

Regular Board Meeting – May 17, 2011

SUBJECT: UPDATE IN MATHEMATICS IMPLEMENTATION

Introduction

The Mathematics Learning Team completed a set of recommendations to guide the development of a revised mathematics curriculum for District 68 in December, 2010. Utilizing the recommendations, a K-8 Mathematics Implementation Team was formed last December to develop and implement a new curriculum based on the criteria enumerated by the Mathematics Learning Team.

K-8 Implementation

With the guidance of our consultant for mathematics, Fern Tribbey, vertical and horizontal articulation of the curriculum was established by convening the K-5 teacher leaders representing each elementary grade level and the 6-8 teachers from the mathematics department to organize and prioritize the Common Core Standards in Mathematics adopted by the state of Illinois and forty-seven other states around the country. Areas of emphases were determined at each level and redundancy was reduced in order to establish focus for each grade. The final set of priority standards was compared with curricular maps developed by other districts and reviewed by our consultant for completeness.

At the same time, recommendations from the Mathematics Learning Team involving problem-solving skills with global applications, a balanced approach in addressing mathematics, developmental appropriateness, common vocabulary throughout all grade levels, common formative and summative assessments, integrated math strands, and embedded technological applications were utilized to review various new mathematics programs.

Two series, *Math in Focus* and *Math Expressions* were selected for piloting by the teacher-leaders in grade K-5 because they met the developed criteria at over 90%. At the completion of the piloting period, *Math in Focus*, which is referenced globally as “Singapore Math,” was selected. *Math in Focus* follows an instructional process of moving from concrete illustrations, to pictorial representations, and finally to abstract formulas. Problem-solving with real world applications is incorporated throughout the lessons. Interactive technology is included. Full implementation of the K-5 mathematics program will commence in the fall of 2011. Professional development activities began this past April, 2011, with each grade level introduced to the curriculum; another session will follow in June. In 2011-12, monthly professional development sessions will continue including demonstration lessons by *Math in Focus* professional developers and integration of technology will be led by our instructional technology director, Jen Anderson. Both re-teaching strategies for students experiencing challenge in math and enrichment for those who master the concepts more quickly are included in the organization and delivery of this curriculum. The transition from the current *Bridges* and *Trailblazers* programs to *Math in Focus* is aided by resources available to teachers on the internet. For example, a fourth grade teacher may return to third or second grade lessons to scaffold a concept for students who are struggling with foundational skills and supplement explanations with materials students may use to fill-in gaps. It is important to note that by fourth/fifth grade, the level of the new Common Core Standards is approximately one grade higher than current American mathematics programs. With the new Common Core standards

scheduled to be assessed in 2014-15, it is important to begin the process of increasing the challenge in mathematics by about one-third each year to approach the raised performance benchmark by 2015. A parent meeting will be held in October, 2011, with consultants from *Math in Focus* to foster familiarity and understanding of the new curriculum. A *Home and School Connections* component of *Math in Focus* is incorporated in the program and will be highlighted.

In grades 6-8, a similar procedure was followed to develop a curriculum for implementation next fall. During the process, it was discovered that publishers had not yet migrated to the new Common Core standards. In fact, we were examining texts labeled at one grade higher than the current level to equal the rigor of the new Common Core Standards. The decision was made to postpone implementation at grades 6-8 for 2011-12. The same procedures used in K-5 will commence again next year; piloting will occur in April-May, 2012, and the new curriculum is scheduled to begin in the fall of 2012. It is noted that with the extra year before implementation begins at OOJH, students in grade 5, and all students in the lower grades, will begin to experience the increased level of rigor expected by 2015. Similarly, grade 6-8 mathematics and special education teachers met in April and will meet again in June to modify their existing curriculum to increase expectations by approximately one-third so that when the transition takes place to the new 6-8 curriculum in fall, 2012, students are more prepared.

RtI Interventions in Mathematics

Two researched-based intervention programs, *Destination Math* and *Math Triumphs*, will be piloted next year in grades 1-5 and 6-8 respectively. *Destination Math* is a web-based program that will be offered to students twice per week for an eight to ten week period each trimester before or after school in each K-5 school. The program will target the lowest performing 10-15% of students and parents will receive information in the fall regarding the participation of their child in the intervention. Classroom teachers will select math strands for intervention emphasis based on current units of instruction. Performance will be monitored using the *Learning Management System* embedded in the program.

At OOJH, the *Math Triumphs* program will be piloted. Approximately 30-35 students will be served during a math lab period within the school day as has been the practice in the last four years. A *Learning Management System* is also embedded.

As the RtI intervention pilot concludes, its effectiveness in relation to both student performance and alignment with *Math in Focus* and the newly selected program in 6-8 math will be evaluated by teachers and administrators.

Conclusion

The new mathematics curriculum will be implemented for K-5 beginning in the fall of 2011 and will include professional development activities monthly through March, 2012. Parents will be informed of features of the program through written communications and a parent meeting. In grades 6-8, implementation of the new curriculum will begin one year later after programs have been analyzed in relation to the new Common Core Standards. Supporting the new curriculum will be the piloting of aligned RtI intervention programs in Grades 1-5 and 6-8.