



schedule at-a-glance

Teachers Development Group
2021 Leadership Seminar | Mathematics
Professional Learning

Wednesday, March 10

Pacific Time Zone 9:00 am –12:15 pm

<p>9:00 – 10:00 am Pacific time</p>	<p>Session A</p> <p><i>See Learning Opportunities Through One-on-One Conversations</i></p> <p>Grades PK-5</p> <p>Vicki Jacobs Carrie Valentine</p>	<p>Session B</p> <p><i>Accelerating Student Learning</i></p> <p>Grades PK-12</p> <p>Cathy Martin</p>	<p>Session C</p> <p><i>Facilitating Emergent Multilingual Students' Mathematics Class Experience</i></p> <p>Grades 6-8</p> <p>Johannah Nikula Jill DePiper</p>	<p>Session D</p> <p><i>Let's Talk About It: Deepening Students' Mathematical Sense-making by Attending to Teachers' Listening</i></p> <p>Grades PK-12</p> <p>Allison Hintz Kersti Tyson Andrea English</p>	<p>Session E</p> <p><i>A Framework for Equitable and Inclusive Mathematics Education for Complex Learners</i></p> <p>Grades PK-5</p> <p>Corey Drake Kimberly Hufferd-Ackles</p>
<p>10:15 – 11:15 am Pacific time</p>	<p>Session F</p> <p><i>Monitoring Student Work: Attending to and Keeping Track of Students' Thinking</i></p> <p>Grades 6-12</p> <p>Peg Smith</p>	<p>Session G</p> <p><i>Instructional Activities in Early Childhood: Supporting Language and Participation</i></p> <p>Grades PK-2</p> <p>Angela Chan Turrou Nick Johnson</p>	<p>Session H</p> <p><i>Building Lasting Skills, Engagement and Confidence in Algebra using Tactile Immersive Virtual Reality</i></p> <p>Grades 6-12</p> <p>Anarupa Ganguly</p>	<p>Session I</p> <p><i>What have we Learned? Understanding Ambitious and Equitable Mathematics Teaching through Real-Time Teaching Dilemmas</i></p> <p>Grades PK-5</p> <p>Melinda Knapp</p>	<p>Session J</p> <p><i>Instructional Moves to Foster Equitable Student Engagement</i></p> <p>Grades PK-12</p> <p>Kathy Pfaendler Carolyn Choi</p>
<p>11:30—12:15 Pacific time</p>	<p>Generalize to Practice Part I Wednesday, March 10 • 11:30 am—12:15 pm</p> <p>Meet with other educators in facilitated small groups to debrief the day's learning, generalize to your own roles and set next steps for action. Each day, the debrief will have a slightly different focus and involve meeting in break out groups with a variety of participants in similar and different roles.</p>				



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Lessons Learned from an Extraordinary Year:

Insights about How to Enact More Equitable & Inclusive PreK-12 Mathematics Teaching & Professional Learning

WEDNESDAY MARCH 10

9:00 am –12:15 pm • Pacific Time

Session A

Wednesday, March 10

9:00—10:00 am
Pacific Time

See Learning Opportunities Through One-on-One Conversations

What can we learn from one-on-one conversations with elementary children during the pandemic? We will consider how these conversations—virtual or face-to-face—enhance children’s engagement and learning. Emphasis will be on “seeing” individual children as they make sense of mathematics and gain confidence as problem solvers. Videos of these conversations will illustrate the power of teachers’ fine tuning their instruction based on what they learn from the details of what children say and do—lessons that also apply to group instruction. We will discuss teachers’ selection of instructional tasks and follow-up questions related to number sense and problem solving.

