## KENTUCKY DEPARTMENT OF EDUCATION

### Mathematics Achievement Fund Grant Competitive Application

**District:** Madison County **Amount Requested:** $41,000

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**Participating School:**

Glenn Marshall Elementary School

**Mathematics Intervention Grant Approved Program Selected:**

Math Recovery (MR) and Add+ Vantage MR

I assure the attached application has been reviewed and approved for implementation by all stakeholders and the district and school will comply with all requirements, both technical and programmatic, pertaining to the Mathematics Achievement Fund grant. Failure to do so could impact future funding.

Superintendent — Date: 10/2/14

Notary Public — My commission expires: 10/18/14

Notary seal

Principal Signature — Date: 10/03/14

Notary Public — My commission expires: 10/18/14

Notary seal

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## Part 1: Identification of Mathematics Needs

**1.1:** The following describes our comprehensive mathematics model; specifically, our core curriculum, our instructional design and resources used for implementation. The school's current math core curriculum **not only aligns** with the Kentucky Core Academic Standards (KCAS), it is derived from these standards**.** In 2013-14, the KCAS were organized into units of instruction through a teacher-led collaborative process at the district level. Unit development included identification of enduring skills and *Standards for Mathematical Practice* (SMP) as specified by the KCAS. **These units, based upon the KCAS, are the core curriculum.** The unit development process prompted deeper analysis of **how** we teach the core curriculum. As a result, in 2014-15, we reconfigured our comprehensive model to a "workshop" design which adheres to constructivist principles and best practice. Specifically, our instruction includes a systematic, comprehensive, daily 90 minute block. **The components include:** a)warm-up; b)whole group instruction; c)small group instruction; d)one-on-one conferencing; and e)assessment. Table 1.1a provides a description and approximate time for each component.

*Table 1.1a:Components of Instructional Design for Mathematics*

| Components | Description | Time |
|---|---|---|
| Warm up | Teacher-led discussion to transition and prepare students for core instruction. | 10 min |
| Whole Group | Teacher-led core instruction to address KCAS with comprehensive, standards-based units. | 20 min |
| Small-Group/ One on One | Teacher-led small groups and individual conferences to provide enrichment, reinforcement and intervention as warranted by student achievement. | 60 min |
| Assessment | **Embedded throughout** whole group, small group, and one-on-one conferencing. | |

The intentional focus on improving our comprehensive model provided greater cohesion between **what** we teach (core curriculum) and **how** we teach it (instructional design). We have shifted to an approach that enables teachers to use multiple **research-based resources to implement the KCAS units within the instructional design.** These resources include: a)*Origo Stepping Stones®*; b)*Everyday Counts Calendar®*; c)*Teaching Number in the Classroom*; d)*Developing Number Knowledge*; e)*Developing Number Concepts*; and, f)*Kentucky Numeracy*

*Project*. These resources foster student thinking and reasoning, offer differentiated instructional models, and include methods to assess deep understanding of knowledge. Table 1.1b describes the resources, their purpose, and situates each within the instructional design, which includes instruction across Tiers 1 and 2.

*Table 1.1b Resources used to Implement Core Curriculum*

| Resources | Description and Purpose | Tier |
|---|---|---|
| Origo Stepping Stones | Web-based & aligned to KCAS; supports multiple tiers of instruction | 1 & 2 |
| Everyday Counts Calendar | Daily enrichment of core math concepts | 1 |
| Teaching Number in the Classroom | Inquiry-based small-group and/or classroom intervention | 2 |
| Developing Number Knowledge | Inquiry-based small-group and/or classroom intervention | 2 |
| Developing Number Concepts | Inquiry-based small-group and/or classroom intervention | 2 |
| Kentucky Numeracy Project | Activities for numeracy development in small-group instruction. | 2 |

**1.2: Describe current math needs and trends over time.** Our school serves 492 students grades 1-5; 60% qualify for free or reduced (F/R) lunch**.** Formal assessments to show math needs include **a)**K-PREP, our state accountability measure**; b)**Measures of Academic Progress (MAP), an assessment to predict achievement and growth; **c)**AVMR, a diagnostic assessment used in Add+VantageMR, which measures proficiency in specific math skills. **K-PREP illustrates trends in overall math achievement.** Table 1.2a presents the percentage of 3$^{rd}$, 4$^{th}$ and 5$^{th}$ graders below proficiency on K-PREP from 2011-14 and comparison data for our F/R lunch students. From 2011-14, **55%** of our 3$^{rd}$-5$^{th}$ graders were below proficiency, suggesting consistent school underachievement in math. Low math proficiency is even more pervasive among students receiving F/R lunch. From 2011-2014, over **64%** of F/R students **<u>did not reach proficiency</u>** on K-PREP. Moreover, the gap between our total population and F/R students has increased steadily since 2011-2012. The 2013-14 gap was 14 points. K-PREP clearly illustrates lack of math proficiency **over time** as **55%** of all students and **64%** of F/R students did not reach proficiency from 2011-2014. K-PREP also reveals a **current need** as **48%** of all our students, and **62%** of F/R students failed to achieve math proficiency in 2013-14.

*Table 1.2a: Percentage of Students Below Proficiency (Novice or Apprentice) on K-PREP*

| Percent Below Proficiency | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Math Gr. 3 | | Math Gr. 4 | | Math Gr. 5 | | | Math Gr. 3-5 | |
| | Sch | F/R | Sch | F/R | Sch | F/R | | Sch | F/R |
| 13-14 | 48% | 60% | 53% | 64% | 44% | 61% | | 48% | 62% |
| 12-13 | 46% | 53% | 53% | 57% | 61% | 71% | | 53% | 60% |
| 11-12 | 58% | 61% | 79% | 84% | 57% | 66% | | 64% | 70% |

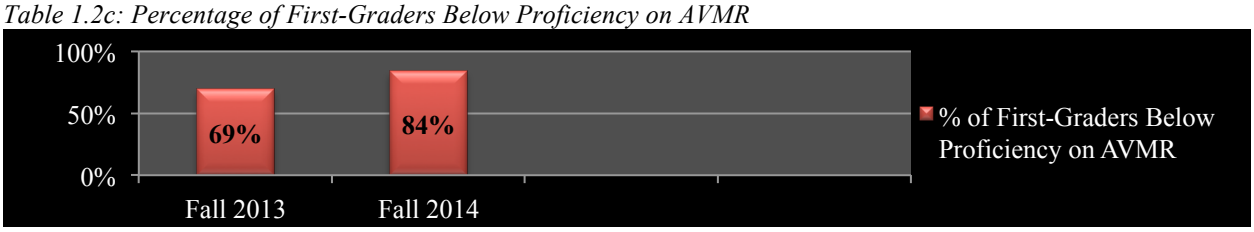
**MAP also illustrates trends in overall math achievement.** Table 1.2b includes the percentage of students who entered 1st and 2nd grade below proficiency on MAP from 2011-14. During that four-year period, **69%** of 1st and **63%** of 2nd graders were not proficient in math. There has been nearly a **20%** increase in 1st graders below proficient since 2011. In fall 2014, **76%** of 1st and **73%** of 2nd graders scored below proficient on MAP. MAP indicates a pervasive and growing problem with low achievement in 1st and 2nd grade. The consistency of these data over time indicates our first-graders who start school behind are remaining behind in second-grade.

