

MEDWAY PUBLIC SCHOOLS

Report to the School Committee
PreK-12 Mathematics Curriculum Review

6/4/09

Mathematics Visiting Committee

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Curriculum Review Process

- The district completed a self-study in the spring of 2009 that included the following:
 - PreK-12 draft math curriculum units
 - MCAS, AP, SAT data, surveys of teachers, parents, and students, list of essential questions, list of program strengths and needs, and program overview
 - Surveys from Students, Parents and Teachers

Visiting Team Process

- Visiting team members recommended by superintendents
- Team members were in district for two days
- Team members observed classes, read self-study and curriculum documents, interviewed teachers and students, and met with administrators

Overview of Findings

- Teachers and principals are working hard to implement an effective program, despite limited resources
- The overall math program implementation is inconsistent and materials (texts and support) are both limited and often out-dated
- Lack of curriculum oversight has hampered grade-level articulation and the system has no clear mathematics philosophy of instruction
- There is a strong need for more professional development in mathematics

Technology Findings

- PreK-8 teachers have little technology available to support instruction
- HS technology is in need of some software and hardware upgrades as well as technology implementation training
- Improved use of instructional technology would support improved student achievement in math

Professional Development Findings

- No consistent, standards-based math PD program has been implemented (i.e. differentiation in the mathematics classroom, use of manipulatives, assessment in mathematics, reading and vocabulary development in mathematics)
- Both special education and regular education teachers need more intensive mathematics and technology implementation PD
- Mentoring and support for new teachers is in need of improvement

Assessment Findings

- Increased use of common formative and summative assessments is needed
- Assessment results need to be reviewed by teams of teachers and used to inform instruction
- HS teachers need to implement more consistent grading practices
- PD on math assessment is needed

Special Education Findings

- The replacement math model used for special education students is in need of review and revision.
- The district needs to focus on supporting inclusion and co-teaching models
- There is a need to increase the use of differentiated instruction in all math classrooms, helping both the stronger math students as well as those struggling with math concepts

Program Oversight

- Implementation of a stronger system of supervision and support for mathematics is a strong need in the district
- New mathematics texts/programs are recommended for K-8; successful implementation will require in-district support and coordination

Key Recommendations

- Develop and implement an effective PreK-12 mathematics PD program.
- Complete the vertical articulation of the math curriculum, including annual benchmarks assessments.
- Develop and implement a plan to reduce or eliminate pull-out programs for special needs students.

More Key Recommendations

- Increase technology at the PreK-8 level and improve the use of technology at the high school level.
- Provide appropriate personnel to support improved classroom instruction, analysis of assessments, and institute professional development.
- Implement a new standards-based mathematics program at the PreK-8 level.