

### PRIMARY (K-2)

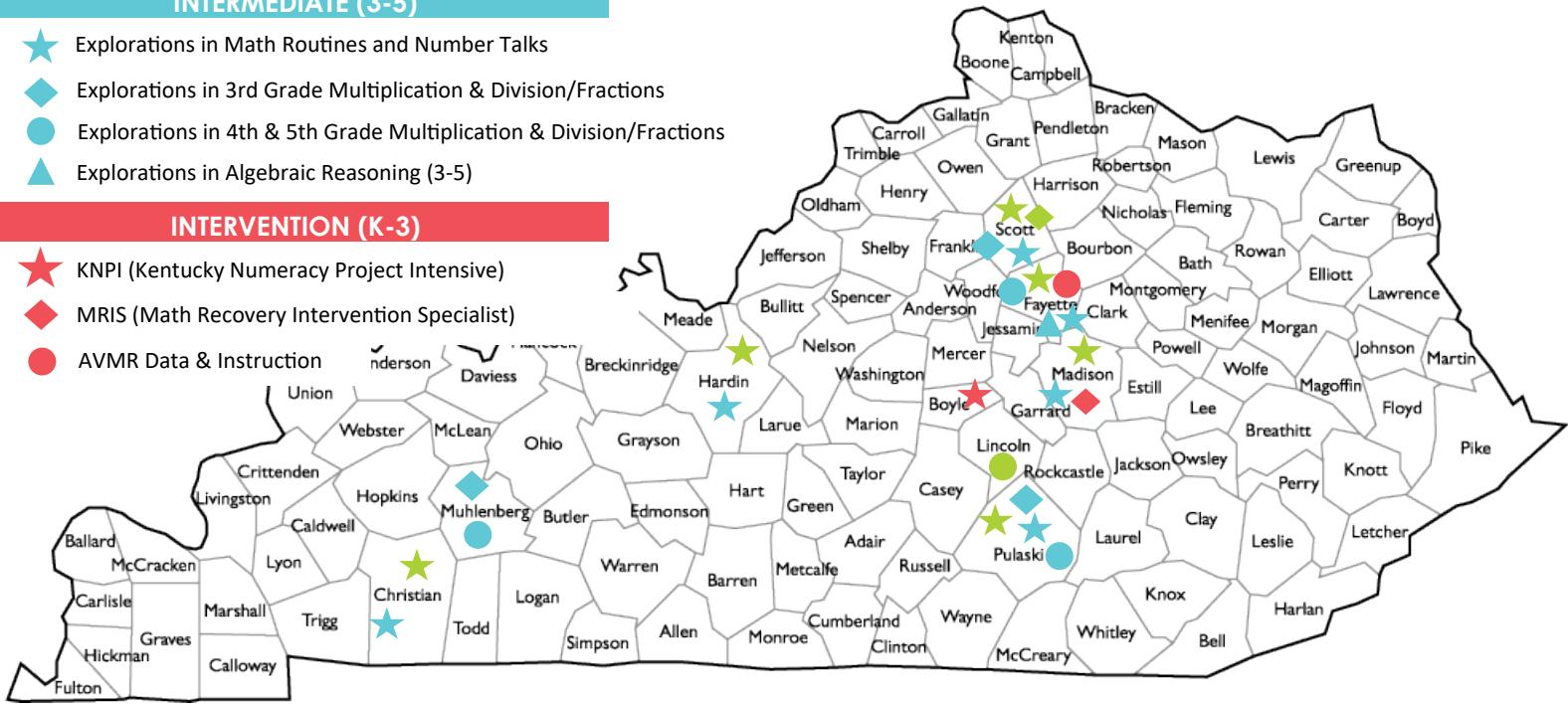
- ★ Comprehensive Course for Primary Grades (K-2)
- ◆ SNAP (Student Numeracy Assessment Progressions)
- Explorations in the SEAL (Stages of Early Arithmetical Learning)

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

## PRIMARY (K-2)

### 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  $5 \times 7$  to solve  $5 \times 70$  or  $5 \times 69$ . 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](#)