*Table 1.2b Percentage of Students Below Proficiency as Measured by Fall MAP*

| | Fall 2014 | Fall 2013 | Fall 2012 | Fall 2011 |
|---|---|---|---|---|
| First Grade | 76 | 74 | 69 | 56 |
| Second Grade | 73 | 51 | 64 | 63 |

**AVMR illustrates trends in overall math achievement.** AVMR data from fall 2013 and 2014 reinforces trends revealed by K-PREP and MAP. In fall 2013, 69% of first graders were not proficient in math (Table 1.2c). Fall 2014 scores revealed **an alarming** increase in first-graders below proficiency. According to AVMR, **84% of our current first-graders are below proficiency in math.** Table 1.2c illustrates **69%** of all first graders were below proficiency as measured by fall 2013, AVMR. We used 2013-14 mid-year and spring AVMR data to track the progress of **those students** who started the year below proficiency. **94%** were **still below** at mid-year and **67%** in spring. Thus **almost 70% of** first-graders who began 2013 below proficiency **were still below** at the end of first-grade. This suggests an urgent need for early, responsive math intervention.

*Table 1.2c: Percentage of First-Graders Below Proficiency on AVMR*




**AVMR and MAP also illustrate specific needs of primary students not prepared to be successful with grade level math.** Because it is diagnostic, AVMR reveals both the percentage of students below proficiency (Table 1.2c) and specific skills they lack. Table 1.2d illuminates skill deficits among entering first-graders as evidenced on AVMR. In 2014, **72%** of first-graders were significantly below proficiency across subskills: **87%** were below in *Forward Number Word Sequence*, **60%** in *Numeral Identification*, **86%** in *Structuring Number* and **81%** in *Addition/Subtraction*. Because skills tested by AVMR parallel those measured by MAP, we compared deficits across both and found similarities. When broken down by subskill, fall 2014 MAP shows **69%** of 1st graders below proficiency in *Number & Operations*; **60%** in O*perations & Algebraic Thinking*; **68%** in *Measurement & Data*; and **58%** in *Geometry*. Collectively these data reveal a persistent, increasing problem in students entering first grade without foundational skills and suggest our students have wide-ranging math needs.

*Table 1.2d: Fall AVMR Scores of Students Below Proficiency Disaggregated by Skill Area*

| | Forward # Word Sequence | Backward # Word Sequence | Numeral Identification | Structuring Number | Addition Subtraction |
|---|---|---|---|---|---|
| Fall 2014 | 87 | 48 | 60 | 86 | 81 |
| Fall 2013 | 78 | 28 | 34 | 61 | 76 |

To comprehensively **illustrate the needs of primary students ill-prepared to be successful with grade level math,** we conducted a survey of classroom teachers. The qualitative survey data found that students who struggle have great difficulty with mental math or selecting and applying efficient problem solving strategies. These problems are directly related to difficulty with *structuring number* and *addition/subtraction*; which correlates with AVMR and MAP

subskills data. Further, survey data suggests that students who struggle most often have limited background knowledge and content area language to facilitate learning both concrete and abstract math concepts and to communicate their thinking through explanation. Collectively, these data suggest a substantial need for responsive first-grade interventions that can address these issues. Further, they suggest the need for collaboration with classroom teachers to empower their core instruction. Our MAF program will address both of these needs.

## Part 2: Identification of the Grant Approved Program

**2.1: The research-based math intervention programs for which the school is applying are** Math Recovery(MR) and Add+VantageMR.

**2.2. Math Recovery and Add+VantageMR are designed to meet our current math needs.** Our interventions will serve first-graders in a pull-out, individualized (MR) or group (Add+VantageMR) setting for 30 minutes daily. Section 1.2 described our school's needs which fall into four specific categories: **1)**Low and decreasing math performance in first grade; **2)**Specific skill deficits among first-graders; **3)**Achievement gaps in subpopulations; and **4)**Overall school underachievement in math. The following provides evidence for how our intervention program addresses each of these areas of need. **1)<u>MAP and AVMR suggest</u>** low and **<u>decreasing</u>** math performance in first grade. Students who enter behind are likely to remain behind in subsequent years without appropriate early intervention. According to Allington (2009), "The first-grader who is half a year behind his classmates needs far less extensive intervention than the fourth-grader who is two years behind. Younger students catch up faster with less expensive and less extensive efforts" (p. 6). **Thus, our interventions will target first grade** and help students establish stronger mathematical knowledge early, before problems are more difficult to overcome. Our interventions will reduce the number of first-graders below

level because they occur early **and because they are responsive**. They are responsive because Math Recovery(MR) and Add+VantageMR teachers are trained to plan and carry out lessons that are explicit, systematic and tailored to student needs. Teachers are trained to observe sensitively and make second-by-second microadjustments in response to student behaviors. MR and Add+VantageMR clearly address our need for a **responsive intervention** that catches first-graders up to their peers and reduces their need for supplemental help in later years. **2)Our data illustrated that our students have specific math skill deficits** across subskill areas (Table 1.2d). Our interventions address these issues in the following ways: **a)** Our interventions equip teachers with theoretical understandings of the relationships between all subskills. **b)MAF interventions use** assessments that carefully pinpoint student skill along a continuum for all subskills and enable the Math Intervention Teacher (MIT) to observe closely for evidence of sophistication of strategies employed. **c)They include** activities to precisely match achievement levels in these areas. This targeted practice in the exact area of need quickly advances skill level. **d)They include** instructional tasks and settings that are hands-on, experiential and meaningful to build achievement in all subskills, which ultimately fosters understanding of the *structure* of number, a major skill deficit among our students. **e)They include a flexible lesson** design with multiple components directed at building the arithmetical knowledge of *addition and subtraction*. These are some of the many ways our interventions will address the specific skill needs of our students who struggle. **3)Our data also revealed gaps** between our total population and students who live in poverty (F/R). Research suggests that MR and Add+VantageMR are particularly effective for these students (Phillips et al., 2003). Teachers report these students come to school lacking early numerical skills and have lower content-area vocabulary than their peers. Gervasoni et. al. (2010) suggest F/R students may actually

encounter specific math-related content (e.g., numbers greater than 10) less often than middle-class peers. Our interventions address these issues by helping students: **a)**internalize the quantitative, verbal, and symbolic aspects of number; **b)**construct their own understanding through explorations with materials and manipulatives carefully posed by the MIT; **c)**explain thinking and justify answers after solving a task. In this way, our interventions will focus on exploration and explanation to support the numerical and language skills of F/R students. **4)Low overall math achievement** at 3rd-5th grades is compounded by low math achievement in early primary evidenced on MAP and AVMR. In other words, early failure is contributing to long-term underachievement. We will address this by concentrating interventions at 1st grade. By fostering independence early, students will be better equipped for success in later grades. In this way, our interventions will have a systemic impact upon the chronic failure of our students**.** MR and Add+VantageMR help students build a strong foundation for higher-level mathematics. However, we recognize that early intervention alone will not rectify all problems with our core. So, in addition to MR and Add+VantageMR for first-grade, our MIT will collaborate with teachers in 1st-3rd grades and the principal to improve core instruction. Collaboration (Sections 4.3 & 4.4), includes a variety of MIT-facilitated activities to build capacity and improve the core. Thus, our MAF program addresses all needs through responsive Tier 2 & 3 intervention and collaboration to support for Tier 1 instruction.

