



Mathematics Professional Learning Opportunities

Brought to you by the Mathematics Team in the Department of STEM

Office of Curriculum, Instruction, and Professional Learning

Division of Teaching and Learning

NYC Department of Education

Listing by Grade – Registration Links available by clicking on event/session topic

[PL sessions for teachers in K – 2](#)

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PROFESSIONAL LEARNING – TEACHERS IN GRADES K – 2

Event	Grade	Dates	Time
<p><u>Powerful Mathematical Routines – Grades K-2</u></p> <p>In this two day session teachers will have the opportunity to deeply explore and understand several engaging and powerful mathematical routines in a K through second grade math progression. A variety of routines will be covered including “Quick Image” and those focused on number and operations to support addition and subtraction and the development of number sense. The sessions will also include time to plan and practice the routines in an effort to support implementation in their early childhood classrooms.</p> <p>Target Audience: This workshop is intended for all early childhood educators. Participants will be expected to implement the routines between the first and second sessions.</p> <p>Registration Note: This professional learning opportunity occurs over two school days. Registrants should plan to attend both sessions</p>	K-2	Wed 3/1 Fri 3/24	9:00 am to 3:00 pm
<p>Go Math! Making Strategic Adaptations to Support Mathematical Thinking for All – Grades K-2</p> <p>Over the course of three sessions, participants will understand how selected concepts from Number and Operations in Base Ten; Geometry; and Measurement & Data are developed within the K-2 grade bands in <i>Go Math!</i>. Participants will use this information to collaborate with colleagues from across the city to plan strategic adaptations to the curriculum with the goal of support the learning of all of their students.</p> <p>Session #1: Number and Operations in Base Ten Session #2: Geometry Session #3: Measurement and Data</p> <p>Target Audience: This workshop is intended for K-2 Teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: Registrants are encouraged to register for all sessions but the content of the sessions will not build upon each other.</p>	K-2	Thu 10/27 Thu 2/16 Thu 5/25	9:00 am to 3:00 pm
<p><u>Rtl in Math – Level 1: Effective Practices</u></p> <p>Under the guidance of nationally renowned RtI expert Lynn Fuchs along with national RtI and math specialists Sarah Powell and Leanne Ketterlin-Geller we have crafted an intensive four-session seminar on effective practices for RtI in mathematics for grades K-8. Sessions 1-3 will focus on understanding the RTI framework and effective practices for Tier 1 intervention. Session 4 will focus on effective practices for Tier 2 intervention. Over the course of the four sessions, there will be breakout opportunities for both elementary and middle school participants to provide more targeted content work specific to the K-5 and 6-8 grade bands.</p> <p>Target Audience: This workshop is designed for educators who are responsible for RTI structures and practices in their school. It is important that administration supports the sharing and implementation of practices from the series.</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series. Sessions will run from 9:00 AM-3:00 PM, with breakfast and registration beginning at 8:30AM.</p>	K-8	Tues 11/15 Tues 12/6 Mon 1/9 Mon 3/13	9:00 am to 3:00 pm

