



KENTUCKY CENTER
FOR MATHEMATICS

2019-2020 Course Catalog

KCM Elementary Offerings

PRIMARY (K-2)

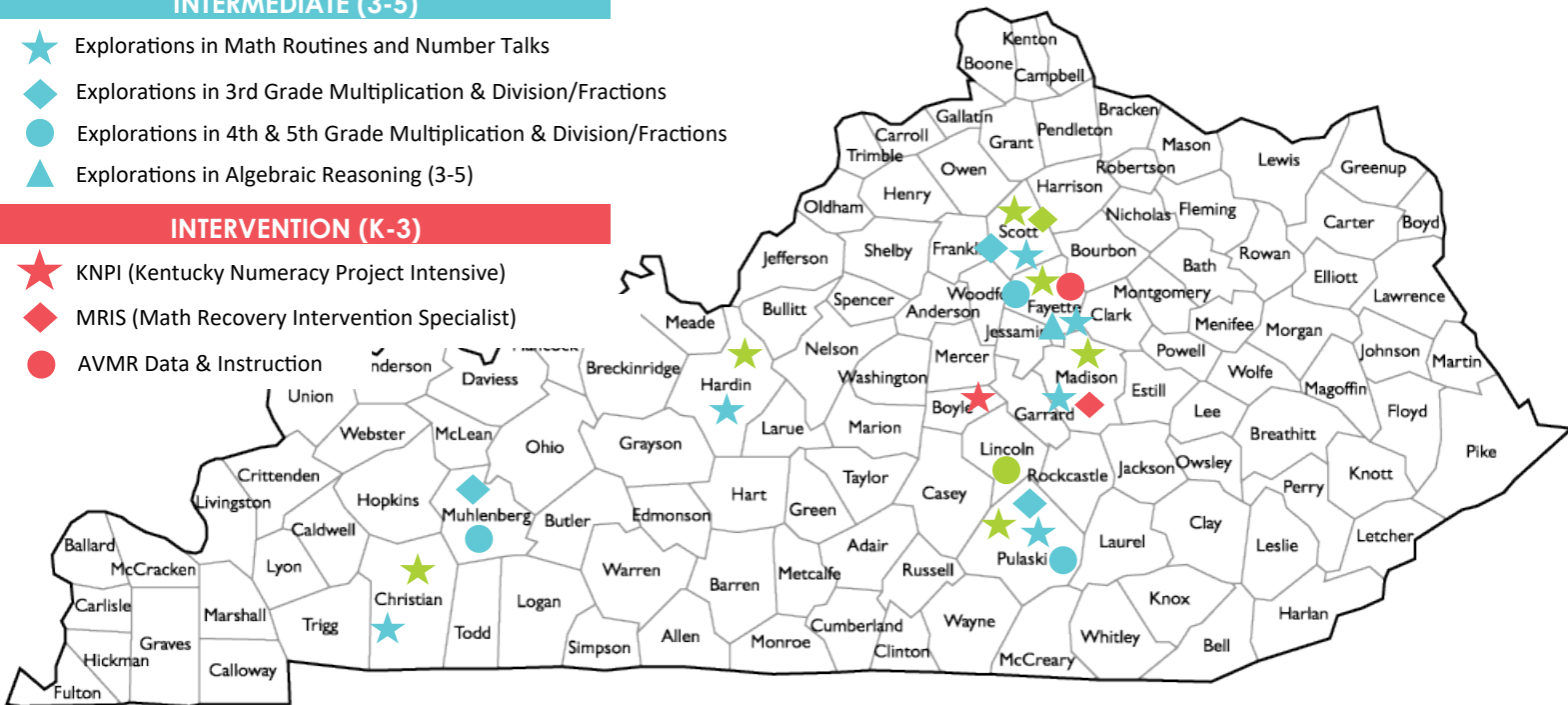
- ★ Comprehensive Course for Primary Grades (K-2)
- ◆ SNAP (Student Numeracy Assessment Progressions)
- Explorations in the SEAL (Stages of Early Arithmetical Learning)

INTERMEDIATE (3-5)

- ★ Explorations in Math Routines and Number Talks
- ◆ Explorations in 3rd Grade Multiplication & Division/Fractions
- Explorations in 4th & 5th Grade Multiplication & Division/Fractions
- ▲ Explorations in Algebraic Reasoning (3-5)

INTERVENTION (K-3)

- ★ KNPI (Kentucky Numeracy Project Intensive)
- ◆ MRIS (Math Recovery Intervention Specialist)
- AVMR Data & Instruction



For MAF (Mathematics Achievement Fund) Participants:

The primary teacher is required to attend eight days of intensive training known as the *Comprehensive Course for Primary Grades*. The intermediate teacher is required to attend six days of intensive training. The first three days of training is *Explorations in Math Routines and Number Talks for Intermediate Grades*. The remaining three required days will be based upon the teacher's grade level.