**2.3: Math Recovery and Add+Vantage complement our RTI framework** which is a multi-tiered, problem-solving approach, based upon the Kentucky Systems of Interventions (KSI). We define tiers as: Tier 1-core instruction grounded in KCAS; Tier 2-pull-out Add+VantageMR groups; Tier 3-Math Recovery and Tier 4-long-term intervention and special education. Our RTI

framework includes principles derived from KSI. Table 2.3 provides an in-depth explanation of these principles and evidence of how MAF interventions complement our RTI framework.

*Table 2.3: Complementary Components of our MAF Program and RTI Framework*

| Principles of RTI Framework | How MAF program complements the framework |
|---|---|
| Interventions must happen early. | Identify first-graders below proficiency and provide early intervention to promote accelerated learning, thus preventing problems in later grades. |
| Interventions must be responsive, short-term and focus on problem solving. | Interventions are provided by teachers with extensive training in observation, theory and responsivity, thus students make rapid progress. |
| More than one tier of intervention is included. | **Tier 1:** Core instruction grounded in KCAS (all students); **Tier 2:** Add+VantageMR (small group); **Tier 3**: Math Recovery (one-on-one) |
| Interventions must supplement, **not supplant** classroom instruction. | MAF interventions are pull-out, and supplement the core program. In other words, all MAF students receive appropriate classroom instruction. |
| Methods must be based on research or scientific evidence. | Research suggests Math Recovery and Add+VantageMR are highly effective for both students who struggle and those with special populations. |
| Teacher expertise is essential to student success. | MR has an extensive training protocol with theoretical and practical knowledge necessary for responsive interventions. |
| Decisions are about placement and interventions are data-driven. | Our RTI system has comprehensive assessment protocol including universal screening, diagnostics, progress monitoring, and outcome measures. |
| A problem-solving method is used to move students between RTI tiers. | Classroom and intervention teachers collaborate to monitor progress and make decisions about student placement, goals and program discontinuation. |

Our RTI framework emphasizes early interventions that are responsive, research-based, and data-driven. The plan includes Tier 2 and 3 pull-out interventions that occur early and are based upon an assessment protocol for eligibility, progress monitoring and measuring outcomes. The selection process ensures students who need the most intensive interventions are the first to be served. As well, classroom interventions are collaboratively planned so students who may be waitlisted due to inadequate space in pull-out interventions are receiving intervention support. Continuous progress monitoring ensures efficient use of MAF slots, so students may be dismissed when their needs are met, and others may be served. Classroom and MAF programs work together seamlessly, collaboratively and comprehensively to meet **all** student needs.

## Part 3: Identification of the Students to be Served

**3.1 Description of the process to determine student eligibility**: The RTI team, which includes principal and/or guidance counselor, classroom teachers, and the MIT, will work collaboratively to select students for intervention. The initial step in student eligibility is administering **our**

**universal screener, the Measures of Academic Progress (MAP).** In the first two weeks of school, 1st grade teachers will administer MAP to all students. The MIT will collect MAP reports and identify the lowest **20%** of 1st graders. These students will be given AVMR, a diagnostic assessment measuring *Forward Number Word Sequence (FNWS)*, *Backward Number Word Sequence (BNWS), Numeral Identification (NID), Structuring Number (SN)* and *Addition/Subtraction (AS)* (Table 6.1). **AVMR is the assessment we will use to select students**. The RTI Team will meet to identify the lowest-scoring students on AVMR and place them in interventions until slots are filled. Specifically, the 4 scoring lowest on AVMR will be placed in one-on-one intervention, Math Recovery (Tier 3). The next 12 lowest will be placed in small-group intervention, Add+VantageMR (Tier 2). To address the needs of students not selected for interventions, the MIT will support Tier 1 instruction through grade level PLC's and other collaboration (Section 4.3). Interventions are responsive and short-term; children exit at different rates (Section 3.3). We will repeat this process to fill intervention slots throughout the year.

**3.2 Process to ensure intervention is based on progress monitoring:** Our interventions use a comprehensive assessment protocol that includes progress monitoring with formal and observational measures. The child's total score on AVMR will be used as the entry level against which progress will be measured. After documenting entry levels with AVMR, progress will be monitored with multiple measures (described in detail in Section 6.1) at specified intervals (Table 3.2) as follows: **1)**Individual tasks from AVMR will monitor progress toward targeted proficiency goals (Table 6.1). The MIT will select AVMR tasks that monitor progress on specific target skills **every 2 weeks** as warranted by the child's immediate needs (Table 3.2). **2)***Fluency Assessments (FA)*, developed by the Kentucky Center for Mathematics(KCM), will also monitor progress. The *FA* includes nine equivalent forms of leveled assessments tied to specific KCAS.

They will be administered **every 2 weeks** and progress is analyzed to determine proficiency on targeted fluency benchmarks. **3)**In addition, informal **anecdotal records** will provide evidence of student responses to intervention tasks. The MIT will collect and analyze anecdotal records **daily** using Math Recovery's continua, which illustrate observable behaviors that signal development of targeted skills. All progress monitoring tools will be administered by the MIT. Anecdotal records most directly inform instruction, whereas AVMR and *FA* provide formal evidence of growth toward standard benchmarks. Table 3.2 depicts the process for progress monitoring, including the program weeks each formal tool is administered and the intervals at which the RTI team will meet to monitor progress (weeks 5, 10 & 15). The collective data set, including anecdotal records, AVMR and *FA*, will be discussed at RTI team meetings.

