



# schedule at-a-glance

Teachers Development Group  
 2021 Leadership Seminar | Mathematics  
 Professional Learning

<b>Thursday, March 11</b> <i>Pacific Time Zone 3:00 pm – 6:15 pm</i>					
<b>3:00 – 4:00 pm</b> <b>Pacific time</b>	<b>Session K</b>  <i>Rough Draft Math as an Equity Pedagogy During Online Instruction</i>  Grades 6-12  Amanda Jansen	<b>Session L</b>  <i>Analyzing Context and Models in 2021</i>  Grades 6-8  Amy Lucenta Grace Kelemanik	<b>Session M</b>  <i>Exposing Historical Inequities Around “Building Fluency”: Redefining and Creating More Equitable Practices</i>  Grades PK-12  Kristine Ho Jenn Hagman	<b>Session N</b>  <i>Using “Practical Measures” of Teachers’ Experiences to Reflect on and Improve Professional Learning</i>  Grades PK-12  Hilda Borko Kara Jackson Michael Jarry-Shore Anita Lenges Hannah Nieman Zuhail Yilmaz	<b>Session O</b>  <i>Routines for Leaders that Empower Teachers</i>  Grades PK-12  Bill Feeley Julie Fredericks
	<b>Session P</b>  <i>Math Is... Young Children’s Studies of Mathematics Through Line and Trajectory</i>  Grades PK-1  Alex Morgan Kirsten Zimbelman	<b>Session Q</b>  <i>How Might We Address Unfinished Learning in K-12 Mathematics? Exploring Some Strategies That Help Students Succeed</i>  Grades PK-12  Linda Ruiz Davenport Stacey Solomon	<b>Session R</b>  <i>What Do We Need to Know to Design More Effective Professional Learning?</i>  Grades PK-12  Heather Hill	<b>Session S</b>  <i>Noticing Student Thinking as a Resource for Equitable Mathematics Classrooms</i>  Grades PK-8  Miriam Sherin Elizabeth van Es	
<b>5:30 –6:15</b> <b>Pacific time</b>	<b>Generalize to Practice Part II</b> 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.				



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**THURSDAY, MARCH 11**

<p><b>Session K</b> Thursday, March 11</p> <p>3:00 – 4:00 pm Pacific Time</p>	<p><b><i>Rough Draft Math as an Equity Pedagogy During Online Instruction</i></b></p> <p>How have mathematics teachers integrated rough draft thinking into their online learning environments? How are these approaches helping the teachers achieve their goals for equity in mathematics teaching and learning? In this session, I will share what I have learned from middle school and high school teachers in Delaware about how they have created online learning spaces that humanize mathematics learning by welcoming students' thinking and providing opportunities to revise. I will connect these teachers' work to three out of four dimensions of equity from Rochelle Gutiérrez's work: access, identity, and power.</p> <p>Grades 6-12</p> <p><i>Amanda Jansen, Professor, University of Delaware</i></p>
<p><b>Session L</b> Thursday, March 11</p> <p>3:00 – 4:00 pm Pacific Time</p>	<p><b><i>Analyzing Context and Models in 2021</i></b></p> <p>The past year has saturated the market with mathematical models and left experts and laypeople alike to interpret complex contexts and create or make sense of mathematical models of those contexts and data related to them. Teaching our students to do the same has never been more imperative. In this middle school-focused session, we'll engage in our current iteration of an instructional routine designed to provide ALL students repeated experiences in modeling with mathematics in inclusive ways. We'll unpack the routine, articulate specific designs for interaction to engage and support students. Participants will leave ready to try Analyzing Contexts and Models in a remote or in-person setting.</p> <p>Grades 6-8</p> <p><i>Amy Lucenta, FosteringMathPractices.com   Co-Founder</i> <i>Grace Kelemanik, FosteringMathPractices.com   Co-Founder</i></p>
<p><b>Session M</b> Thursday, March 11</p> <p>3:00 – 4:00 pm Pacific Time</p>	<p><b><i>Exposing Historical Inequities around "Building Fluency": Redefining and Creating More Equitable Practices</i></b></p> <p>In this session student thinking will be the catalyst for shifting teacher practice in order to address inequities historically plaguing our education system. We will draw on Cognitively Guided Instruction and its principled ideas by highlighting how listening to students' thinking in the secondary classroom can inspire</p>



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	<p>teachers to rethink mathematics instruction. Join us in exploring fluency, what it is, how to develop it, and how it can be a tool for more equitable mathematics. Participants will develop their abilities to become better listeners, sense-makers, and strategic facilitators of using student thinking as a foundation for learning for ALL students.</p> <p>Grades PK-12</p> <p><i>Kristine Ho, PhD, Director Mathematics Programs, UCLA</i> <i>Jenn Hagman, Associate Director of Secondary Mathematics, UCLA Math Project</i></p>
<p><b>Session N</b> <i>Thursday, March 11</i></p> <p>3:00 – 4:00 pm Pacific Time</p>	<p><b><i>Using “Practical Measures” of Teachers’ Experiences to Reflect on and Improve Professional Learning</i></b></p> <p>Leaders who facilitate collaborative professional learning for mathematics teachers often have limited ways to get systematic, targeted feedback about their practice. We will introduce “practical measures” (e.g., short teacher surveys) that leaders can use to reflect on and adjust their practice. The measures are grounded in research on what supports ambitious, equitable goals for teaching. They support facilitators to attend to, for example, whose voices are valued and whose needs and interests are taken up in professional learning meetings. We will invite participants to consider how the measures can inform design and facilitation in their own contexts.</p> <p>Grades PK-12</p> <p><i>Hilda Borko, Charles E. Ducommun Professor of Education, Graduate School of Education, Stanford University</i> <i>Kara Jackson, Associate Professor of Mathematics Education, University of Washington</i> <i>Michael Jarry-Shore, Graduate Student, Stanford University</i> <i>Anita Lenges, Clinical Associate Professor of Mathematics Education, University of Washington</i> <i>Hannah Nieman, Research Scientist, University of Washington</i> <i>Zuhal Yilmaz, Visiting Assistant Professor, University of California, Riverside</i></p>
<p><b>Session O</b> <i>Thursday, March 11</i></p> <p>3:00 – 4:00 pm Pacific Time</p>	<p><b><i>Routines for Leaders that Empower Teachers</i></b></p> <p>Our leadership voice as administrators and teacher-leaders is being called. Perhaps now - more than ever - our teachers deserve regular feedback in ways that nurture equitable and inclusive mathematics teaching and learning focused on justification and generalization. As we navigate remote and/or in-person</p>



