the scales in graphing.	Molly Hill 3-5 Mathematical Fluency = Fun Have you wondered what mathematical fluency is? Have you been searching for activities that will increase your students' number sense? You will walk away with a better understanding of mathematical fluency and a smorgasbord of ideas to increase your students' fluency!								
Petygrove Pe	Chris Hunter 4-9 Operations Across the Grades There are key sense-making matters that the foundation of each operation which hold no matter how the operations are used. Come explore how these operations progress across the grades, from whole numbers to decimals to fractions and even to algebra.	Cheryl Henjum K-5 Drills to Thrill All Students! Fact fluency is the goal! Cheryl Henjum of Kim Sutton Associates will share Kim's powerful model of teach for understanding, teach the computational strategies and effective practice. Participants will sing, dance, play games and practice skills all at the same time! Participants will learn how to use a drill command for each practice opportunity.	Chris Mikles 6-12 Using Manipulatives and Investigations to Teach Geometry Highlighting the CCSS-M Practices Participants will use hinged mirrors, rubber bands, pat paper, paper plates and other manipulatives, as well as investigations to develop geometry concepts such as similarity and triangle congruence, transformations, central angles, polygons, arcs, and more.	Dennis Mulhearn 4-8 Use Cubes as a Setting for Your Problem Solving Start with a cube or a pile of cubes. Stack them, count them, paint them, and you'll do some real math. A dozen 5 minute cube problems provide a fresh approach to problem solving.	Ryan Seidel 7-12 Using Desmos as a medium for inquiry based learning During this workshop, we use one teacher's implementation of Demos in a high school math support class to illustrate principles of technology and inquiry-based classroom activities. Participants should bring a computer or tablet and will engage in various Demos activities.									