

EARLY CHILDHOOD

Foundations for Early Childhood

Description: The Foundations for Early Childhood Mathematics professional development features content developed by the Erikson Institute, leaders in early childhood education. The professional learning highlights the “Big Ideas” in early mathematics which include sets, number sense, counting, number operations, pattern, measurement and shape.

Cost: Free!

Duration: Eight, half-day sessions

Locations (Click to Register):

[Fayette County](#)
[Grayson County](#)

[Rowan County](#)
[Warren County](#)

PRIMARY

Foundations for Primary– 2nd and 3rd Grades

Description: Foundations for Primary Grades Mathematics cohorts are professional learning communities that grow second and third grade teachers’ understanding of effective ways to scaffold and differentiate instruction to better accommodate student needs via a learning climate that welcomes questions, opinions and participation of all students. Members will focus on how to select instructional tasks that encourage mathematical discourse and help students conceptually understand place value, addition/subtraction, multiplication/division and fractions. Participants receive specialized training from an experienced facilitator featuring evidence-based strategies and materials from experts in early numeracy development. Community members provide support to each educator as new strategies and methods are utilized in the classroom.

Cost: Free!

Duration: Eight, half-day sessions

Locations (Click to Register):

[Barren County](#)
[Campbell County](#)
[Floyd County](#)

[Jefferson County](#)
[Pulaski County](#)
[Rowan County](#)

Explorations in Fluency– MAF Collegial Team Meeting

Description: The CGI Number Facts Strategies Assessment (Levi & Jaslow, 2012) is a short, interview-based assessment of student fluency in addition, subtraction, multiplication, and division. The Kentucky Academic Standards for Mathematics view Number and Operations and Algebraic Thinking as a unified domain, and assessing student strategies towards fluency helps teachers and students make these connections. The Progress Monitoring Collegial Team Meeting will provide participants with materials for using the Levi CGI Assessment and experience administering the assessment questions and tracking student scores and growth.

Cost: Free for MAF Mathematics Intervention Teachers

Duration: One half-day in-person session and two one-hour virtual follow-up sessions

Location (Click to Register):

[Fayette County](#)

INTERMEDIATE GRADES (3-5)

For MAF (Mathematics Achievement Fund) Participants:

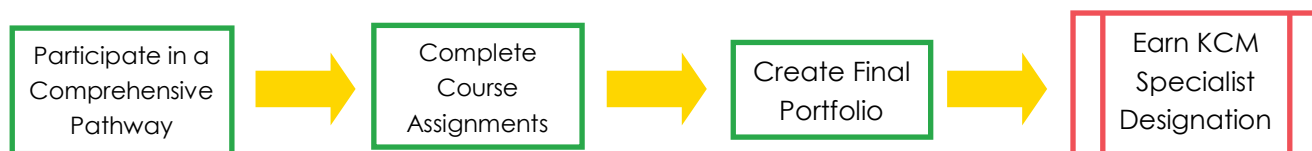
MAF Intermediate “Plus Two” Teachers are required to select AT LEAST two additional days of professional learning from the MAF offerings below (indicated as MAF Eligible). MAF participants are encouraged to complete a comprehensive grade-level pathway (outlined below).

Third Grade Comprehensive Pathway	4th/5th Comprehensive Pathway (Option A)	4th/5th Comprehensive Pathway (Option B)
Explorations in Number Talks & Routines (3 days)	Explorations in Number Talks & Routines (3 days)	Explorations in Number Talks & Routines (3 days)
Explorations in Multiplication & Division for Grade 3 (2 days)	Explorations in Multiplication & Division for Grades 4-5 (1 day)	Explorations in Multiplication & Division for Grades 4-5 (1 day)
Explorations in Fractions—3rd Grade (1 day)	Explorations in Fractions—4th/5th (2 days)	Explorations in Fractions—4th/5th (2 days)
Explorations in Algebraic Reasoning (1 day)	Explorations in Algebraic Reasoning (1 day)*	Explorations in Mindsets 4/5 (1 day)*

* Grade 4/5 teachers may wish to attend **both** Explorations in Algebraic Reasoning and Explorations in Mindsets 4/5. These are complementary courses exploring different resources and topics.

KCM Specialist Designation

The KCM Specialist designation is available to MAF interventionists and classroom teachers who participate in a comprehensive KCM professional learning experience and complete a set of extension assignments designed to enhance the growth of the participating teacher.



Educators successfully earning the designation will receive a KCM plaque honoring this accomplishment as well as a seal that can be used in an electronic signature.

More information about this experience can be viewed at https://www.kentuckymathematics.org/kcm_specialist_designation.php.