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	<p>instruction, leaders can develop routines that offer mathematically productive feedback in ways that are do-able/manageable, generative, and non-evaluative. In this session, we will explore components of mathematically productive feedback to teachers, consider different tools and structures that can be generalized to any school/grade/context, and rehearse this essential and powerful leadership routine. Specifically, we'll consider how feedback that is descriptive, purposeful, focused, and motivating empowers teachers to implement more effective and equitable teaching practices.</p> <p>Grades PK-12</p> <p><i>Bill Feeley</i> <i>Julie Fredericks</i> <i>Mathematics Professional Development Specialists, Teachers Development Group</i></p>
<p><b>BREAK</b> 4:00—4:15 pm • Pacific Time</p>	
<p><b>Session P</b> Thursday, March 11</p> <p>4:15—5:15 pm Pacific Time</p>	<p><b><i>Math Is... Young Children's Studies of Mathematics Through Line and Trajectory</i></b></p> <p>How does the study of mathematics become relevant and deeply personal in the context of a toddler? When viewed through an adult lens, mathematics curricula can be intimidating. In reality, math forms the foundation of our world and toddlers are engaging with it whether we join them or not. This session examines a year-long investigation, researched by a class of 2-year-old children, around line, trajectory, and toddler joy. We unpack the schema the children developed and strategies the teachers used to support the children. The teachers' hesitancy and uncertainty is addressed throughout and specific research is offered that supported the teachers' growth. Further, we examine how we can begin to dismantle approaches to mathematics education that exclude and oppress children's diverse problem-solving strategies when working with toddlers through first graders.</p> <p>Grades PK-1</p> <p><i>Alex Morgan, Community Outreach Specialist, Boulder Journey School</i> <i>Kirsten Zimbelman, Mentor Advisor / Boulder Journey School</i></p>



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<p><b>Session Q</b> Thursday, March 11</p> <p>4:15—5:15 pm Pacific Time</p>	<p><b><i>How Might We Address Unfinished Learning in K-12 Mathematics? Exploring Some Strategies That Help Students Succeed</i></b></p> <p><i>Many students complete the school year without gaining proficiency with all the content they are learning. This is even more the case now, with the COVID19 pandemic keeping many students out of schools, and with many classrooms working remotely. Students of color, EL students, students with special needs, and students who are otherwise marginalized often face the greatest challenges successfully engaging in remote instruction. How might we address these needs? In this session, we share perspectives from “unfinished learning” that can help us with strategies for revisiting content in meaningful ways while still moving forward with grade level work.</i></p> <p><i>Grades K-12</i></p> <p><i>Linda Ruiz Davenport, Middle School Math and Science Teacher, Boston Public Schools</i> <i>Stacey Solomon, Program Director, Mathematics K-8, Boston Public Schools</i></p>
<p><b>Session R</b> Thursday, March 11</p> <p>4:15—5:15 pm Pacific Time</p>	<p><b><i>What Do We Need to Know to Design More Effective Professional Learning</i></b></p> <p><i>This session will feature a discussion between K-12 professional development practitioners (i.e., Julie Fredericks, Teachers Development Group; Claire Gogolen, Center for Education Policy Research at Harvard University; Grace Kelemanik, Fostering Math Practices) and an academic (Hill) who studies this topic. Following a summary of “what is known” about teacher professional development practices in the research literature, Hill will ask practitioners: What professional development practices – defined as methods for helping teachers learn content – lead to positive impacts on teaching and learning? What new professional development practices should we experiment with and study? Finally, what critical outcomes – beyond student test scores – would help us determine whether these professional development practices work to accelerate improvements in teaching and learning?</i></p> <p><i>Grades PK-12</i></p> <p><i>Heather Hill, Professor, Harvard University</i></p>



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<p><b>Session S</b> Thursday, March 11</p> <p>4:15—5:15 pm Pacific Time</p>	<p><b><i>Noticing Student Thinking as a Resource for Equitable Mathematics Classrooms</i></b></p> <p>When it comes to students’ learning, teacher noticing matters. Both what teachers notice about students’ mathematical ideas and how teachers make sense of those ideas has the potential to open up valuable opportunities for student learning. How and what teachers notice can also provide avenues for establishing an equitable mathematics classroom where students are positioned as capable learners and supported in developing positive mathematical identities. This session will engage participants in thinking about their own noticing and provide practical suggestions for establishing productive noticing practices in one’s classroom. This session is recommended for those teaching K-8.</p> <p>Grade PK-8</p> <p><i>Miriam Gamoran Sherin, Associate Provost for Undergraduate Education, Northwestern University</i> <i>Elizabeth A van Es, Professor, University of California, Irvine</i></p>
<p><b>Generalize to Practice Part 2</b> Thursday, March 11 • 5:30—6:15 Pacific time</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>	