*Table 3.2: Progress Monitoring Tools &Frequency for MR and Add+VantageMR Organized by Weeks in Program*

| Week | Progress Monitoring | Week | Progress Monitoring | Week | Progress Monitoring |
|---|---|---|---|---|---|
| 1 | Intervention Begins | 6 | AVMR Task Group | 11 | Fluency Assessment |
| 2 | AVMR Task Group | 7 | Fluency Assessment | 12 | AVMR Task Group |
| 3 | Fluency Assessment | 8 | AVMR Task Group | 13 | Fluency Assessment |
| 4 | AVMR Task Group | 9 | Fluency Assessment | 14 | AVMR Task Group |
| 5 | Fluency Assessment | 10 | AVMR Task Group | 15 | Full AVMR Assessment |
| End of Wk 5: RTI Team Meets | | End of Wk 10: RTI Team Meets | | End of Program: RTI Team Meets | |

**3.3: The process to determine student movement** is designed to be as responsive to the child as the interventions themselves. Thus, student movement within and out of interventions is a problem-solving collaborative process that occurs throughout the child's program. A single intervention may not exceed 15 weeks. When progress monitoring data illustrates competency toward standard benchmarks, the MIT will readminister AVMR in its entirety. Then, the RTI team will review AVMR data and compare the child's results to established benchmarks for grade level competency. Table 3.3 provides these benchmarks for mid-year and spring. Benchmarks are raw scores that represent targeted skills and levels. Raw scores within the "Benchmark Achieved" category (Table 3.3) means the child can do the following: **1)**count forward to 100 (mid-year & spring), starting at any number; **2)**count backward from 30 (mid-

year); 100 (spring), starting at any number; **3)**identify numerals 1-100 (mid-year); 1-1000 (spring); **4)**structure numbers to 5 (mid-year); 10 (spring); **5)**apply count-on and count-back strategies within addition and subtraction. Using these data, the RTI team will determine movement within the Tiers (Tier 2-Add+VantageMR; Tier 3-MR) as follows: **a)**Students who **meet all benchmarks** may exit the program without further Tier 2 or 3 service; **b**)Students who **meet 3 of 5** benchmarks in Tier 2 or Tier 3, may move to a less intensive Tier 2 intervention, tailored with additional work on specific undeveloped skills. **c)Students who meet fewer than 3 benchmarks in** Tier 2 may continue in a Tier 2 intervention of greater intensity (e.g., smaller group) or move to a Tier 3 intervention. **d)Students who meet fewer than 3 benchmarks in Tier 3, will be** recommended for additional screening and long-term (Tier 4) support.

*Table 3.3: Mid-year and Spring AVMR Numeracy Skill Level Benchmarks*

| | Benchmark Achieved | | Approaching Benchmark | | Far Below Benchmark | |
|---|---|---|---|---|---|---|
| | Mid-year | Spring | Mid-year | Spring | Mid-year | Spring |
| *FNWS* | 5 | 5 | 4 | 4 | 3 | 3 |
| *BNWS* | 4 | 5 | 3 | 3 | 2 | 3 |
| *NID* | 3 | 4 | 1 | 2 | 0 | 1 |
| *Structuring* | 1 | 3 | 0 | 1 | 0 | 0 |
| *Add & Sub* | 3 | 3 | 2 | 2 | 0 | 1 |

## Part 4: Professional Learning and Leadership Activities

**4.1:The MIT's professional learning will lead to serving the needs of the students.** Our **school has already selected** the person who will serve as the MIT. The following describes the professional development our MIT candidate has already completed **and those** that will be completed during the grant period. The MIT candidate **has already completed** Math Recovery(MR) and Add+VantageMR and will complete Champion training in summer 2015. These **include** academic and clinical training in which teachers learn to administer assessments, analyze student records to plan for instruction, and reflect upon and gauge the impact of their instruction. The training empowers teachers to implement a framework for responsive teaching that pinpoints exactly what each child needs to learn. *Champion* training equips MIT's with

extensive theoretical and practical knowledge that prepares them to train and collaborate with classroom teachers. Our MIT candidate has completed those trainings and will also **complete the following:** Champion training, Collegial Team Meetings, Peer Visits, Online *WebEx* meetings and KCM conference. To maintain certification, the MIT will attend a United States Math Recovery Council (USMRC) event in 2017. Table 4.1 describes how **these activities** lead to serving student needs. Because these activities include academic study, guided and independent reflection, modifying practice to meet student need, and evaluating professional learning, they continuously build teacher knowledge thus enabling her to meet student needs.

*Table 4.1: Professional Learning Activities and How they Will Lead to Serving Student Needs*

| Activity | How This PD Will Lead to Serving Our Student Needs |
|---|---|
| Math Recovery | Certification as a Math Recovery Intervention Specialist empowers MIT's to use AVMR to pinpoint student numeracy levels as well as provide hiqh-quality best-practice teaching to meet student needs in short-term intense one-on-one intervention. |
| Add+VantageMR | Add+VantageMR builds upon the same research as Math Recovery. It provides a more flexible framework to use with small groups and to support Tier 1 and 2 instruction. |
| Champion | Champion training empowers Math Recovery Intervention Specialists to train others in Add+VantageMR, which will improve Tier 1 and Tier 2 instruction at the school level. |
| Collegial Team Meetings | In *Collegial Team Meetings* (KCM requirement – 3 per year), MIT's share video and join in collective professional noticing to discuss student achievement and instructional next steps. |
| Peer Visits | *Peer Visits (KCM requirement – 2 per year)* enable MIT's to interact and collaborate with colleagues about student-specific issues at the school site. Instructional strategies are shared. |
| Online WebEx | *WebEx meetings (KCM requirement – monthly*) provides time to discuss research, best-practice instruction, assessment, record-keeping, and other supportive topics with peers. |
| KCM Conference | *KCM Conference (KCM requirement – yearly)*provides time for MIT to gain knowledge from scholarly presentations on relevant research, theory and practice to be applied at school level. |
| KCM Visits | *Regional Coordinator visits (KCM requirement – 2 per year)* enable MIT's to be observed teaching a lesson and get feedback about instructional choices. |
| USMRC Events | *USMRC Event* (*USMRC requirement – once every three years*) allows MIT's to network with MR specialists and learn to improve assessment, collaboration and intervention instruction. |

**4.2 The principal will participate in professional learning experiences including** KDE/KCM trainings to help her understand her role in MAF implementation. The principal will also attend: **a)**monthly grade-level PLC's with the MIT; **b)**an MIT-directed book study of *Number Talks;* **c)**AVMR training in Summer 2015; and **d)**collaborate with MIT and classroom teachers during fall/winter district-scheduled days to improve the KCAS units and curriculum documents.

**4.3 The MIT's expertise will be shared with colleagues at the school, district and state level:** **At the school level**, the MIT's expertise will be shared with colleagues to support teacher decisions in core and small-group instruction. This is critical to addressing overall school underachievement in math, described in Section 2.2. Specifically the MIT will: **a)**conduct monthly PLC's with 1st-3rd grade level teams to share resources, problem-solve students, view video exemplars of teaching, and reflect upon teaching practices; **b)**conduct job-embedded PD with 1st-3rd grade teams each year to analyze AVMR data and modify instruction; **c)**conduct formal (monthly) and informal (as-needed) collaborative discussions with individual teachers to problem-solve students, helping them plan classroom interventions and Tier 1 instruction. **d)**conduct a school-wide book study using *Number Talks*. **At the district level the MIT will:** **a)**conduct AVMR trainings each summer for classroom teachers and administrators; and **b)**facilitate the district committee to improve and implement the KCAS units and curriculum documents. **At the state level** the MIT will apply to present annually at the KCM conference.

