

School Improvement Plan

Middleburg Middle School

Middleburg Public Schools

Goal: All students at Middleburg Middle School will be proficient in mathematics.

Objective:

80% of all students will demonstrate a proficiency in grade level standards and practices in Mathematics by 60/20/2018 as measured by state level summative and formative/interim assessments (currently M-STEP).

Strategy 1:

Math Fact Mastery: Two-minute time assessment (District Fact Fluency) will be given to students to determine who are on benchmark and who are at-risk of declining performance in mathematics. Oral timings may be given to students with fine motor challenges. Students will engage in setting individual goals to meet grade level targets.

Research Cited:

Bloom, B.S. (1986). Automaticity: The Hands and Feet of Genius. *Educational Leadership*, 43(5), 70-77.

Buchholz, L. (2004). Learning strategies for addition and subtraction facts: The road to fluent and the license to think. *Teaching Children Mathematics*, 10(7), 363-370.

Cholmsky, P. (2011). From acquisition to automaticity: The reflex solution for math fact mastery. Retrieved from http://www.reflexmath.com/assets/doc/Reflex_White_Paper.pdf

Gerste, R., Beckmann, S., Clarke, B., Foegen, A., Marsh, L., Star, J.R., et al. (2009). *Assisting students struggling with mathematics: Responses to Intervention (RTI) for elementary and middle schools* (NCEE 2009-4060). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute for Education Sciences, U.S. Department of Education.

Issacs, A., & Carroll, W. (1999). Strategies for basic-facts instruction. *Teaching Children Mathematics*, 5(9), 508-515.

Kling, G. (2011). Fluency with basic addition. *Teaching Children Mathematics*, 18(2), 80-84.

Activity Name: Math Fact Fluency Assessment

Activity Type: Walkthrough, Implementation, Monitor

Activity Description: Students will take part in common fact fluency assessments at each grade level. Implementation Readiness: Common assessments with grade level benchmarks will be created/shared by teachers at each grade level. Implementation Process: Teachers will administer common assessments a minimum of once a week. Monitoring/Evaluating: Teachers will indicate in lesson plans which type of assessments they will be implementing. Walk through observations by administration will verify implementation.

Dates: 9/01/2017 to 06/30/2019 Responsible Staff: MMS Mathematics Teachers, Principal & Assistant Principal

Resource Assigned: \$0 Source of Funding: Title II Part A

Activity Name: Monitor Student Progress

Activity Type: Implementation, Monitor, Evaluation

Activity Description: Students will set individual goals and monitor progress towards these goals. Implementation Readiness: Common learning targets and monitoring sheets will be developed by grade level mathematic teachers. Implementation Process: Students will be provided with monitoring sheets and trained in their use. Monitoring/Evaluating: Each student will set their own learning goals and monitor progress weekly using their goal/monitoring sheets.

Dates: 9/01/2017 to 06/30/2019 Responsible Staff: MMS Mathematics Teachers, Principal & Assistant Principal

Resource Assigned: \$0 Source of Funding: Title II Part A

Strategy 2:

Improving Mathematical Problem Solving: Students who learn to visually represent mathematical information when problem solving are more effective at solving mathematical problems. Students learn mathematics and solve problems better when they monitor their thinking and the problem solving steps as they solve problems. The more students reflect on their problem-solving processes, the better their mathematical reasoning- and their ability to apply this reasoning to a new situation will be.

Research Cited:

Gerste, R., Beckmann, S., Clarke, B., Foegen, A., Marsh, L., Star, J.R., et al. (2009). Assisting students struggling with mathematics: Responses to

Intervention (RTI) for elementary and middle schools (NCEE 2009-4060). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute for Education Sciences, U.S. Department of Education.

Activity Name: Learning to Visually Represent Mathematical Thinking

Activity Type: Monitor, Implementation, Direct Instruction, Evaluation

Activity Description: Students will learn how to use visual representations during the problem-solving process. Implementation Readiness: Determine which visual representations (tables, graphs, number lines, strip diagrams, percent bars, and schematic diagrams) are appropriate for students to use with each grade level/math course and/or type of problem they are solving. Implementation Process: Math teachers will determine which visual representations are to be used during each quarter in 6th, 7th, and 8th grade Math classes at MMS. Monitoring/Evaluating: Teachers will ensure that the visual representations chosen are added to instructional calendars and their use documented in weekly lesson plans. Classroom walk-throughs/visitations conducted by school administration will monitor the problem-solving process and ensure that visual representations are being utilized by students.

