

Possible Criteria for Math Program Selection

(assumes that the goal is a program that is sufficiently rigorous and focused to enable students to enroll in Algebra 1 in Grade 8 and meets updated math framework)

Program should:

1. Give equal weight to conceptual understanding, computational/ procedural fluency and problem solving skills.
2. Emphasize proficiency with key topics (depth vs breadth) that facilitate fluency with whole numbers, fractions and particular aspects of geometry and measurement (per the Critical Foundations of Algebra, NMP report , pg 17) and allows the Benchmarks for the Critical Foundations to be met.
3. Concentrate on basic arithmetic concepts and procedures in Grades K-3 that allow students to develop automatic and accurate execution of the standard algorithms and use these competencies to solve problems.
4. Show logical progressions from less difficult or complex topics to more difficult or complex topic w/in a grade and from grade to grade. Any program that spirals by revisiting topics year to year without closure should be avoided.
5. Not give priority to, nor emphasize, small group work or problems contextualized in daily life.
6. Balance teacher-directed instruction with student-centered instruction.
7. Provide quality support for differentiated instruction.
8. Support instructional practices and materials based on the most current, high-quality research.
9. Support the teacher with well-organized, user-friendly material.
10. Promote the integration of technology.
11. Require a realistic amount of time to be dedicated to math instruction. Current 5th grade periods are approx. 50 minutes.

[How to Strengthen K-12 Mathematics Education in Massachusetts: Implications of the National Mathematics Advisory Panel's Report](#), by Sandra Stotsky. Pioneer Institute Policy Brief, [to be] presented at a one-day Pioneer Institute conference, [Mathematics Reform: Implications of the National Mathematics Advisory Panel Report](#), June 16, 2008, in Boston, MA