**4.4 The building principal will support the MIT's leadership for helping other teachers by:** **a)ensuring** the MIT has a schedule that guards time with students and promotes collaboration with colleagues**; b)ensuring** collaboration with teachers is efficacious by attending monthly grade-level PLC's; **c)collaborating** with MIT to implement PGES, using the MIT's knowledge to develop growth plans that relate to student growth goals; **d)being** a member of the RTI team to select students and monitor progress; **e)providing** resources, beyond those paid for by grant funds (Section 7); **f)assisting** with a family math event to promote home-school connections.

**4.5: The ongoing professional learning experiences are job-embedded, systematic, and sustained over time,** as evidenced in Table 4.1. These activities are job-embedded by integrating PD into daily work with students. Their inquiry-based, recursive nature enables the MIT to

continuously reflect upon her work with children and enhance expertise. The activities utilize a *community of learners* model which fosters long-term, continuous teacher development. In this way, they are job-embedded, systematic and sustained over time. Our MIT candidate has completed initial MR and Add+VantageMR training. She **will continue** to refine expertise through Champion training in summer 2015 and other PD noted in Table 4.1. In this way, teacher development is **sustained over time**.

## Part 5: Implementation

**5.1: Identified students will receive interventions in addition to the core.** Identified students will participate in core instruction with targeted small group and one-on-one conferencing. Concurrently, the MIT will provide Tier 2 small-group (Add+VantageMR) or Tier 3 one-on-one (MR) each day. To ensure MAF interventions do not supplant core instruction, our school has enacted a PLC model where grade-level teams meet weekly. The MIT participates in PLC's, providing training or support monthly. The PLC framework is instrumental to achieving MAF goals. In particular, it will enable the MIT and first grade teachers to establish a schedule for instruction that meets student needs. The process for scheduling is systematic and recursive. Following student selection, the MIT will compile a master schedule including lunch, recess, activity, grade-level PLC's; these blocks will be planning and collaboration. Then, the MIT and first-grade teachers will identify times targeted students are in Literacy and Math Groups and schedule students for Tier 2 and 3 interventions at times that don't remove them from this targeted instruction. Table 5.1 illustrates a sample schedule for the MIT, with blocks for groups and one-on-one. Because the MIT is an integral part of PLC's, schedule revisions will be ongoing throughout the year. Additionally, the PLC framework enables continuous collaboration so the MIT can assist classroom teachers in providing targeted instruction that aligns with the

goals and needs of students as evidenced in progress monitoring data. In this way, a student will receive layers of consistent, targeted instruction across contexts and Tiers.

*Table 5.1: Daily Schedule With Activities, Minutes and Percentage of Day*

| Activities and Scheduled Times | Min | % Day |
|---|---|---|
| **MR**: 8:30-9:00 (Student 1) 9:30-10:00 (Student 2) 10:30-11:00 (Student 3)12-12:30 (Student 4)<br>**Add+VantageMR:** 8:00-8:30 (Group 1); 12:30-1:00 (Group 2); 2:00-2:30 (Group 3) | 210 | 58% |
| **Planning, Communication & Collaboration**:9:00-9:30; 10:00-10:30; 11:00-11:30; 1:00-2:00 | 150 | 42% |

**5.2: To support family involvement the MIT will: 1)**Notify parents when their child is selected (letter, phone, email, or face-to-face meeting), ask for consent, and give information about qualifying criteria and specific goals;**2)**Send daily activities for home numeracy practice; **3)**Inform parents of progress via intervention reports in mid and end-of-term report cards;**4)**Join classroom teachers during parent-teacher conferences twice each year; **5)**Host a family math event each year. **6)**Utilize district ELL translation services; **7)**Utilize Family Resource Center resources to provide for families who need transportation to and from school for math events.

**5.3: The MIT will impact RTI implementation.** Teacher expertise is central to our RTI framework. The MIT will have the most extensive, continuously-evolving expertise in math and thereby play a facilitative role in RTI. **For Tier 2 and 3 interventions the MIT will: a)**analyze diagnostic assessments to select students and plan goals; **b)**analyze formal and informal data to monitor progress and student response to intervention; **c)**continuously revise instruction based upon student needs and interpretation of data so that interventions are responsive (Section 6.3); **d)**communicate with parents and classroom teachers to provide progress updates, ideas for support in those contexts and problem-solve issues. **As a member of the RTI Team the MIT will: a)**facilitate meetings for intervention students at specified intervals (Table 3.2); **b)**guide decisions about student placement, progress and program exit (Section 3.1-3.3); **c)**collect, organize and maintain data to share with RTI team. **To support RTI in Tier 1 the MIT will: a)**collaborate with classroom teachers in scheduling intervention to protect core instructional

time (Section 5.1 &7.1); **b)**collaborate with classroom teachers to monitor progress across instructional settings (Section 4.3); **c)**provide training for classroom teachers to ensure students are receiving best practice core instruction (Section 4.3 & 4.4). **At the school level the MIT will manage RTI data** by: **a**)maintaining documentation (hard copy and in Infinite Campus) of Tier 2 and 3 interventions; **b)**organizing AVMR folders at grades 1-2; **c)**creating reports for the RTI Team and Special Education referrals; **d)**maintaining and submitting data to KCM and USMRC.

**5.4 Interventions implementation will be sustained beyond the MAF grant.** The long-term sustainability of our program depends upon the degree to which it creates systemic change. The MIT will create such change through service to students and efforts to transfer that learning to the classroom, school and district. As classroom teachers apply what they learn from the MIT to core instruction, **all students are** impacted. At the school level, the MIT is essential to RTI, as noted in Section 5.3. Through direct service to students and collaboration with teachers and administrators, the MIT will impact the entire RTI system, creating enduring change. The MIT's expertise will also be essential to extending district initiatives which began in 2013, and will continue beyond the grant period. The MAF program aims to create systemic change so core instruction and interventions align with *constructivist* principles and current research. Such changes in mindset and practice will lead to change that is sustained following MAF. Further, matching funds committed to this project illustrate firm commitment by the school and district.

## Part 6: Assessment and Evaluation Plan

**6.1: Assessments to show progress include** formal and observational measures. **1)**AVMR provides achievement levels in specific numeracy strands; individual AVMR tasks will monitor progress in targeted skill areas. Table 6.1 illustrates strands, skills measured by AVMR and

related task groups. The MIT will select the appropriate AVMR tasks to measure skills the child is acquiring. AVMR provides data that monitors progress and directly informs instruction.

