

# OML 2019 Sessions

A snapshot of the sessions that will be offered at this year's OML conference.

Session Title	Session Description
Can We All Talk About This?	What does it look like when each and every student has access to mathematical discussions in your classroom? Mathematical conversations are for all, not just for the few. How could we ensure that more of our students are included in discussions and are prepared to “construct viable arguments and critique the reasoning of others” (MP3)? Explore with us, effective teaching practices for facilitating inclusive status-free small- and large-group discussions, characteristics of equitable lessons, and mathematically productive student-to-student interactions daily.
Detracking Middle School - A Case Study	Math tracking damages those students who can least afford it, and the damage to confidence can be fateful. How can you offer different “levels” of achievement within a math class, so that all students’ needs are met? At Keys School, our students learn in heterogeneous classrooms, and all cover the same yearly curriculum. However, activities are open to multiple processing speeds, and assessment reflects successive levels of mastery. We’ll share examples, observations and challenges. Come with questions!
Living the Standards for Mathematical Practice in a Math Teacher Circle	Sometimes it's been too long since we as teachers experienced both the frustration and the wonder of doing a math problem that is new and difficult, that we find it difficult to relate to our students' struggle. We'll work through a set of low-floor/high-ceiling problems from our Lane County Math Teachers' Circle that's interesting enough to challenge adults but that I've successfully implemented in 4th grade classrooms. Through this, we'll learn what it feels like to use the Standards for Mathematical Practice and discuss successful teacher moves for including all learners and providing support for the productive struggle that will allow them to both access and enjoy math.
Language Matters	How we talk to and about students matters. It has consequences for student achievement and emotional well-being. In this session, discuss and practice using language as a lever for equity.

<p>Nancy Anderson Workshop: Math Comes in All Shapes and Sizes (Will be presented twice)</p>	<p>In this session the measurement progression across K-5 will be analyzed to see where the measurement concepts are aligned to either major or supporting clusters of grade level standards. Participants will look at concepts for measuring lengths, how they connect to perimeter and area measures, and finally how these are all related to volume measurement concepts. Measurement misconceptions will be examined. Equitable teaching practices related to measurement instruction will be explored throughout this workshop. Come spend the session with Janis and Jackie discovering it's a pleasure to measure.</p>
<p>Modeling, Functions, &amp; Statistics Come Alive with Real-World Data in Tuva</p>	<p>Use real-world datasets and interactive tools to make math relevant and engaging! In this session, we will explore teaching modeling, functions, and statistics through inquiry-based, highly engaging math lessons using research-based, interactive data &amp; graphing tools. You will walk away with tons of free resources such as 15 real-world datasets, ready-to-use lessons, and the data &amp; graphing tools to use with your students.</p>
<p>Create Diverse, Equitable and Inclusive Classroom Routines</p>	<p>In this session, participants will experience "Ignite, Chunk, Chew, Review" as a set of classroom routines to help students minimize the impact of previous negative experiences with school. Using ideas from Culturally Responsive Teaching &amp; the Brain (Hammond, 2015), we will lead you through a suggested classroom routine that uses brain-based research that can help low-achieving dependent learners move to a more independent and successful learning style.</p>
<p>Diversity and Equity: Mathematical Thinking</p>	<p>What does diverse thinking look like in a math classroom? Can equity be honored and used to promote mathematical confidence and mathematical sense of self in students? Let's promote and make room for diversity and equity among students' mathematical thinking.</p>
<p>D3: Desmos, Differentiation &amp; Discourse</p>	<p>Explore how to integrate Desmos with your curriculum to deepen discourse and differentiate for all learners. Experience several strategies for more robust math engagement with Desmos using word banks, sentence frames and error analysis.</p>
<p>Mathematical Modeling for Equity</p>	<p>Mathematical Modeling is a math practice standard and an entire domain at the high school level. Yet, few students have the opportunity to experience modeling in the math classroom. Come learn what it is, why it is an instructional &amp; curricular tool that can help us include more students and concrete ways you can start incorporating it into your practice. (This session will dive deeper into content introduced in the morning's keynote.)</p>