Dates: 9/01/2017 to 06/30/2019 Responsible Staff: MMS Mathematics Teachers, Principal & Assistant Principal

Resource Assigned: \$0 Source of Funding: No funding required

Activity Name: Reflecting on the Problem-Solving Process

Activity Type: Walkthrough, Monitor, Direct Supervision

Activity Description: Teachers will assist students in monitoring and reflecting on the problem-solving process. Implementation Readiness: Review research to identify prompts (questions or tasks) that students should use as they complete steps in the problem solving process. Implementation Process: teachers will provide students with a lists of prompts to help them monitor and reflect during the problem-solving process. Monitoring/Evaluating: Evidence of the prompts that students are to be using will be documented in weekly lesson plans and monitored by administration during classroom walk throughs/visitations.

Dates: 9/01/2017 to 06/30/2019 Responsible Staff: MMS Mathematics Teachers, Principal & Assistant Principal

Resource Assigned: \$0

Source of Funding: No funding required

Objective:

85% of all students will demonstrate a proficiency (by reaching benchmark on the Winter I-READY Screener in mathematics by 1/30/2018 as measured by the I-READY Winer Readiness Screener.

Strategy 1:

Differentiation to Supplement Learning- Staff will provide supplemental learning opportunities to students who are identified as not proficient in mathematics or who are identified as at-risk of becoming non proficient in mathematics based on a variety of assessments. In addition, advanced courses will be offered to students to extend their learning.

Research Cited:

Boudett, K., City, E.A., & Murnane, R.J. (2014). Data Wise: A step-by-step guide to using assessment results to improve teaching and learning. Cambridge, MA; Harvard Education Press.

Ainsworth, L. (2007). Common formative assessments: The centerpieces of an integrated standards-based assessment system. In D. Reeves (Ed.), Ahead of the curve: The power of assessment to transform teaching and learning (pp. 79-101). Bloomington, IN: Solution-Tree.

Activity Name: Intervention Outside of Daily Math Instruction

Activity Type: Academic Support Instruction, Technology

Activity Description: Staff will provide instructional interventions to students demonstrating a need through data analysis and collaboration. Learning coaches and interventionists will help facilitate team meetings to ensure outside interventions of daily math instruction align with classroom instruction. The use of IReady to to facilitate this instruction as well as any additional materials necessary to implement this activity, including but not limited to technology resources, are also a part of this activity.

Dates: 9/01/2017 to 06/30/2019 Responsible Staff: MMS Mathematics Teachers, Principal & Assistant Principal, Interventionists

Resource Assigned: \$0

Source of Funding: Section 31A

Objective:

A 20 % decrease of all students will demonstrate a proficiency on M-STEP math assessment by reducing the number of “At Risk” students from 30% (Winter 2017) to 10% (Spring 2018) in math by 6/30/18 as measure by the M-STEP assessments.

Strategy 1:

Differentiation to Supplement Learning- Staff will provide supplemental learning opportunities to students who are identified as not proficient in mathematics or who are identified as at-risk of becoming non proficient in mathematics based on a variety of assessments. In addition, advanced courses will be offered to students to extend their learning.

Research Cited:

Boudett, K., City, E.A., & Murnane, R.J. (2014). *Data Wise: A step-by-step guide to using assessment results to improve teaching and learning*. Cambridge, MA; Harvard Education Press.

Ainsworth, L. (2007). *Common formative assessments: The centerpieces of an integrated standards-based assessment system*. In D. Reeves (Ed.), *Ahead of the curve: The power of assessment to transform teaching and learning* (pp. 79-101). Bloomington, IN: Solution-Tree.

Activity Name: Alternative and Intervention Programs

Activity Type: Academic Support Program, Behavioral Support Program, Technology

Activity Description: Alternative and Intervention programs are offered to students in grades 6-8 who have not succeeded in the traditional middle school setting, or for those who have had challenges with attendance, behavior and academic progress. Various alternative and intervention programs and course specific interventions are offered to students in grades 6-8. These include blended or full-time virtual students, after school campus, and the ombudsman program to work with students who have an identified need based on behavior and academic progress.

Dates: 9/01/2017 to 06/30/2019 Responsible Staff: MMS Mathematics Teachers, Principal & Assistant Principal, Interventionists

Resource Assigned: \$0

Source of Funding: Section 31A