Montgomery County Public Schools Mathematics Interventions Pre-K–12

Interventions in mathematics support student access to and success in the student's course of enrollment. All students need to have access to the grade level focus lesson. During small group independent practice (centers) students can receive intervention to address individual needs (e.g., Fastt Math). Students in need of more support are often enrolled in double period math courses. The second period of the class is an ideal time for intervention to occur since it can be tailored to immediately support the content being studied. Another time for support is during the homeroom period. While each school has a different name and schedule for this time, it is available for consistent and ongoing support. For some students math intervention could be integrated into the scheduled resource time.

The purpose of this document is to provide information to schools about programs that have been reviewed and approved for intervention use by the math unit in the Department of Curriculum and Instruction. In order to be approved as an intervention, a resource must meet the following criteria:

- evidence of alignment to MCPS/VSC curricula,
- inclusion of both an instructional component and practice materials, and
- balance of concept-based and process development.

The first resources listed are K-12, they are followed by secondary, intermediate, and elementary targeted materials. These materials are intended for use by students accessing the general education curriculum. Following this list is a resource approved for students in the Fundamental Life Skills curriculum. Consultation with special education and DCI specialists is encouraged when selecting programs. Implementation of shaded programs is supported by the Division of School-Based Special Education Services.

Instructional Levels	Target Content/Skills	Program	Description	Progress Monitoring
K–12	All content standards	***Understanding Math*** Neufeld Learning Systems Inc. http://www.neufeldmath.com/	• CD-based • Components: *Understanding Numeration* (K–3) *Understanding Math* (4–10) • Teacher-guided instructional program • Tutorial-guided instructional program	Yes
K-12	All content standards	***Math Forum*** Drexel University http://www.mathforum.org/	• Online tool that supports the curriculum, and allows students to write about math • Grade-specific problems and puzzles aligned to state standards and textbooks • Online mentoring for students and teachers	No

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Instructional Levels	Target Content/Skills	Program	Description	Progress Monitoring
6–12	MSDE Core Learning Goals for Algebra/Data Analysis	***Algebra Online*** Maryland State Department of Education(MSDE) http://msde.mdk12online.org	Online lessons for the Algebra/Data Analysis High School Assessment (HSA)	Yes* *Teacher must received training and register class to use progress monitoring tools.
6–12	MSDE Core Learning Goals for Algebra/Data Analysis	***HSA Prep Online*** MCPS http://www.montgomeryschoolsmd.org/curriculum/hsa/	• Students independently access the online website. • Website contains over 180 HSA-type selected response practice questions with hints to solve and feedback on student responses.	No
Grades 3–8	Basic fact mastery and fluency.	***FASTT Math*** Tom Snyder Productions Scholastic http://www.tomsnyder.com/	• CD-based application with teacher manual for intervention lessons. • Recommended **only** if implemented as intended • **Not appropriate for student use below Grade 3**	Yes
K – 8 K – 2 3 – 5 6 – 8	All content standards	***Achieve Now*** PLATO Learning http://www.plato.com/products.	• CD-based in PlayStation® game format Altered PC version (not recommended) • K–5 intervention and challenge • 6–8 intervention and remediation	No

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Instructional Levels	Target Content/Skills	Program	Description	Progress Monitoring
2-6	Elementary: Number relationships and computation; measurement Secondary: Number relationships and computation; statistics; algebra, patterns and functions	***Navigator*** America's Choice http://www.ncee.org/acsd/math/220.jsp	• 20-day modules on specific concepts • Targeted instruction to identify and repair gaps and misconceptions	Yes
2–6	Arithmetic Intervention	***Do the Math*** Scholastic http://teacher.scholastic.com/products/dothemath/	• Arithmetic intervention outside the math block or in after-school program. • Hands-on approach • Uses number sense, student discourse, manipulatives, reflection, games, and literature to build computational fluency	Yes
K–5	All content standards	***Think Math*** Harcourt Math http://www2.edc.org/thinkmath/	• Focuses on use of process standards to learn content standards, with emphasis on problem-solving, reasoning, use of manipulatives, and student discourse • Aligns to Harcourt resource, which recommends it for use before, during, or after the Harcourt lessons for K–5 • Provides parent letters and home practice sheets to explain strategies and tasks to parents	Yes
Grade 4	Number computation for Math 4 students	***Computation Unit*** **Camelot Learning** http://www.camelotlearning.com	• Kit contains 20 folder lessons and limits use to 20 students.	NA

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Instructional Levels	Target Content/Skills	Program	Description	Progress Monitoring
Pre-K–1	Counting, addition, and subtraction	***Number Worlds*** *Levels A–C* SRA The McGraw-Hill Companies http://www.sranumberworlds.com/	• This is a prevention program for early learners. • 30 weeks instruction in whole group setting—focuses more on procedural rather than conceptual learning. • Students have access to the site from any computer; may be used outside the school.	No
Grades 1-4	Number Sense Operations • Addition • Subtraction • Multiplication • Division Place Value Money Word Problems • Join • Separate • Part-Part-Whole Compare	***Expeditions to Numeracy,*** ***A Place-Value-Based Intervention*** Digi-Blocks http://www.digi-block.com	• Place-value intervention program with focus on number sense and operations. • Designed for small group instruction. • Multiple "entry points" to accommodate students at various learning levels. • Requires use of Digi-Blocks. • Structure: Student-explorers travelto *CountOn Country* where they visit important areas of mathematical interest.	Yes

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Instructional Levels	Target Content/Skills	Program	Description	Progress Monitoring
Grades 1-6	Number and Operations: computation Number Sense	*ORIGO Math* http://www.origomath.com c_chapman@origomath.com (Cathy Chapman)'410-476-7489	• Recommended as an intervention program outside the mathematics block of time during the school year (not for use in ELO Summer Program). • Step-by-step approach, which promotes number sense strategies that lead to computational proficiency. • Promotes student-centeredness and hands-on learning with a focus on conceptual understanding. Discourse supported (teacher-to-student, student-to- teacher and student-to-student) as well as student reflection. • Consists of 12 units (each unit contains 5 lessons) with blackline masters included. • Optional supplements not included in basic program (referenced in program) are: student journals, *Figure It*! (computation practice), *Fundamentals* (games for developing mental computation strategies), *Box of Facts* (+,-,x,) containing visual aids and models to develop basic fact strategies, *Think Tank* (problem solving, logical thinking, and reasoning), and *Algebra for All* (4, 5, 6).	Yes
Prek-2 3-5	Number Concepts and Skills	***Math Intervention: Building Number Power with Formative Assessments, Differentiation, and Games Grades Prek-2 and 3-5*** Eye on Education http://www.eyeoneducation.com/products.asp?dept=13	• The focus of this resource is on developing number sense to increase computational fluency. • Two separate books provide formative assessments to diagnose student needs and games to reinforce concepts while building skills. Introduction builds background and explains the importance of the model of instruction. Multiple strategies for assessment and student learning are presented.	Yes

Montgomery County Public Schools Mathematics Interventions Pre-K–12

The following program has been approved for students in the Fundamental Life Skills curriculum.

Instructional Levels	Target Content/Skills	Program	Description	Progress Monitoring
6-12	The conceptual foundations for base 10, pattern recognition, figure recognition, counting, and connections to money are emphasized in this program.	***Above and Beyond*** Digi-Block http://digiblock.stores.yahoo.net/aboveandbeyond.html	• For use ONLY in Fundamental Life Skills classes. The audience for this intervention is disabled students with cognitive disabilities in secondary school. • Scripted instruction with manipulatives to small groups of students.	Yes