*Table 6.1: AVMR Strands, Skills and Criteria Measured and Associated Task Groups for Progress Monitoring*

| Strand | Skills and Criteria Measured | Progress Monitoring |
|---|---|---|
| Forward Number Word Sequence | Count forward from varied starting numbers | Task Group 1 & 2 |
| Backward Number Word Sequence | Count backward from varied starting numbers | Task Group 4 & 5 |
| Numeral Identification | Identify & recognize numerals | Task Group 3 |
| Structuring Number | Compose & decompose numbers | Tasks Groups 1-5 |
| Addition and Subtraction | Strategies used to add & subtract | Task Groups 1-4 |

**2)**The *Fluency Assessments* contain leveled assessments, with nine equivalent forms at each level, to determine proficiency on grade-level fluency benchmarks. To administer, the MIT will compare observable student behaviors (e.g., sophistication of finger use while solving math tasks) and explanations (e.g., how student knew when to stop counting when adding) to those indicating proficiency with the fluency benchmark. **3)**Anecdotal records are an **informal source** of progress monitoring data. Lessons will be based on the analysis of anecdotal records which provide evidence of student responses and explanations to intervention tasks. Because MIT's are trained to collect and analyze this data in a systematic manner, they are a reliable, valid, systematic method of monitoring progress. The records will be analyzed with Math Recovery's continua, which illustrate observable behaviors that signal development of targeted skills. Instructional decisions will be based upon achievement of individualized learning targets. **4)To measure student** outcomes at the end of intervention the MIT will readminister AVMR. **5)To monitor sustained** progress of intervention students, the MIT will use MAP and AVMR. The MIT will collect fall, mid-year and spring MAP for former intervention students through the end of 3rd grade. The MIT will collect AVMR data for end of 1st grade, and fall/spring AVMR for 2nd graders. The MIT will use a data collection grid with student names and interventions received to record these data. It will be updated as AVMR and MAP are completed.

**6.2: Specific goals to assess progress toward attaining objectives**: Objectives for **intervention students** are to: reach standard benchmarks (Table 3.3), develop self-regulated math strategies applied successfully in the classroom and sustain gains over time. Objectives for **our program** are to reduce the number of first-graders below proficiency, to reduce the percentage of all primary students below proficiency and to improve overall math performance. Table 6.2 illustrates measurable performance goals to assess progress toward attaining these objectives:

*Table 6.2: Specific Measurable Goals Toward Attaining Objectives*

| Measurable Goals | |
|---|---|
| Student Goals | Increase **at least 1 level** toward **at least 1 AVMR** benchmark **every week** of the program. For example, students will increase at least 1 level in 1 strand (FNWS, BNWS, NID, SN & AS)each week, so by week 15, benchmark levels in all five strands are achieved. |
| Program Goals | • **At least 80%** of students will reach standard **AVMR** benchmarks by the end of the program<br>• **100%** of students will reach at least **3 of 5** standard **AVMR** benchmarks by end of the program |
| Program Goals to Show Sustained Gains | • **At least 90%** of students **who successfully exit** the program will maintain achievement in 2nd grade as evidenced by reaching standard **AVMR** benchmarks in fall (2016 & 2017)<br>• **At least 90%** of students **who successfully exit** the program will score ***at or above grade level benchmarks*** on **MAP** at the beginning of 2nd grade (Fall 2016 & 2017) and 3rd grade in (Fall 2017 & 2018) to show gains are sustained over time. |

**6.3: Multiple sources of data will guide instruction according to student need.** After the RTI team has carefully matched students to appropriate interventions, the MIT will guide instruction by continuously monitoring student progress with formal and observational measures (Section 3.2 & 6.1). AVMR Tasks and *Fluency Assessments* will evaluate student development toward proficiency in level of arithmetic learning, number word sequences, numeral identification, and structuring number. Observations and anecdotal records will enable the MIT to interpret student behaviors and explanations throughout each lesson. In response, the MIT will scaffold tasks to move students towards learning targets. The power of our interventions is the MIT's ability to map her interpretations of formal and informal data onto theoretical and pedagogical knowledge to make second-by-second instructional decisions while working with students. The RTI team will monitor progress using the process on Table 3.2. Their role will include analyzing progress monitoring data for growth toward standard benchmarks. Because AVMR task groups are used

to monitor progress, the RTI team can clearly establish if the child is moving toward the standard benchmarks for success that will be used to determine movement out of the intervention. These criteria are in Table 3.3. Further, the fact that first-grade teachers have been trained in AVMR makes this source of data particularly accessible and actionable to them. Section 4 describes collaboration with classroom teachers. The first-grade teachers are part of the RTI team that monitors progress. As well, the MIT will meet formally with first-grade teachers during PLC's and informally on an as-needed basis. This collaboration will provide opportunities to monitor and adjust interventions continuously. Specifically, the MIT and first-grade teachers will have opportunities to discuss and compare observations of student growth in both contexts. It will also allow them to consider formal progress monitoring data at a micro-level and make hypotheses about specific instructional barriers or supports to student learning. This bridges instruction between core and intervention so the student has similar goals, hears common language and experiences congruent instruction across contexts. Input from parents is also essential to targeting student need and communication strategies were outlined in Section 5.2. Their input will help the MIT understand how the child's progress is translating to home practice and to their overall affect, or how they feel about their efficacy in math.

## Part 7: Budget

**7.1: The cost of proposed activities and number of students served:** The MIT will provide intervention to approximately 32 first-graders annually through two rounds of service. This is roughly 30% of 1st grade and nearly 10 more students than the average classroom teacher. Through collaboration with classroom teachers, all 1-3rd graders will be impacted. The **$41,000** MAF funds are dedicated to the MIT's salary, benefits, and PD. In addition, our district commits matching funds in the amount of **$17,194.46** <u>for MIT salary and benefits.</u> We will also spend

school and district funds (**$15,563.95)** on MIT materials and activities for collaboration and parent involvement. Our MIT candidate has already completed MR and Add+VantageMR training. **Thus, there are no additional costs for this.** She will complete Champion training in 2015 and the budget reflects matching funds for this cost. The total cost of our program is **$73,758.41**. The total school and district match is **$32,758.41**, illustrating substantial commitment to implementation**.**

**7.2: Grant and resources will be used efficiently:** Cost effectiveness research suggests "efficiency" is dependent upon positive outcomes. Our program is built upon a highly-qualified MIT who can provide enough service to targeted students to achieve positive outcomes**.** Because our interventions will be fully-implemented at first-grade, we will see accelerated and sustained learning that precludes the need for additional expensive services later. The MIT's collaboration will ensure the program impacts all students. Our model provides a comprehensive, job-embedded collaboration approach which is more efficient than other PD and is built upon best practices in teacher development. Further, grant funds are allocated directly to the MIT and district and school funds are allocated to collaboration and parent involvement.

**7.3: Connection between activities and desired results:** Our program is built upon the highly-skilled MIT who can provide responsive interventions and collaborative support for teachers. **78%** of the funds are dedicated to MIT salary and benefits and **1%** for MIT materials. **21%** is for professional learning, collaboration and parent involvement. Salary for the MIT is **$57,314.81.** When divided by 32 students, the cost per student is **$1,818.57**. Because the MIT is also serving students indirectly through collaboration with teachers, all students are impacted. The primary focus of this grant is direct service to the most at-risk 1st-graders. Thus, the majority of the funds are concentrated on the MIT, her expertise and providing direct service.