If you are interested in embarking on this professional journey, please contact KCM Faculty Associate Dr. Funda Gonulates by email (gonulatesf1@nku.edu) or by phone (859)572-7690.

INTERMEDIATE GRADES (3-5) CONTINUED

Explorations in Third Grade Multiplication and Division (MAF Eligible)

Description: The first critical area of focus for third grade is developing understanding of and strategies for multiplication and division within 100. During this session, teachers will explore contexts and tasks designed to support students in their journey toward multiplicative fluency within 100. Participants will leave with prepared activities and several books from the series Contexts for Learning: Level 2 (Investigating Multiplication and Division).

Cost: \$200/participant

Duration: 2 days

Locations (Click to Register):

[Madison County](#)

[Muhlenberg County](#)

[Nelson County](#)

[Rowan County](#)

Explorations in Multiplication and Division for Grades 4 & 5 (MAF Eligible)

Description: Multiplicative reasoning in grades 4 & 5 builds on strategies and understandings developed in third grade. For example, students might use what they know about 5×7 to solve 5×70 or 5×69 . But how do we support students in making these connections? Number talks and problem strings provide learners with opportunities to develop relational reasoning, a deeper understanding of the distributive and commutative properties, and extend these understandings to work with multi-digit and rational numbers. Participants will be provided with books and instructional materials.

Cost: \$100/participant

Duration: 1 day

Locations (Click to Register):

[Laurel County](#)

[Logan County](#)

[Franklin County](#)

Explorations in Third Grade Fractions (MAF Eligible)

Description: Third grade is a critical year in which students should develop strong foundations for understanding fractions. During this session, teachers will explore hands-on activities and tasks designed to support students in developing conceptual understandings of fractions as numbers. Teachers will deepen their understanding of the third grade fractions standards, seeing them as part of a progression starting in first grade and continuing into middle school. Participants will leave with prepared materials and manipulatives sufficient for work with a small group, including fraction squares, Cuisenaire rods and KNPIG activities.

Cost: \$100/participant

Duration: 1 day

Locations (Click to Register):

[Barren County](#)

[Bourbon County](#)

[Johnson County](#)

[Pulaski County](#)

INTERMEDIATE GRADES (3-5) CONTINUED

Explorations in Fractions for Grades 4 & 5 (MAF Eligible)

Description: Intermediate grades are a critical time in which students are expected to develop an understanding of fractions as numbers and make sense of fraction operations. During this two-day session, teachers will explore instructional strategies such as the use of manipulatives, fraction models (including number lines) and rich tasks. Teachers will deepen their understanding of the fourth and fifth grade fractions standards, seeing them as part of a progression starting in first grade and continuing into middle school. Participants will be provided with a variety of books and manipulatives.

Cost: \$200/participant

Duration: 2 days

Locations (Click to Register):

[Boone County](#)

[Floyd County](#)

[Grayson County](#)

[Madison County](#)

[Shelby County](#)

Explorations in Algebraic Reasoning for Grades 3-5 (MAF Eligible)

Description: During this session, participants will explore big ideas of algebraic reasoning for grades 3-5 and consider a variety of ways to support students in deepening their understandings of these ideas. For example, students can use a math balance to explore ideas about equivalence, equations, operations and variables. Participants will receive books and instructional materials including a set of student math balances.

Cost: \$100/participant

Duration: 1 day

Locations (Click to Register):

[Clinton County](#)

[Fayette County](#)

[Rowan County](#)

[Warren County](#)

Explorations in Mindsets for Grades 4 & 5 (MAF Eligible)

Description: “Visualize. Play. Investigate.” The Explorations in Mindsets learning experience will feature opportunities for teachers to participate in conceptual, visual mathematics and examine the deep student thinking that is possible with low-floor, high ceiling mathematical tasks which engage students in visualizing, exploring and talking about the big mathematical ideas of each grade level. Participants will receive both the 4th and 5th grade books in Jo Boaler’s series Mind-set Mathematics: Visualizing and Investigating Big Ideas.

Cost: \$100/participant

Duration: 1 day

Locations (Click to Register):

[Jefferson County](#)

[Jessamine County](#)

[Whitley County](#)

INTERMEDIATE GRADES (3-5) CONTINUED

Foundations for Intermediate

Description: For 3rd, 4th, and 5th grade teachers and aligned to research-based teaching practices and KAS, topics will include number, place value, operations (addition, subtraction, multiplication, and division) and early algebraic reasoning.

