Mathematics Program Review Update May 2012
Topics

• Process

• Recommendations:
  – K-8 Resources and Training
  – Algebra and beyond Resources and Training
  – Class/Course Offerings for 2012-13
### Committee Members

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Purpose of Program Review

To assist in developing a comprehensive plan to ensure students meet or exceed the K-12 Common Core Mathematics Standards.

This means students will be career and college ready when they graduate from high school.
Key Accomplishments

- Staff Needs Assessment
- Research on best practice in mathematics
- Refinement of Vision & Guiding Beliefs
- Creation of Selection Criteria for new resources
- Review of resources
# Program Review Process

## Screening Criteria

### Core Content
- Materials must meet and exceed Common Core Standards.

### Differentiation
- Tiered toolkits to support differentiation
- Response to Intervention clearly described
- Resources that allow teachers to easily provide support for deficiencies

### Effectiveness of Assessment Tools
- Formative Assessments
- Vocabulary aligned to Common Core
- Pre/Post Summative Assessments
## Mathematical Practices
- Home Connections that offer ways for parents to help
- Strong practice and homework component
- Strategies for solving problems
- Cooperative Learning

## Quality Materials
- Inviting, easy to use; flexible and appropriate
- Real World Problems
- Reasonable for teacher planning and preparation

## Balance of Approach
- Conceptual thinking with a balance of practice
- Balance of group and individual work
- Focus on problem solving
- Builds fluency in mathematical skills and processes
Screening Criteria

Teacher Resources & Support

✓ Professional Development Embedded/Readily Available
✓ Notes for teachers that explain critical components of a unit
✓ References skills previously taught

Technology

✓ Resources that support differentiation
✓ Well developed assessment, remediation and online student support with record keeping
✓ Easy to use media support aligned to text and content core
✓ Exam edit software
✓ Fluency and goal setting
Resources K-8

- Delay adoption until 2013-14
- Focus on transition to CCSS
  - Provide in-depth training on mathematical practices and content of the new standards.
  - Participate in State and ESD training.
  - Develop and provide training for all K-8 math staff.
Recommendations: Course/Class Offerings

• Sakai/Woodward - Increase the number of students accessing higher level course work at earlier grades.
The Need

• Greater challenge for our students
• MAP testing confirmed sense that we had more students ready to accelerate
• Having small number of 6th graders walk over to Woodward is a disincentive
• Emphasis on STEM
• Side benefit: enrollment draw (we screened qualified home and independent school students who are considering Sakai for next year)
The Planning

- Internal discussions with our math teams
- Coordination with Woodward, including agreeing on common procedure for testing 5th graders consistent with 6th graders
- On-going checks between Woodward and Sakai
- Collaboration between and commitment of Sakai math teachers
- Multiple Excel spreadsheets (thanks Debbie Oliver!)
The Selection Process

• Initial criteria used by teachers: 1) High MAP score; 2) Highly Capable in Math; 3) Consistently good classroom performance; 4) Participation in extra math such as Math Olympiad.

• Also accepted: parental nominations after phone call with DOS.

• High Score on IAAT Test

• Final Review/Adjustments
Communication

- Multiple announcements/articles in the COHO Connection throughout the process [http://www.bisd303.org/Page/4078](http://www.bisd303.org/Page/4078)
- Announced at 4th grade parent night
- Letters home to parents of all students initially nominated by MAP scores/teachers [E:\Letter inviting 5th graders to test Spring 12.doc](E:\Letter inviting 5th graders to test Spring 12.doc)
- Individual teacher-parent and DOS-parent phone calls and e-mail
- The family of every student who was screened will receive a placement letter
- Assurance that not “qualifying” is not failure
How it will look

• One 7th grade math class
• Students will be integrated within an existing 6th grade team (won’t travel together all day as a pack)
• Assumption that these students will automatically be placed in 7th grade algebra at Woodward
• Other students will still be able to test for 7th grade algebra next Spring
• Textbooks will be borrowed/used from Woodward
The Future

- More effective differentiation in 6th grade math classes
- More than one 7th grade math class?
- A 6.5 math class?
- A 6th grade math class in 5th grade (or 5.5)?
- More 7th grade algebra at Woodward and potential need for greater range of advanced math offerings at BHS
Recommendations:
Course/Class Offerings

• **BHS**- New Advanced Placement Computer Science
Resources Algebra & Beyond

- Geometry (H): Jacobs—Geometry (3rd Edition)
Resources

• Pre-Calculus: Larson—Precalculus with Limits
• Pre-Calculus (H): Demana, Waits, Foley & Kennedy—Precalculus
• Calculus: Stewart—Calculus 7th Edition
Resources

• AP Statistics: Peck, Olsen, Devore—Introduction to Statistics and Data Analysis
• AP Computer Science: Reges & Stepp—Building Java Programs (2nd Edition)
• AP Calculus: Larson & Edwards—Calculus (AP Edition)