The *Explorations in Algebraic Reasoning* course is an optional additional session for intermediate teachers.

Primary "Plus Two" Comprehensive Pathway	Intermediate "Plus Two" Pathway 3rd GRADE TEACHERS	Intermediate "Plus Two" Pathway 4th & 5th GRADE TEACHERS
Full participation in an eight day Comprehensive Course for Primary Grades	Explorations in Number Talks & Routines (3 days)	
	Explorations in 3rd Grade Multiplication & Division (2 days)	Explorations in 4th & 5th Grade Multiplication & Division (1 day)
	Explorations in 3rd Grade Fractions (1 day)	Explorations in 4th & 5th Grade Fractions (2 days)
	OPTIONAL – Explorations in Algebraic Reasoning (1 day)	

Comprehensive Course for Primary Grades

Description: This 8-day learning opportunity is designed for classroom, special education and mathematics intervention teachers of students in Grades K-2. Participants will engage in varied instructional strategies, and will acquire tools to assess, support, and advance students' mathematical reasoning and knowledge. Aligned to research-based teaching practices and KAS, topics will include counting and cardinality, number and operations, early algebraic reasoning, conceptual place value, measurement and data, and math/literature connections. Participants will receive books, activities and instructional materials, along with assessment strategies to identify and target student needs and misconceptions in early numeracy.

Cost: \$800 for MAF participant

\$1300 for non-MAF participant

Duration: 8 days

Locations (Click to Register):

[Fayette County](#)

[Pulaski County](#)

[Christian County](#)

[Scott County](#)

[Hardin County](#)

[Madison County](#)

SNAP (Student Numeracy Assessment Progressions)

Description: The Student Numeracy Assessment Progressions (SNAP) course for K-2 teachers is an introduction to the assessment and advancement of early learning of number and arithmetic.

Cost: \$250/participant

Duration: 2 days

Locations (Click to Register):

[Scott County](#)

Explorations in the SEAL (Stages of Early Arithmetical Learning) for Kindergarten Teachers

Description: The Stages of Early Arithmetical Learning (SEAL) identifies the different ways young children make sense of quantity, addition and subtraction. During this session, we will dig in deeply to the Kindergarten Standards and how the SEAL can support teachers in helping students meet those standards.

Cost: Free

Duration: 1 day

Locations (Click to Register):

[Lincoln County](#)

INTERMEDIATE GRADES (3-5)

Explorations in Math Routines & Number Talks for Intermediate Grades

Description: This course provides an opportunity for classroom teachers of students in Grades 3-5 to learn strategies and acquire tools to advance students' mathematical reasoning. Aligned to research-based teaching practices and KAS, topics will include addition, subtraction and place value; the use of instructional routines including number talks; and the use of manipulatives, visual models and number lines. Participants will receive books, activities and instructional materials including a classroom number line. Participants will be expected to attend all 3 days of the course.

Cost: \$300/participant

Duration: 3 days

Locations (Click to Register):

[Fayette County](#)

[Pulaski County](#)

[Christian County](#)

[Scott County](#)

[Hardin County](#)

[Madison County](#)

Explorations in 3rd Grade Multiplication and Division

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):

[Pulaski County](#)

[Muhlenberg County](#)

[Scott County](#)

Explorations in 4th & 5th Grade Multiplication and Division

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):

[Fayette County](#)

[Pulaski County](#)

[Muhlenberg County](#)

INTERMEDIATE GRADES (3-5) CONTINUED

Explorations in 3rd Grade Fractions

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):

[Pulaski County](#)

[Muhlenberg County](#)

[Scott County](#)

Explorations in 4th and 5th Grade Fractions

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):

[Fayette County](#)

[Pulaski County](#)

[Muhlenberg County](#)

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

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):

[Fayette County](#)

INTERVENTION

KNPI (Kentucky Numeracy Project Intensive) Course

Description: This ten day course is built around Add+Vantage Math Recovery and is designed for elementary grades teachers to learn and practice assessments and teaching strategies for advancing students' foundational number knowledge, including addition, subtraction, multiplication and division.

Cost: \$2,000/participant

Duration: 10 days

Locations (Click to Register):

[Boyle County](#)

MRIS (Math Recovery Intervention Specialist) Course

Description: MRIS is the KCM's most rigorous learning experience for elementary grades teachers who deliver intensive mathematics intervention and who help students at different ability levels. Expertise is developed in mathematics, through study, practice, collegial reflection, and application of tools and strategies for assessing and advancing student numeracy, based on the Learning Framework in Network.

Cost: \$3,900/participant

Duration: 10 days

Locations (Click to Register):

[Madison County](#)

AVMR– Data & Instruction (AVMR/KNPI Graduates Only)

Description: This session will focus on using AVMR data to design lessons that are appropriate, purposeful and targeted for maximum student growth. Open to any teacher that has completed AVMR or KNPI.

Cost: Free

Duration: 1 day

Locations (Click to Register):

[Fayette County](#)