<p>Equity – Connecting with At-Risk Students in Math Class</p>	<p>For students who struggle in math there are six areas that can be specifically addressed by teachers to help create equity for all students and especially at-risk students. Teachers will focus on students' failure identity, teacher behaviors, attitude change, self-concept, non-verbal communication, and responding. Ideas and strategies will be those featured in the book At-Risk Students, Feeling their pain, Understanding their Defensive Ploys by Bill Page.</p>
<p>Supporting Inclusion and Equity through Reading and Writing in Math Class</p>	<p>Communication through written text in math is critical to building mathematical understanding. For many students, reading can be a barrier to context-rich problems that promote opportunities to bring prior knowledge and accessibility. Writing is one of the few ways that we can ensure every student engages their voice and shares their reasoning. Both need to be intentionally supported in the math classroom. We will explore principles that incorporate reading and writing strategies in a meaningful way, empowers students to develop a deeper mathematical understanding, gives all students a voice, and engage in math practices that transcend the classroom.</p>
<p>Practical Applications of the Opportunity Myth: Working to Implement the 4 Key Resources Students Need to Succeed</p>	<p>This breakout session will look closely at the 4 Key Resources highlighted by the research presented in the New Teacher Project's Opportunity Myth. This research has had an impact statewide and is being used around the nation to push for equitable instruction that is based on access to grade level curriculum, students doing the thinking, deep engagement, and the critical role of high expectations in teachers. The session will provide a good mix of theoretical ideas and practical approaches regarding the work of implementing equitable instruction.</p>
<p>Mentoring/Coaching for Equity in Mathematics</p>	<p>Immerse yourself in a wide variety of equity-based instructional routines that you can bring into your classroom or school setting. Discover inclusive educational practices that can be immediately applied to your lessons or coaching toolbox including improv games for teaching group norms and addressing status through collaborative tasks. This interactive session will provide you with many instructional practices that you can use with students or the teachers you support.</p>
<p>Mathematical Mindsets: Helping All Students Maximize their Learning Potential</p>	<p>Students need rich inquiry tasks involving high cognitive demand, connections to their lived experience, and development of their identities as mathematicians and as citizens. Hear about my experience with an open-ended, student-driven math task suited to individual interests, local issues, or timely concerns while also meeting math goals, and some other options for math tasks with real-world relevance.</p>

<p>Working on Creating Worked-Out Examples</p>	<p>A worked example in mathematics is a problem that has been fully completed to demonstrate a procedure. Worked examples, in combination with self-explanation prompts (questions that encourage students to explain the problem back to themselves) have been found to increase learning. Students make fewer errors, are more independent problem-solvers with improved conceptual and procedural knowledge around important mathematical ideas. Teachers reported overwhelmingly that they see their students mastering concepts that had previously eluded them to ensure that each and every student achieves increased success. Examine the impact of worked examples for various instructional purposes and gain hands-on experience creating worked out examples for use in your classes.</p>
<p>Math IDEAs in the Primary Classroom, Strategies to Include All Learners</p>	<p>After interviewing teachers, the most consistent concern about math in the primary grades is how to address the multiple learning levels in one classroom. This presentation offers some ideas using a team approach to problem solving and self checking games to help reinforce skills enabling the teacher to spend more time on small group instruction.</p>
<p>Share your IDEAs: Small Group Equity Talks</p>	<p>This is something new we are trying this year. These small group equity talks are an opportunity for you to get together with a smaller group and talk about equity issues as they pertain to the grade levels that you all collectively teach. Please share your thoughts, ideas, perspective, and questions. While there is a presentation planned for this time, there will also be a lot of opportunity for sharing and learning. 😊</p>
<p>Number Talks Workshop</p>	<p>An extended session offered in 4 different grade bands (primary, intermediate, middle, and high school) led by teacher educators who are experienced with Number Talks.</p>