

HIGH SCHOOL MATH CURRICULAR INDEPENDENT REVIEW

SUMMARY OF POLICY ISSUE /STATE BOARD OF EDUCATION (SBE) STRATEGIC PLAN GOAL

The State Board of Education has been reviewing OSPI's work on the development of new math standards and curriculum aligned to those standards. This work is related to the Board's goal of improving achievement for all students.

BACKGROUND

The Legislature requires the Superintendent of Public Instruction to present to the SBE "no more than three basic mathematics curricular each for elementary, middle, and high school grade spans" (2SHB 2598 section 7 (a) from the 2008 legislative session) within six months of the adoption of the math standards. Within two months after the presentation of the recommended curricula, the SBE "shall provide official comment and recommendations to the Superintendent of Public Instruction regarding the recommended mathematics curricula. The Superintendent of Public Instruction shall make any changes based on the comments and recommendations from the State Board of Education and adopt the recommended curricula" (2SHB 2598 section 7 (b)).

At the January 2009 Board meeting, the Superintendent's Office presented the Board with its recommendations for up to three high school programs that are best aligned with the new 9-12 math standards. They recommend three "bundled" programs that cover Algebra I, Geometry and Algebra II. Two of the programs are traditional programs: Holt and Discovering. A third program, CORE Plus Mathematics, is an integrated program. The OSPI review of alignment of content and other factors to the new high school math standards was over 80% for the two traditional programs and 78% for the integrated series. In a recent survey done by OSPI, it was noted that approximately 56% of high school students use a traditional series and 36% use an integrated series. (SBE staff is unclear about the 8% not included). For the Holt series 3% of the state's students are using it, 7% are using the Discovering series, and 16% are using the Core Plus Mathematics series.

SBE staff and Steve Floyd, Board lead, directed Strategic Teaching to look at these three recommended OSPI programs as well as one additional traditional program, Glencoe McGraw Hill, which was highly ranked (composite score also over 80%) in the event that one (or more) of the programs is found to be inadequate. Strategic Teaching will not do a content alignment analysis as the OSPI review was deemed complete. Instead, Strategic Teaching has hired an additional mathematician, Dr. Guershon Harel to assist Dr. Steve Wilson in a review of key mathematical soundness for key standards. These will include:

- (Algebra I) A1.4.B: *Write and graph an equation for a line given the slope and the y-intercept, the slope and a point on the line, or two points on the line, and translate between forms of linear equations.*
- (Algebra II) A2.3.A: *Translate between the standard form of a quadratic function, the vertex form, and the factored form; graph and interpret the meaning of each form.*
- (Algebra II) A2.1.C: *Solve problems that can be represented by quadratic functions, equations, and inequalities.*
- (Geometry) G.3.A: *Know, explain, and apply basic postulates and theorems about triangles and the special lines, line segments, and rays associated with a triangle.*

The SBE met with its Math Panel on January 27 to obtain its feedback. Linda Plattner, from Strategic Teaching, agreed to include one additional standard for the four programs under review: Algebra I: A1.1.b. Solve problems that can be represented by linear functions, equations and inequalities and she will also consider reviewing: Algebra II: Solve quadratic equations and inequalities, including equations with complex roots. There will be one final meeting of the Math Panel on March 3 where Strategic Teaching will present its draft findings for feedback.

Strategic Teaching will present its findings to the Board at the March meeting. This will conclude the two year work and two contracts (\$374,900 for the standards review and \$134,200 for the curriculum review) that Linda Plattner of Strategic Teaching has done for the Board on reviewing the old math standards, the new math standards and the alignment of current Washington math programs to the new math standards.

EXPECTED ACTION

After the Strategic Teaching presentation, the Board will take public comment and determine what to recommend to the Superintendent on the high school math programs. A draft recommendation will be provided at the Board meeting.