# Mathematics Achievement Fund Grant

Budget Summary Form

**2015-2016**

_____

## Name of School

**Instructions**: Use this form to provide a detailed, itemized explanation of expenditures for each MUNIS Object Code. Not all MUNIS codes listed need to be used. However, the school may not use Mathematics Achievement Fund grant monies for any MUNIS code that is not listed. Successful approval of budget is pending further review by the Kentucky Department of Education.

| MUNIS Code | Description | Amount | Explanation of Expenditures |
|---|---|---|---|
| 110 | Certified Permanent Salary | $38,162.60 | **$38,162.60** will be paid from MAF fund for the Math Intervention Teacher's salary. This represents **70%** of the total salary. The district will pay the remaining **$16,355.40** with matching district funds. Thus, the total MIT salary before benefits is **$54,518**. MAF grant funds will pay **$38,162.60.** |
| 111 | Extended Day Salary for Certified Staff | | |
| 113 | Stipends for Certified Staff | | |
| 120 | Certified Substitutes | | |
| 211 | Life Insurance[1] | | |
| 214 | Dental Insurance[1] | | |
| 219 | Other Group Insurance[1] | | |
| 221 | Employer FICA Contribution | | |
| 222 | Medicare Employer Contribution | $553.36 | **$553.36** will be paid from MAF grant funds for the Math Intervention Teacher's Medicare. This represents **70%** of total Medicare costs. The district will pay the remaining**$237.15** with matching district funds. Thus, the total for Medicare is **$790.51**. MAF grant funds will pay **$553.36** of this total. |
| 231 | Kentucky Teachers Retirement | $1,240.28 | **$1,240.28** will be paid from MAF grant funds for the Math Intervention Teacher's retirement (KTRS). This represents **70%** of the total KTRS costs. The district will pay the remaining **$531.56** with matching district funds. Thus, the total for the MIT's retirement costs is $**1,771.84.** MAF grant funds will pay **$1240.28** of the total. |
| 251 | State Unemployment Insurance | | |
| 253 | KSBA Unemployment | $42.00 | **$42.00** will be paid from MAF grant funds for the Math Intervention Teacher's Unemployment. This represents **70%** of total KSBA Unemployment costs. The district will pay the remaining **$18** with matching district funds. Thus, the total for KSBA Unemployment is **$60**. MAF grant funds will pay **$42.00** of the total. |

| | | | |
|---|---|---|---|
| 260 | Workers Compensation | $122.12 | **$122.12** will be paid from MAF grant funds for the Math Intervention Teacher's Worker's Comp. This represents **70%** of total Worker's Comp costs. The district will pay the remaining **$52.34** from matching district funds. Thus, the total for Worker's Comp is **$174.76**. MAF grant funds will pay for **$122.12** of the total. |
| 298 | Other Employee Paid Benefits | | |
| 322 | Educational Consultant (non-LEA) | | |
| 338 | Registration Fees | $110 | **$110** will be paid from MAF grant funds for the Math Intervention Teacher's registration for the annual Kentucky Center for Mathematics Conference held in March. |
| 581 | Travel – In-District | | |
| 582 | Travel- Out-of-District | $432.64 | **$86.40** will be paid from MAF grant funds for the Math Intervention Teacher's mileage to the KCM Conference in Lexington (.48/ mile x 60 miles x 3 days)<br>**$346.24** will be paid from MAF grant funds for the Math Intervention Teacher's travel and lodging to attend AVMR Champion Training. Total MAF grant funds for out-of – district travel is **$432.64**. |
| 584 | Travel – Out-of-State | | |
| 610 | General Supplies (consumables) | | |
| 641 | Library Books | | |
| 642 | Periodicals and Newspapers | | |
| 643 | Supplemental Books, Study Guides & Curriculum | | |
| 644 | Textbooks and Other Instructional Materials - Data required for state reporting | | |
| 645 | Audiovisual Materials | | |
| 647 | Reference Materials | | |
| 650 | Supplies – Technology Related | | |
| 734 | Technology Related Hardware [3] | | |
| 735 | Supplies – Technology Related | | |
| 810 | Dues and Fees | $337 | **$337** will be paid from MAF grant funds to cover dues for membership to Math Recovery **($50),** National Council of Teachers of Mathematics **($87),** and Kentucky Center for Mathematics **($200).** |
| 892 | Parent Involvement Meetings[4] | | |
| **Total** | | $41,000 | |

## Budget Narrative

- The total cost of supporting the Mathematics Intervention Program and the implementation of Math Recovery and Add+ Vantage Math Recovery will be **$73,758.41**. If this proposal is funded then **$41,000** will come from the Math Achievement Fund. The additional **$32,758.41** will come from matching district and school funds. **Please note, the teacher paid through MAF funds is referred to throughout the narrative as the *MIT*, which represents *Math Intervention Teacher*.** The following narrative describes the breakdown and source of funds. For clarity, the narrative is divided into 3 sections: **1)**MAF and matching funds for the MAF teacher/MIT salary and benefits; **2)**Matching funds to pay for MAF teacher/MIT materials; and **3)**MAF and matching funds to pay for activities related to professional development, collaboration and parent involvement.

### MAF Grant and Matching Funds for MAF Teacher/MIT Salary and Benefits

- **Certified Permanent Salary and Benefits**
  A certified teacher with 21 years' experience, Math Recovery and Add+VantageMR training, and a MaEd in Elementary Education has been selected as the MIT candidate. Her total salary including benefits is **$57,314.81**. MAF funds will pay **70%** of the salary and **30%** will be paid from district general funds. Salary and benefits represent **78%** of the total budget.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 110 | Certified Permanent | Salary based upon schedule for 187 days is **$54,518** to be paid from MAF (79%) and district funds (21%) | $38,162.60 | $16,355.40 (general fund) |
| 0222 | Employer Medicare | Medicare for MIT **($790.51)** will be paid from MAF and district funds | $553.36 | $237.15 (general fund) |
| 0231 | KTRS Retirement | KTRS Employer Contribution for MIT **($1,771.84)** will be paid from MAF and district funds | $1,240.28 | $531.56 (general fund) |
| 0253 | KSBA Unemployment | KSBA Unemployment for MIT (**$60**) will be paid from MFA and district funds | $42.00 | $18.00 (general fund) |
| 0260 | Workman's Comp | Workman's Comp for MIT **($174.46)** will be paid from MAF and district funds | $122.12 | $52.34 (general fund) |

### Matching Funds for Materials for MAF Teacher/MIT

- **Our school has already purchased the primary materials for Math Recovery and Add+VantageMR.** The following costs include additional consumable materials and technology-related supplies for the MIT. The total cost for these materials is **$1050**, representing **1%** of the total budget. **All of these will be paid with matching funds**.

- **General Supplies**
  General supplies to be purchased for the MIT include: colored folders, card stock, counters, dice, blank playing cards, other manipulatives, and Arithmetic Racks. Total funds allocated to the purchase of these materials are **$250.** All will come from matching school funds.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0610 | General Supplies | Consumable materials for the MIT (e.g., colored folders, card stock, counters, dice, blank playing cards, manipulatives and Arithmetic Racks | $0 | $250 (school funds) |

- **Supplies – Technology Related**
  Ink for printer required for MIT will be purchased from school funds for a total of **$200**.

