



PreK-3 Mathematics Essentials Coaching and Professional Learning Funding Request FY 2021-22

Rationale: Michigan's early math crisis....

Data from the 3rd Grade MSTEP illustrates that over the past 6 years overall student performance on the 3rd grade MSTEP has consistently decreased. In 2014 only 49% of 3rd graders received a score of proficient or advanced, while in 2018 the percentage decreased to 44%. Furthermore, the data shows expanding gaps in math achievement by gender and for students with disabilities, and consistent underperformance in specific subgroups by race and socioeconomics. Michigan has failed to meet the needs of all students.

Early mathematics learning prepares children with the essential foundational skills necessary for success in Algebra I. Algebra I has been referred to as the “gateway” to advanced mathematics. Failure to prepare all students in grades K-3 across the state is limiting students’ ability to engage in STEM-related fields. The impact of this lack of foundational skills is evident in the performance of Michigan students in grades 4-11.

NAEP results do not paint a more favorable picture of Michigan. In 2019 only 36% of Michigan’s 4th grade students scored at or above proficient on the NAEP and Michigan’s national rank on the 4th grade test has declined. Michigan ranked 35th nationally in Grade 4 Mathematics in 2017 compared to 42nd in 2019. This decrease in rank occurred as our average scale score increased by only one point, an indication that Michigan is not keeping pace with the rest of the world on this assessment. In each of these cases, Michigan’s scores were considered significantly below the national public score.

Improving learning in early mathematics has never been more crucial. Students who do well in early mathematics have greater success in math later in school, in school more broadly, and later in the labor market. If we aim to increase student achievement, then we must consider the school-based factor that has the largest influence over student performance: the amount, kind, and quality of mathematics instruction students receive.

In fiscal year 2022 we will assemble the research informed content and tools, articulate the plan, and begin training our audiences to ensure that the resources and skills necessary to address the critical needs in early mathematics are available to every Michigan educator. The planning and development work will provide a strong start, but implementation will require flexibility, additional thinking, and innovation as we scale the plan and adjust to the funding amount, timelines, and needs of our educators and students.

YEAR-1 GOAL: BUILD STATEWIDE CAPACITY FOR RESEARCH INFORMED EARLY MATH INSTRUCTION

Funding Request: \$2 Million for FY 2021-22

Essential Instructional Practices in Early Mathematics: Prekindergarten to Grade 3

<p>Staff and Staff Expenses (\$690,500)</p>	<p>Project Director (1) Project Coordinator (2) Project Admin Support (1) MAISA Staff Support Overhead costs</p>
<p>Resource Development (\$704,500)</p>	<p>Document Support Essential Coaching Practices for Early Math Essential Schoolwide and Centerwide Practices in Early Math Video Module Support Video Modules to support professional learning for the</p> <ul style="list-style-type: none"> ● Essential Instructional Practices in Early Math: Pre-K to Grade 3 ● Essential School-Wide & Center-Wide Essential Practices ● Essential Coaching Practices for Early Math <p>Year 1 Professional Learning Materials</p>
<p>Development of State-Wide System That Drives Implementation (\$180,000)</p> <p>This work establishes a statewide system that:</p> <ul style="list-style-type: none"> ● aligns and provides coherence among the project’s PL components, ● aligns to the statewide work in early literacy, ● maximizes our reach with various 	<p>System Components</p> <ul style="list-style-type: none"> ● Statewide Professional Learning Networks for school administrators and coaches ● Regional Professional Learning Network for ISD and other early math professional developers ● PL for professional developers, teachers, administrators, and coaches ● Digital platform to support professional learning and access to resources ● Progress Monitoring

<p>audiences using technology (Digital PL Platform),</p> <ul style="list-style-type: none"> ● sustainably reduces the inequities that currently exist related to accessing resources and services across the state, and ● provides progress monitoring of implementation over time. 	
<p>Year 1 Implementation (\$425,000)</p>	<p>Professional learning</p> <ul style="list-style-type: none"> ● Implementation of year-1 (entry level) professional learning for <ul style="list-style-type: none"> ○ professional developers (ISD consultants & others) ○ administrators ○ Pre-K to Grade 3 Teachers

YEAR 2 GOAL: INCREASE IMPLEMENTATION TO INCLUDE AT LEAST THESE COMPONENTS

Development

- Deeper Professional Learning Cycles for each audience
- Additional resources and professional learning components to be named

Implement

- ISD early math coaches hired
- Cohort 1 Early Math Coaches Institute
- Professional learning programs for professional developers, teachers, building administrators
- Professional Learning Networks for professional developers, administrators, and coaches