Event	Grade	Dates	Times
<p>RtI in Math – Level 2: A Deeper Study</p> <p>These sessions will build on last year’s introductory sessions. Last year, under the guidance of nationally renowned RtI expert Lynn Fuchs along with national RtI and math specialists Sarah Powell and Leanne Ketterlin-Geller, participants learned about the RtI framework, assessment practices within the framework and research based instructional practices to support tiers 1 and 2 in mathematics. This year, we will go deeper into the framework, develop a comprehensive understanding of the tiered system and explore effective models that are used in Elementary and Middle schools. We will learn more about the role of assessment in the RtI framework, with an emphasis on streamlining the process and enabling schools to get the best information to make decisions regarding students’ mathematical understanding and progress. We will continue to learn about effective planning with an emphasis on progressions in mathematics. Over the course of the four sessions, there will be breakout opportunities for both elementary and middle school participants to provide more targeted content work specific to the K-5 and 6-8 grade bands.</p> <p>Target Audience: This workshop is intended for educators who have an understanding and experience with the RtI framework. Participants are expected to apply, reflect and share practices covered in the session. *Principals or APs are invited to attend the first session with their attending teachers. If you are new to RtI please attend the level I sessions.</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series. Sessions will run from 9:00 AM-3:00 PM, with breakfast and registration beginning at 8:30AM.</p>	K-8	<p>Wed 11/16 Wed 12/7 Tue 1/10 Tue 2/14</p>	<p>9:00 am to 3:00 pm</p>
<p>Teaching K-8 Students Who Struggle in Mathematics</p> <p>This two day session will be led by Dr. Karen Karp, visiting professor at Johns Hopkins University, formerly at the University of Louisville and former member of the Board of Directors of NCTM. She will be joined by Dr. Barbara Dougherty, Research Professor at the University of Missouri and also former member of the Board of Directors of NCTM. Both have worked extensively with mathematics educators and special educators to support students who struggle in mathematics.</p> <p>The sessions will focus on the effective teaching practices of mathematics through understanding how students learn, rather than “telling” students how to do mathematics. It will also focus on how to promote learning by teaching through problem solving, and how to plan for and assess student learning. These two days will help you think about ways to build instruction that engages students in ‘doing math.’ There will be an emphasis on teaching mathematics through a multi-tiered system of support such as Response to Intervention.</p> <p>Target Audience: This workshop is intended for all K-8 educators seeking strategies and resources intended to support all learners in the mathematics classrooms.</p> <p>Registration Note: This professional learning opportunity occurs over two consecutive school days. Registrants must plan to attend all sessions</p>	K-8	<p>Mon 3/13 Tus 3/14</p>	<p>9:00 am to 3:00 pm</p>

PROFESSIONAL LEARNING – TEACHERS IN GRADES 3 - 5

Event	Grade	Dates	Time
<p>Go Math! Making Strategic Adaptations to Support Mathematical Thinking for All – Grades 3-5</p> <p>Over the course of three sessions, participants will understand how selected concepts from Number and Operations in Base 10; Geometry, and Number and Operations in Fractions are developed within the 3-5 grade bands in <i>Go Math!</i>. Participants will use this information to collaborate with colleagues from across the city to plan strategic adaptations to the curriculum with the goal to support the learning of all of their students.</p> <p>Session #1: Number and Operations in Base Ten Session #2: Geometry Session #3: Measurement and Data</p> <p>Target Audience: This workshop is intended for 3-5 grade teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: Registrants are encouraged to register for all sessions but the content of the sessions will not build upon each other.</p>	3-5	Fri 10/28 Wed 2/15 Wed 5/24	9:00 am to 3:00 pm
<p>Powerful Mathematical Routines – Grades 3-5</p> <p>In this two day session teachers will have the opportunity to deeply explore and understand several engaging and powerful mathematical routines in a third through fifth grade math progression. A variety of routines will be covered including “Quick Image” and those focused on all number operations in whole number and fractions to build conceptual and procedural understanding. The sessions will also include time to plan and practice the routines in an effort to support implementation in their classrooms.</p> <p>Target Audience: This workshop is intended for all grade 3-5 educators. Participants will be expected to implement the routines between the first and second sessions.</p> <p>Registration Note: This professional learning opportunity occurs over two school days. Registrants should plan to attend both sessions</p>	3-5	Thu 12/15 Wed 1/25	9:00 am to 3:00 pm
<p>Rtl in Math – Level 1: Effective Practices</p> <p>Under the guidance of nationally renowned RtI expert Lynn Fuchs along with national RtI and math specialists Sarah Powell and Leanne Ketterlin-Geller we have crafted an intensive four-session seminar on effective practices for RtI in mathematics for grades K-8. Sessions 1-3 will focus on understanding the RTI framework and effective practices for Tier 1 intervention. Session 4 will focus on effective practices for Tier 2 intervention. Over the course of the four sessions, there will be breakout opportunities for both elementary and middle school participants to provide more targeted content work specific to the K-5 and 6-8 grade bands.</p> <p>Target Audience: This workshop is designed for educators who are responsible for RTI structures and practices in their school. It is important that administration supports the sharing and implementation of practices from the series.</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series.</p>	K-8	Mon 11/15 Wed 12/6 Mon 1/9 Mon 3/13	9:00 am to 3:00 pm

