

Initiative Plan for Reaching Mathematics Specialist Goal
Madison Metropolitan School District

April 2009

Overview: This model describes how Madison Metropolitan School District (MMSD) will provide professional development to current and future 6th – 8th grade teachers of mathematics. The model creates cohorts of 25 teachers that will receive 210 hours of content focused professional learning over the course of two years. The plan reallocates 1.0 FTE in Teaching and Learning, shifting resource teacher and building teacher ratios and job responsibilities. The plan also requests an additional 1.0 FTE position for full implementation.

Goal: MMSD will design professional development to help teachers further their mathematical content knowledge in order to better meet the needs of the diverse population of MMSD middle school students.

Audience: MMSD will begin with voluntary teachers from across the district. In the first year, MMSD will focus on working with regular education classroom teachers and work to expand this certification process to Special Education and ELL teachers in the future. MMSD will begin by recruiting two or three teachers from each school from various grade levels for Cohort I implementation in the Spring of 2010.

Content Focal Points: Teachers will engage in the study of mathematics to deepen their understanding of the development of number sense and proportional reasoning. Teachers will also study how these arithmetic properties can be abstracted through algebraic reasoning. Throughout the program, problems that are based in Geometry, Measurement, Statistics, and Probability will be incorporated into this focused study on Number and Algebra to show the integration of these various strands of mathematics.

Teacher Incentives for Participation:

- Increased effectiveness in the classroom
- Involvement in collaborative effort to deepen mathematical knowledge
- Fullfill PI-34 Requirements
- (Tentative) Earn University credits and/or Certification that will lead to a Masters Degree
- Increase status on the MMSD pay scale

Timeline:

Fall 2009 -

MMSD Teaching & Learning Staff and local Institute of Higher Education (IHE) Faculty work collaboratively to design a two-year professional development program aimed at deepening the mathematical content knowledge of MMSD middle school mathematics

April 20, 2009

teachers. This design includes a definition of MMSD middle school math specialist, evaluation of program and participant success, content for two years of coursework and coaching model.

MMSD Teaching and Learning Staff advertise and recruit for the first cohort of teachers beginning in the Spring of 2010.

Spring of 2010-

The first cohort of teachers begins work early in the semester. There are four full day content-based workshops offered during the workweek with substitutes provided. In addition, MMSD Teaching and Learning Staff and IHE Faculty support teachers within their individual classroom between each session. This constitutes approximately 28 hours of face to face workshop time and approximately 12 hours of coaching for each participant throughout the semester. Cost of subs: \$19,000

Summer 2010-

The first cohort of teachers participates in a one week 25 hour summer institute with MMSD Teaching and Learning Staff and IHE Faculty. Cost of Facilitators: \$2,750

2010-2011 School Year-

The first cohort of teachers continues to engage in eight content-based workshops and coaching throughout this school year constituting a total of 80 hours of professional development. Cost of subs: \$38,000

Summer 2011-

The first cohort of teachers participates in a one week 25 hour summer institute with MMSD Teaching and Learning Staff and IHE Faculty. Cost of Facilitators: \$2,750

Fall 2011-

The first cohort of teachers finishes the program with four additional workshops and ongoing coaching in the classroom. Cost of subs: \$19,000

Subsequent Cohorts:

In the fall of 2010, MMSD Teaching and Learning Staff advertise and recruit for the second cohort of teachers beginning in the Spring of 2011 following the same two year plan as described in the first cohort. This cohort will end in the Fall of 2013 Each subsequent spring a new cohort of teachers will begin the two year program. In total the program will consist of approximately 210 hours of professional development for each participating teacher. Costs will be structured the same as the first cohort described above and will be an on-going cost until full implementation of math specialists in all classrooms.

Roles: For full implementation of the middle school mathematics specialist professional development plan, two resource teachers will be assigned to the project. One resource teacher will have in-depth knowledge of K-8 mathematics, with a particular focus on the development of number sense and proportional reasoning. The other resource teacher

will have in-depth knowledge of 6-12 mathematics and in particular, the development of proportional reasoning and algebraic reasoning.

Two cohorts of 25 teachers running concurrently will require 16 days of professional development sessions throughout the year. These sessions will require at least 16 days of collaborative planning with the local university representatives. In addition, between professional development sessions, these resource teachers will be providing a minimum of 48 hours of in-class support for each participating teacher in implementation of new mathematics content knowledge gained during the professional development sessions.