Grades PK-5

*Vicki Jacobs, University of North Carolina at Greensboro
Carrie Valentine, Retired Teacher, Madison Metropolitan School District*

Session B

Wednesday, March 10

9:00—10:00 am
Pacific Time

Accelerating Student Learning

The Covid-19 pandemic has created a massive disruption in our students' learning time, particularly our Students of Color. The actions we take matter, more now than ever, for our students and have the potential to accelerate student learning and to minimize and mitigate learning loss. In this session, we will examine ways to accelerate student learning while simultaneously engaging students in grade-level content with the goal that we accelerate rather than remediate. Participants will engage in an examination of the essential learning that will set students up for future success and how to use current learning opportunities to do so.

Grades PK-12

Cathy Martin, Associate Chief of Academics, Denver Public Schools



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<p>Session C Wednesday, March 10</p> <p>9:00—10:00 am Pacific Time</p>	<p><i>Facilitating Emergent Multilingual Students' Mathematics Class Experience</i></p> <p>How can we elevate the voices and mathematical thinking of emergent multilingual students (EMs) in the mathematics classroom? This session will explore how teacher and student use of diagrams and integrated language support strategies highlight EMs' mathematical thinking and facilitate their classroom participation. We will share what teachers and EMs had to say about lesson design features during a study involving 23 middle grades mathematics classes. Participating teachers and leaders will also be prompted to consider how EM voices are and can be supported in mathematics classes in their districts.</p> <p>Grades 6-8</p> <p><i>Johannah Nikula, Education Development Center (EDC)</i> <i>Jill DePiper, Research Scientist, Education Development Center (EDC)</i></p>
<p>Session D Wednesday, March 10</p> <p>9:00—10:00 am Pacific Time</p>	<p><i>Let's Talk About It: Deepening Students' Mathematical Sense-making by Attending to Teachers' Listening</i></p> <p>Mathematics classrooms are democratic spaces where students learn how to discuss differing ideas. They are places where students deepen their learning by talking about their thinking. As students talk, educators are called upon to deepen the ways we listen. Join us to learn more about pedagogical listening. We will discuss questions such as: What kinds of listening foster sense-making in mathematics classrooms? How can we attend to, and be curious about listening? How does the way a teacher listens shape how students listen to themselves and to each other? How is listening essential for rehumanizing mathematics education?</p> <p>Grades PK-12</p> <p><i>Allison Hintz, Associate Professor, Math Education, School of Educational Studies, University of Washington Bothell</i> <i>Kersti Tyson, Director of Evaluation and Learning, LANL Foundation</i> <i>Andrea English, Senior Lecturer, University of Edinburgh</i></p>



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<p>Session E Wednesday, March 10</p> <p>9:00—10:00 am Pacific Time</p>	<p><i>A Framework for Equitable and Inclusive Mathematics Education for Complex Learners</i></p> <p>We will present a framework developed to support the equitable teaching of mathematics to complex learners in elementary grades. Too often, materials for complex learners focus on rote procedures and memorization. We focus instead on supporting complex learners in developing problem solving strategies and understanding, building on the strengths each student brings to the classroom. The framework describes key questions and mindset shifts for educators along with everyday action steps educators take in the areas of strengths-based interactions with children, design of the learning environment, using and adapting curriculum, re-framing assessments, engaging the community, and supporting teacher learning.</p> <p>Grades PK-5</p> <p><i>Corey Drake, Professor, Department of Teacher Education, Michigan State University Kimberly Hufferd-Ackles, Open Wings Learning Community</i></p>
<p>BREAK 10:00—10:15 am • Pacific Time</p>	
<p>Session F Wednesday, March 10</p> <p>10:15—11:15 am Pacific Time</p>	<p><i>Monitoring Student Work: Attending to and Keeping Track of Students' Thinking</i></p> <p>This session will focus on the practice of monitoring - one of the five practices for orchestrating productive discussions (Smith & Stein, 2018). Monitoring involves listening in on what students are saying and observing what they are doing as they work on a task; asking questions to determine what students understand and to move them towards the goals of the lesson; and keeping track of the approaches that they are using. This session will focus on specific challenges teachers face when monitoring and how to address them, and on the ways in which monitoring can support equity.</p> <p>Grades K-12 ideas, Grades 6-12 content</p> <p><i>Peg Smith, University of Pittsburgh, Professor Emerita Mathematics Education Consultant and Author</i></p>