Event	Grade	Dates	Times
<p>RtI in Math – Level 2: A Deeper Study</p> <p>These sessions will build on last year's introductory sessions. Last year, participants learned about the RTI framework, assessment practices within the framework and research based instructional practices to support tiers 1 and 2 in mathematics. This year, we will go deeper into the framework, develop a comprehensive understanding of the tiered system and explore effective models that are used in Elementary and Middle schools. We will learn more about the role of assessment in the RTI framework, with an emphasis on streamlining the process and enabling schools to get the best information to make decisions regarding students' mathematical understanding and progress. We will continue to learn about effective planning with an emphasis on progressions in mathematics. Over the course of the four sessions, there will be breakout opportunities for both elementary and middle school participants to provide more targeted content work specific to the K-5 and 6-8 grade bands.</p> <p>Target Audience: This workshop is intended for educators who have an understanding and experience with the RTI framework. Participants are expected to apply, reflect and share practices covered in the session. *Principals or APs are invited to attend the first session with their attending teachers. If you are new to RTI please attend the level I sessions.</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series.</p>	K-8	Wed 11/16 Thu 12/8 Tue 1/10 Tue 2/14	9:00 am to 3:00 pm
<p>Teaching K-8 Students Who Struggle in Mathematics</p> <p>This two day session will be led by Dr. Karen Karp, visiting professor at Johns Hopkins University, formerly at the University of Louisville and former member of the Board of Directors of NCTM. She will be joined by Dr. Barbara Dougherty, Research Professor at the University of Missouri and also former member of the Board of Directors of NCTM. Both have worked extensively with mathematics educators and special educators to support students who struggle in mathematics.</p> <p>The sessions will focus on the effective teaching practices of mathematics through understanding how students learn, rather than "telling" students how to do mathematics. It will also focus on how to promote learning by teaching through problem solving, and how to plan for and assess student learning. These two days will help you think about ways to build instruction that engages students in 'doing math.' There will be an emphasis on teaching mathematics through a multi-tiered system of support such as Response to Intervention.</p> <p>Target Audience: This workshop is intended for all K-8 educators seeking strategies and resources intended to support all learners in the mathematics classrooms.</p> <p>Registration Note: This professional learning opportunity occurs over two consecutive school days. Registrants must plan to attend all sessions</p>	K-8	Mon 3/13 Tus 3/14	9:00 am to 3:00 pm

PROFESSIONAL LEARNING – MIDDLE SCHOOL (6 – 8)

Event	Grade	Dates	Time
<p>Getting to Know CMP3 in NYC Institute – Grade 6</p> <p>Over the course of this school year we will be discussing the implementation of two different CMP3 6th grade units. In these sessions we will discuss the mathematical content and pedagogy of each focused unit. We will also focus on management techniques targeted to support the needs of all learners. You will experience the Standards for Mathematical Practice as a learner and discuss the correlations to the CCLS during the workshop.</p> <p>Session #1: Let's Be Rational Session #2: Decimal Operations</p> <p>Target Audience: This workshop is intended for Grade 6 Teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: Registrants are encouraged to register for both sessions but the content of the sessions will not build upon each other.</p>	6	Fri 11/18 Fri 1/27	9:00 am to 3:00 pm
<p>Getting to Know CMP3 in NYC Institute – Grade 7</p> <p>Over the course of this school year we will be discussing the implementation of two different CMP3 7th grade units. In these sessions we will discuss the mathematical content and pedagogy of each focused unit. We will also focus on management techniques targeted to support the needs of all learners. You will experience the Standards for Mathematical Practice as a learner and discuss the correlations to the CCLS during the workshop.</p> <p>Session #1: Comparing and Scaling Session #2: Filling and Wrapping</p> <p>Target Audience: This workshop is intended for Grade 7 Teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: Registrants are encouraged to register for both sessions but the content of the sessions will not build upon each other.</p>	7	Fri 10/21 Fri 3/3	9:00 am to 3:00 pm
<p>Getting to Know CMP3 in NYC Institute – Grade 8</p> <p>Over the course of this school year we will be discussing the implementation of two different CMP3 8th grade units. In these sessions we will discuss the mathematical content and pedagogy of each focused unit. We will also focus on management techniques targeted to support the needs of all learners. You will experience the Standards for Mathematical Practice as a learner and discuss the correlations to the CCLS during the workshop.</p> <p>Session #1: Butterflies, Pinwheels and Wallpaper Session #2: It's in the System</p> <p>Target Audience: This workshop is intended for Grade 8 Teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: Registrants are encouraged to register for both sessions but the content of the sessions will not build upon each other.</p>	8	Wed 11/30 Fri 1/13	9:00 am to 3:00 pm