This project requires the full attention of 2.0 FTE in mathematics. 1.0 FTE is being reallocated from the current K-5 Mathematics Team in Teaching and Learning and 1.0 FTE is being requested in addition to the current structure. The allocation of all mathematics resource teachers is described in the attached spreadsheet. In order to deepen the mathematics content knowledge of MMSD middle school math staff this will require the expertise possessed by the District's 9-12 resource teacher. If an additional FTE is not provided, there will be a significant impact on the implementation of Recommendations #6, 9, 11, and 12 at the high school level.

Costs:

2009-2010 –

• Substitute Funding-	\$19,000
• Additional FTE-	\$75,000
• Evaluator-	\$2,500
Total	\$96,500

2010-2011 -

• Substitute Funding-	\$57,000
• Additional FTE-	\$75,000
• Evaluator-	\$2,500
• Summer Institute-	\$2,750
Total	\$137,500

2011-2012 and Ongoing

• Substitute Funding-	\$76,000
• Additional FTE-	\$75,000
• Evaluator-	\$2,500
• Summer Institutes-	\$5,500
Total	\$159,000

Math Task Force Implementation Resource Needs

Ratios represent Mathematics Division Resource Teachers to Assigned Building Teachers

All initiatives by all staff will address Recommendation # 7 Reducing the Achievement Gap

Current T + L Structure	Primary Responsibilities	With Additional FTE	Primary Responsibilities	Without Additional FTE	Primary Responsibilities
T + L K-5 FTE 1:156	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eight schools Focal Project: Assessments Recommendation #8	K-8 FTE 1:25	In collaboration with local university, design and facilitation of mathematics courses for middle school mathematics staff and 5th grade staff within the cohort groups. Recommendations #1-5	K-8 FTE 1:25	In collaboration with local university, design and facilitation of mathematics courses for middle school mathematics staff and 5th grade staff. Recommendations #1-5
T + L 6-8 FTE 1:120	Middle school teacher and program support Focal Project: Facilitate building based teacher workshops on the development of assessments and accommodations in partnership with Educational Services. Recommendations #6,9,11,13	6-8 FTE 1:70	Middle school teacher and program support Focal Project: Facilitate building based teacher workshops on the development of assessments and accommodations in partnership with Educational Services. Recommendations #6,9,11,13	6-8 FTE 1:70	Middle school teacher and program support Focal Project: Facilitate building based teacher workshops on the development of assessments and accommodations in partnership with Educational Services. Recommendations #6,9,11,13
		New position 6-12 FTE 1:25	In collaboration with local university, design and facilitation of mathematics courses for middle school mathematics staff within the cohort groups. Recommendations #1-5	6-12 FTE 1:25	In collaboration with local university, design and facilitation of mathematics courses for middle school mathematics staff Recommendations #1-5
T + L 9-12 FTE 1:60	High school teacher support and program development via the implementation of the high school core resource plan Recommendation #6, 9, 11, 12	9-12 FTE 1:60	High school teacher support and program development via the implementation of the high school core resource plan Recommendation #6, 9, 11, 12	NO FTE	

Current T + L Structure	Primary Responsibilities	With Additional FTE	Primary Responsibilities	Without Additional FTE	Primary Responsibilities
T + L K-5 FTE 1:156	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eight schools Focal Project: Core Resource Phase II Implementation Recommendation #6	K-5 FTE 1:207	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eleven schools Focal Project: Core Resource Phase II Implementation Recommendation #6	K-5 FTE 1:207	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eleven schools Focal Project: Core Resource Phase II Implementation Recommendation #6
T + L K-5 FTE 1:156	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eight schools Focal Project: Website Support System and Software Review Recommendation #6, 8, 10	K-5 FTE 1:207	Instructional Resource Teacher support via weekly professional development sessions and in-building support for ten schools Focal Project: Website Support System, Assessments and Software Review Recommendation #6, 8, 10	K-5 FTE 1:207	Instructional Resource Teacher support via weekly professional development sessions and in-building support for ten schools Focal Project: Website Support System, Assessments and Software Review Recommendation #6, 8, 10
T + L K-5 FTE 1:156	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eight schools Focal Project: Development and Implementation of Intervention Systems Recommendation # 8 and 12	K-5 FTE 1:207	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eleven schools Focal Project: Development and Implementation of Intervention Systems Recommendation # 8 and 12	K-5 FTE 1:207	Instructional Resource Teacher support via weekly professional development sessions and in-building support for eleven schools Focal Project: Development and Implementation of Intervention Systems Recommendation # 8 and 12