- **Technology Related Hardware**
  Our interventions utilize specific technology. School funds in the amount of $600 will be used to purchase a video camera and tripod for the MIT to use while videotaping lessons each day. School funds will cover this expense.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0650 | Supplies-Technology Related | Technology Related Supplies for MIT including printer ink | $0 | $200 (school funds) |
| 0735 | Technology Related Hardware | Camera for MIT | $0 | $600 (School Funds) |

## MAF and Matching Funds for Professional Development, Collaboration and Parent Involvement

- The following section describes expenditures to support professional development and collaboration. **Our MAF candidate has already completed Math Recovery and Add+VantageMR.** Therefore, there are no expenditures in our budget for those costs. The ongoing professional development experiences our MIT will complete are listed on Table 4.1. Of these, only Champion, KCM and USMRC events have a required fee. Our budget for 2015 includes the costs of the Champion training and the KCM conference (below) for the MIT. Because USMRC events are required every 3 years, that cost (estimated at $1500) will be included in the 2017 budget. MAF grant funds are ONLY used for the MIT. Matching school and/or district funds cover all costs related to collaboration in support of the MAF grant. The total costs for PD and collaboration is **$15,393.60.** This represents **21%** of the total budget. The majority **(94%)** of costs related to PD and collaboration will be paid with matching funds.

- **Registration**
  Grant funds in the amount of **$110** will be allocated to the MIT's registration for the Kentucky Center for Mathematics Conference in Lexington, KY in March 2015. To support MAF implementation and professional learning, school PD funds in the amount of **$550** will be allocated to KCM registration for 5 classroom teachers. To support the MIT's ongoing learning, district Title I funds in the amount of **$5000** will pay for Champion training. This training empowers teachers already trained in MR and Add+VantageMR to facilitate training with teachers. The total amount for registration is **$5660**. **98%** of these costs will be paid with matching school and district funds.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0338 | Registration | Registration for Kentucky Center for Mathematics Conference for MIT and 5 classroom teachers | $110 | $550 (school PD funds) |

| | | | | |
|---|---|---|---|---|
| | | [**$110** per teacher]<br><br>Registration for Champion Training | | $5000<br>(district Title I) |

- **Dues and Fees**
  To support the MIT's professional learning, MAF grant funds will pay membership fees to professional and scholarly mathematics organizations. Specifically, $337 will pay for the MIT's membership to Math Recovery ($50), National Council of Teachers of Mathematics ($87), and Kentucky Center for Mathematics ($200).

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0810 | Dues and Fees | Dues for membership to Math Recovery ($50), National Council of Teachers of Mathematics ($87), and Kentucky Center for Mathematics ($200) for MIT | $337 | $0 |

- **Travel**
  Grant funds in the amount of **$86.40** will cover the MIT's mileage to the KCM conference in Lexington Kentucky in March 2015. The MIT is required to attend 3 days of the conference and classroom teachers attend 2 days. To support MAF implementation, **school PD funds** in the amount of **$115.20** will cover the mileage for 5 classroom teachers to travel to the KCM Conference. The MIT will also attend Champion training in July 2015. The cost of the MIT's mileage and lodging while attending Champion Training in July 2015 is **$545**. MAF grant funds will pay for **$346.24** of these costs and matching district Title I will pay the remaining **$198.76**. Total costs related to travel are $**746.60.**

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0582 | Travel | Travel to Kentucky Center for Mathematics Conference for MIT and 5 classroom teachers. (.48/ mile x 60 miles x 3 days)<br><br>Travel to AVMR Champion Training for MIT (4 nights hotel, mileage, meals) | $86.40<br><br>$346.24 | $115.20<br>(school PD funds)<br><br>$198.76<br>(district Title I) |

- **Supplementary Books**
  The following supplemental materials **<u>will be paid entirely from matching school funds</u>** to support collaboration. These funds support the MIT's work with classroom teachers and illustrate school commitment for the MAF program. *Number Talks* books will be purchased for 20 classroom teachers, the MIT and the principal to participate in professional development directed by the MIT. The books are $59 each for a total cost of **$1,180**. AVMR kits will be provided for additional training. We will purchase 6 course 1 and 2 kits ($395 each) for a total cost of **$2370**. All of these materials, totaling **$3550,** will be purchased from matching, school instructional resource funds.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0643 | Supplementary Books | Books for Number Talks professional development ($59 each) and kits for AVMR training ($395 each) | $0 | $3550.00<br>(school instructional resource funds) |

- **Stipends for Certified Staff**
  Our MIT will plan and carry out AVMR training for classroom teachers each summer, at the school and district level. This training is critical to our MAF goal of collaboration that extends the skills of all teachers. Because this training is essential to our goals and to our overall math initiative at the district-level, district Title I funds will be used as a match to grant funds to pay a stipend to the MIT. The stipend is for 40 hours at $25 an hour, totaling $1000 and will come from matching district Title I funds.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0113 | Stipends for Certified Staff | Stipend for MIT to conduct 40 hours of AVMR training for classroom teachers each summer | $0 | $1000 (District Title I) |

- **Certified Substitutes**
  Collaboration and teacher expertise is foundational to our MAF program. MAF grant funds **will only be used <u>to cover direct costs for the MIT.</u>** <u>However</u>**,** school Title I funds will be used to support the MIT's efforts to collaborate with classroom teachers. To support the MAF program, school Title 1 funds will be used to cover substitute costs so classroom teachers may participate in professional development related to MAF. Specifically, matching school Title I funds will pay for substitutes so 5 classroom teachers may attend the KCM Conference (5 substitutes x2 days x $100 a day) Substitute teachers will be provided for classroom teachers to attend professional development, administer AVMR assessments, and/or work with the MIT to disaggregate data and plan for targeted interventions to be used for Tier I instruction during small group time. The substitutes will be at an average rate of $100 per day for a total of **$3600**. The cost of substitute teachers will be paid from school Title I funds. Thus, the total cost for substitutes to promote professional learning for staff will be **$3600** and will be paid from School Title I funds.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0120 | Certified Subs | Certified substitutes for classroom teachers to attend KCM (5 subs/2 days) and to participate in job embedded professional development with the MIT. | $0 | $3600 (School Title I) |

- **Parent Involvement**
  Parent involvement is an important priority for our MAF program. Mathematical games will be purchased and/or created for a school math event and given to the students and parents for home use. Supplies in the amount of $500 will be purchased to make games for the family math event. These supplies will be purchased with school Title I parent involvement funds. 100% of parent involvement costs will be paid with matching funds.

| Munis Code | Item | Explanation of Expenditures | Amt. of Grant Funds | Source & Amt. of Supporting Funds |
|---|---|---|---|---|
| 0892 | Parent Involvement | Games and materials for parent involvement event | $0 | $500 (School Title 1) |

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