Event	Grd	Dates	Times
<p>Rtl in Math – Level 1: Effective Practices</p> <p>Under the guidance of nationally renowned RTI expert Lynn Fuchs along with national RTI and math specialists Sarah Powell and Leanne Ketterlin-Geller we have crafted an intensive four-session seminar on effective practices for RTI in mathematics for grades K-8. Sessions 1-3 will focus on understanding the RTI framework and effective practices for Tier 1 intervention. Session 4 will focus on effective practices for Tier 2 intervention. Over the course of the four sessions, there will be breakout opportunities for both elementary and middle school participants to provide more targeted content work specific to the K-5 and 6-8 grade bands.</p> <p>Target Audience: This workshop is designed for educators who are responsible for RTI structures and practices in their school. It is important that administration supports the sharing and implementation of practices from the series.</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series.</p>	K-8	Mon 11/15 Wed 12/6 Mon 1/9 Mon 3/13	9:00 am to 3:00 pm
<p>Rtl in Math – Level 2: A Deeper Study</p> <p>These sessions will build on last year's introductory sessions. Last year, participants learned about the RTI framework, assessment practices within the framework and research based instructional practices to support tiers 1 and 2 in mathematics. This year, we will go deeper into the framework, develop a comprehensive understanding of the tiered system and explore effective models that are used in Elementary and Middle schools. We will learn more about the role of assessment in the RTI framework, with an emphasis on streamlining the process and enabling schools to get the best information to make decisions regarding students' mathematical understanding and progress. We will continue to learn about effective planning with an emphasis on progressions in mathematics. Over the course of the four sessions, there will be breakout opportunities for both elementary and middle school participants to provide more targeted content work specific to the K-5 and 6-8 grade bands.</p> <p>Target Audience: This workshop is intended for educators who have an understanding and experience with the RTI framework. Participants are expected to apply, reflect and share practices covered in the session. *Principals or APs are invited to attend the first session with their attending teachers. If you are new to RTI please attend the level I sessions.</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series.</p>	K-8	Wed 11/16 Thu 12/8 Tue 1/10 Tue 2/14	9:00 am to 3:00 pm
<p>Teaching K-8 Students Who Struggle in Mathematics</p> <p>This two day session will be led by Dr. Karen Karp, visiting professor at Johns Hopkins University, formerly at the University of Louisville and former member of the Board of Directors of NCTM. She will be joined by Dr. Barbara Dougherty, Research Professor at the University of Missouri and also former member of the Board of Directors of NCTM. Both have worked extensively with mathematics educators and special educators to support students who struggle in mathematics.</p> <p>The sessions will focus on the effective teaching practices of mathematics through understanding how students learn, rather than "telling" students how to do mathematics. It will also focus on how to promote learning by teaching through problem solving, and how to plan for and assess student learning. These two days will help you think about ways to build instruction that engages students in 'doing math.' There will be an emphasis on teaching mathematics through a multi-tiered system of support such as Response to Intervention.</p> <p>Target Audience: This workshop is intended for all K-8 educators seeking strategies and resources intended to support all learners in the mathematics classrooms.</p> <p>Registration Note: This professional learning opportunity occurs over two consecutive school days. Registrants must plan to attend all sessions</p>	K-8	Mon 3/13 Tus 3/14	9:00 am to 3:00 pm