Participants will:

- Identify Big Ideas embedded in elementary Kentucky Academic Standards with a focus on standards in the domains: Operations and Algebraic Thinking, and Number and Operations in Base Ten.
- Explore tasks, visuals and contexts designed to support student understanding of numbers and number operations
- Use instructional strategies to improve critical thinking, problem solving, and classroom discourse
- Receive resources such as manipulatives, ready-made activities, books, etc.

Participants should be Kentucky 3rd, 4th, or 5th grade educators. Teachers who work with 6th grade students are welcome, but the content focus will be on intermediate grades. Participants may wish to also attend one of the following PLEs: Explorations in Fractions for Third Grade or Explorations in Fractions for Grades 4 & 5.

Cost: Free!

Duration: 4 days

Locations (Click to Register):

[Franklin County](#)

[Madison County](#)

[Pulaski County](#)

Explorations in Fractions and Ratios (Grades 4-6)- Lamon Book Study

Description: What is proportional reasoning? How can we support students in developing a conceptual understanding of fractions? How can we support students in reasoning proportionally without relying on rules or procedures?

These questions and many more will be explored through an online, year-long book study of Teaching Fractions and Ratios for Understanding: Essential Content Knowledge and Instructional Strategies by Susan Lamon. All required professional literature will be provided for participants.

Participants will meet virtually for one-hour meetings on selected Mondays at 4:30 pm ET one or two times per month. Between meetings, participants will be expected to complete reading assignments from the text, work problems and, occasionally, collect examples of student work. Participants should be prepared to submit pictures of their own or their students' work for discussion purposes. Participants should plan to spend at least 1-2 hours per week.

This course is intended for 4th, 5th and 6th grade teachers. Teachers of 7th and 8th grade students may participate but the content standards of 4th, 5th and 6th grades will be the focus.

Cost: Free!

Duration: 10 one-hour virtual meetings

Locations (Click to Register):

[Virtual Book Study](#)

MIDDLE GRADES (6-8)

Explorations in Fractions and Ratios (Grades 4-6)- Lamon Book Study

Description: What is proportional reasoning? How can we support students in developing a conceptual understanding of fractions? How can we support students in reasoning proportionally without relying on rules or procedures?

These questions and many more will be explored through an online, year-long book study of *Teaching Fractions and Ratios for Understanding: Essential Content Knowledge and Instructional Strategies* by Susan Lamon. All required professional literature will be provided for participants.

Participants will meet virtually for one-hour meetings on selected Mondays at 4:30 pm ET one or two times per month. Between meetings, participants will be expected to complete reading assignments from the text, work problems and, occasionally, collect examples of student work. Participants should be prepared to submit pictures of their own or their students' work for discussion purposes. Participants should plan to spend at least 1-2 hours per week.

This course is intended for 4th, 5th and 6th grade teachers. Teachers of 7th and 8th grade students may participate but the content standards of 4th, 5th and 6th grades will be the focus.

Cost: Free!

Duration: 10 one-hour virtual meetings

Location (Click to Register):

[Virtual Book Study](#)

Foundations for Middle: Grade 8

Description: Participants will gain a greater understanding of how to support students in developing algebraic and functional reasoning. This PLE will focus on standards in the Expressions & Equations (EE) and Functions (F) strands.

Participants will:

- Identify Big Ideas embedded in middle school Kentucky Academic Standards for Mathematics and Standards for Mathematical Practice.
- Use instructional strategies to improve critical thinking, problem solving, and classroom discourse.
- Explore evidence-based instructional strategies that can be used to help all students.
- Receive resources such as ready-made activities, manipulatives, books, etc.

Participants should be Kentucky 7th or 8th grade educators and are expected to attend all 4 days of the professional learning experience. Teachers who work with 9th grade students are welcome, but the content focus will be predominantly on 8th grade standards.

Cost: Free!

Duration: 4 days

Location (Click to Register):

[Franklin County](#)

COACHING

Explorations in Creating School-wide Cultures of Mathematical Sense-making

Description: This professional learning experience will provide an opportunity to share thoughts, experiences and ideas with other teachers and interested educators while experiencing a school-wide culture of learning. The experience will include the opportunity to observe students as active learners in problem-centered mathematics lessons across grade levels and discuss the potential of such lessons for deep student learning. Debriefing discussions will focus on how and why different schools might implement effective mathematics lessons structured around rich mathematics problems. In addition, you will have the opportunity to (i) participate in discussions of the co-planning process that led to the observed lessons, (ii) involve other colleague(s) at your school in your own co-planning process to design a problem centered mathematics lesson intended to help students make sense of math concepts and (iii) share and discuss your experience with other participants.

Cost: Free!

Audience: Elementary teachers, middle school teachers, teacher leaders, coaches, administrators

Duration: 2 days

Location (Click to Register): [Bullitt County](#)