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<p>Session G Wednesday, March 10</p> <p>10:15—11:15 am Pacific Time</p>	<p><i>Instructional Activities in Early Childhood: Supporting Language and Participation</i></p> <p>Instructional activities that are intentional, playful, and driven by young children’s ideas are the focus in this session. As teachers take up purposefully-designed Instructional Activities, they enhance their classroom spaces to leverage diverse linguistic resources and varied participation (e.g., gesture and representation), broadening notions of what counts as math and honoring the contributions that children bring to the classroom. This session explores early childhood classroom vignettes of Instructional Activities as we simultaneously address a range of early math content, pedagogy, children’s thinking, and in-the-moment assessment.</p> <p>Grades PK-2</p> <p><i>Angela Chan Turrou, Senior Researcher & Teacher Educator, UCLA Nick Johnson, Assistant Professor, San Diego State University</i></p>
<p>Session H Wednesday, March 10</p> <p>10:15—11:15 am Pacific Time</p>	<p><i>Building Lasting Skills, Engagement and Confidence in Algebra using Tactile Immersive Virtual Reality</i></p> <p>Learning science has validated that we all learn math more fluidly and fluently when we interact with and experience via perceiving, touching, moving, and visualizing concepts within meaningful real world settings. However, the vast majority of math learning tools today do not exploit this fact, and as a result, generations of historically underserved students continue to be squeezed out of STEM fields beginning in middle school through university. In our session, you will learn how to transform engagement & outcomes in secondary math using pedagogically-sound tools that foster tactile, interactive and multimodal sense-making, made possible by recent advances in Immersive Virtual Reality.</p> <p>Grades 6-12</p> <p><i>Anarupa Ganguly, Prisms of Reality</i></p>



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<p>Session I Wednesday, March 10</p> <p>10:15—11:15 am Pacific Time</p>	<p><i>What Have We Learned? Understanding Ambitious and Equitable Mathematics Teaching through Real-Time Teaching Dilemmas</i></p> <p>Most would agree that developing communities in which students explain and justify their thinking, create and respond to mathematical arguments requires knowledge of discourse intensive practices that is challenging for teachers to learn—in online or face-to-face environments. Through our practice-based work we have seen the benefits and possibilities of taking on manageable pieces of instruction while also helping teachers attend to equity-oriented teacher practices and learn from real-time teaching dilemmas (Ghousseini, 2009; Zeichner, 2012). In this session we will explore the possibilities for teacher learning in practice through the exploration of particular pedagogies of practice: representations of practice (e.g., video records of lessons or records of student work); decompositions of practice (e.g., identification of specific instructional practices such as talk moves); and approximations of practice (e.g., simulations of certain aspects of practice through activities such as role play and rehearsal). We also share examples from the field, including how teachers have faced new dilemmas in teaching ambitiously through their own practice.</p> <p>Grades PK-5 <i>Melinda Knapp, Oregon State University-Cascades</i></p>
<p>Session J Wednesday, March 10</p> <p>10:15—11:15 am Pacific Time</p>	<p><i>Instructional Moves to Foster Equitable Student Engagement</i></p> <p>In this session we explore two questions regarding student engagement in the learning of mathematics. How can we ensure that all students are sense-makers and active doers of math? What can teachers do to encourage and invite students to participate fully? We will explore student-centered instructional moves that engage students equitably in math practices as doers of mathematics by reviewing student work and engaging in math together. As these moves become normative for the teacher and students (i.e., habits) student engagement for all students tends to increase.</p> <p>Grades PK-12 <i>Kathy Pfaendler Carolyn Choi Mathematics Professional Development Specialists, Teachers Development Group</i></p>
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