PROFESSIONAL LEARNING FOR HIGH SCHOOLS

Event	Grade	Dates	Time
<p><u>Promoting Mathematical Exploration Through Technology</u></p> <p>This series of 3 full-day sessions will be led by Dan Meyer, the Chief Academic Officer at Desmos where he explores and develops the future of Math textbooks, and is meant to help participants shift instruction to broaden students' experience of mathematics in ways that promote mathematical thinking, positive mathematical mindsets, as well as deepened understanding. The session will also explore how a purposeful use of technology can support this shift.</p> <p>Participants will:</p> <ul style="list-style-type: none"> Examine techniques for putting students in a position to need mathematics ideas and skills so they feel like power, not punishment. Examine techniques and technology that help teachers and students cure the "paper disease" - helping students experience mathematics ideas in both their informal and formal states. Understand how technology can help students argue productively, host those arguments, and turn them into mathematical understanding. <p>Target Audience: This workshop is intended for Middle School and High School Teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: This professional learning opportunity occurs over three school days. Registrants must plan to attend all sessions</p>	6-12	Tue 12/13 Tue 3/14 Tue 5/23	9:00 am to 3:00 pm
<p><u>High School Mathematics – Teacher Institute</u></p> <p>This series of 4 full-day sessions is meant to support teachers in improving their practice as they implement Common Core aligned high school mathematics courses.</p> <p>Participants will:</p> <ul style="list-style-type: none"> Identify and explore some of the big mathematical ideas in the Common Core Learning Standards for Mathematics and how they are developed across Geometry and Algebra II. Develop a shared understanding of how people learn mathematics by exploring problems and the thinking that they, and others, bring to those situations. Examine and discuss effective teaching strategies to develop students' mathematical thinking and understanding, promote fluency, increase access and engagement, and support positive mindsets. <p>Target Audience: This workshop is intended for Geometry and Algebra II High School Teachers, School Administrators, and Instructional Coaches and FSC staff</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series.</p>	9-12	Fri 10/21 Fri 12/9 Fri 2/10 Fri 4/21	9:00 am to 3:00 pm

MATHEMATICS LEADERSHIP: SCHOOL ADMINISTRATORS

Event	Grade	Dates	Time
<p><u>Mathematic Leadership: Fostering Effective Teaching Practices in K-8 Classrooms</u></p> <p>This 3 session series will investigate instructional leadership practices of K-8 administrators that aim to support instructional improvement in mathematics. We will feature materials from the National Council of Teachers of Mathematics (NCTM) designed to support teacher learning, and how leaders can support the implementing of the 8 Mathematical Teaching Practices outlined in Principles to Actions. Administrators will be grouped by grade band and review materials and resources relevant to their grand level. Participants will engage in an analysis of effective mathematics teaching using video cases and resources which will support conversations with teachers back in their schools.</p> <p>Target Audience: This workshop is designed K-8 principals and assistant principals</p> <p>Registration Note: This professional learning opportunity occurs over three school day morning (8:30am-11:30am). Registrants should plan to attend all sessions as the content will build over the course of the series</p>	K-8	Thu 11/17 Fri 12/16 Fri 1/6	8:30 am to 11:30 am
<p><u>High School Mathematics – Assistant Principal Institute</u></p> <p>This series of 4 full-day sessions is meant to support Assistant Principals of Mathematics as they build their capacity of participants to support their teachers as they face the complex work of shifting instruction to meet the demands of the CCLSM.</p> <p>Participants will:</p> <ul style="list-style-type: none"> • Continue to engage in the deep study of the standards, mathematics learning progressions, and current research to strengthen their content knowledge and skills. • Examine and discuss effective teaching strategies to develop students' mathematical thinking and understanding, promote fluency, increase access and engagement, and support positive mindsets. • Examine how instructional materials and tasks have potential to support student learning of mathematical ideas and how they might be modified to increase access and engagement and support positive mindsets. • To reflect and refine the coaching practice in order to better support Common Core-aligned teaching and learning at the school level by sharing with and learning from with colleagues. <p>Target Audience: This workshop is intended for HS Mathematics Assistant Principals</p> <p>Registration Note: This professional learning opportunity occurs over four school days. Registrants should plan to attend all sessions as the content will build over the course of the series.</p>	9-12	Fri 11/4 Fri 12/16 Fri 3/3 Fri 5/12	9:00 am to 3:00 pm