

Larkspur School District
Office of the Superintendent

Date: April 22, 2009
To: Board of Trustees
From: Superintendent, Valerie Pitts, Principals Marilyn Clark and Daniel Norbutas
Re: Action: Curriculum and Instruction Report – Math Adoption Update and BP 6142.92 - Mathematics

Background

The California State Department of Education has recommended a schedule for adoption of K-8 instructional materials. According to this document, Math textbooks were to be reviewed and new State Board of Education (SBE) approved standards-based texts were/are to be adopted during the 2008-09 school year.

Analysis

Hall Middle School (7th and 8th grades) reviewed and piloted SBE-approved Math textbooks during the 2008-09 school year. Neil Cummins and Hall (K-6) reviewed and piloted SBE Math textbooks during the 2007-08 school year. The Committees have recommended the following standards-aligned textbooks:

- K-1 Everyday Math, University of Chicago School Mathematics Math Project Publishers
- 2-5 California Math and Expressions, Houghton Mifflin Harcourt School Publishers
- 6-7 California Mathematics, Holt Rinehart Winston Publishers
- 8 Algebra Connections, Grade 8. College Preparatory Math, CPM Educational Program Publishers

Rationale for the materials being recommended is attached from Neil Cummins and Hall Middle School. Megan Kelly, Chair of the Math Adoption Curriculum Committee, and Principals Norbutas and Clark will present the process and recommendations at the April 22, 2009 Board Meeting.

Financial Impact

According to the Williams settlement, districts are to ensure that each student has access to standards-based instructional materials and texts.

The District annually receives an enrollment-driven allocation for Instructional Materials/ Textbooks. The total cost of the Math adoption charged to the 2008-09 budget to date was \$19,700. The cost of the Math adoption K-6 will be approximately \$50,000, and will be charged to the 2009-10 budget.

Recommendation

The Superintendent recommends Trustees approve the adoption of the above-referenced Math textbooks for K-5 and 6-8 use.

Math Adoption 2009
Hall Middle School

Recommendation and Rationale

Fifth Grade: California Math, Houghton Mifflin Harcourt School Publishers

Houghton Mifflin is a strong, well-rounded curriculum. It includes excellent manipulatives that allow students to interact with the curriculum. Its structure includes short chapters that support teachers in assessing smaller concepts more frequently. It differentiates very well and includes challenge problems and leveled word problems on homework. Included in the curriculum is an online component so families can access it at home.

Transition to Sixth Grade

Houghton Mifflin is similar to Holt in its structure, presentation and vocabulary. Therefore, transition is expected to be easy for students.

Grades 6 and 7: California Mathematics Grade 6 -7, Holt Rinehart Winston Publishers

- Very clean layout (neat and easy to read)
- Standards-based (each lesson identifies standards addressed)
- Precise, mathematically throughout
- Presentation of a challenging curriculum
- Online tutorial videos for every example in text
- Entire text accessible online
- Answers to odd-numbered exercises provided in back of text
- Resources available for differentiated instruction
- Good test preparation materials included
- Good job of spiraling (topics revisited periodically)

Transition to Eighth Grade

The mathematics department strives to develop the mathematical power of all students, the ability of students to apply techniques and skills learned to novel and non-routine problems and situations. If a student's ability to do well in a math course is dependent on the format, layout, and structure of a particular text, then we have not done our job. We anticipate no problems with having students transition from Holt in grades 6 and 7 to CPM in 8th grade algebra. We see the different approach CPM offers as a positive, not a negative. A different look will increase a student's flexibility and facility in mathematical thinking.

Eighth Grade: College Preparatory Math (CPM)

CPM Educational Program

Grade Eight

Algebra Connections

CPM offers a deep curriculum that can be accessed from a variety of levels. Its design facilitates differentiation. CPM focuses on teaching basic skills and procedures, conceptual understanding, and problem-solving strategies (ways of thinking mathematically). It also has online skill support and homework help.

Math Adoption 2009
Neil Cummins Elementary

In accordance with the California Curriculum Adoption Calendar, a mathematics adoption committee was formed to review and pilot materials to support instruction of the essential standards at each grade level. Our purpose was to use an objective procedure focused on determining which materials would provide our students with clear instruction, hands-on activities, and materials which would support and develop all students' understanding of foundational mathematics concepts.

A team of teachers at each grade level reviewed our present level of performance. While many of our students are performing strongly on state assessments, others are not. Boys are not performing as strongly as our girls, but of even greater concern is the fact that our subgroups (Latino, SES, ELL, students with disabilities) are lagging behind. It was of utmost importance to us that teachers would be provided with materials to support *all* learners – those who need extra support, those making grade level progress, and those who need enrichment and challenge. As is so often the case, we found that specific publishers are stronger at some grade levels than others. As a result, we are bringing forward the publishers that we feel will provide the best instructional program for our students. Because more than one publisher is being recommended, we have teams of teachers at grades 1 and 2 who will work cooperatively to determine the key vocabulary, formats, and instructional strategies of each program. They will develop an action plan for their colleagues so that instruction at those grade levels will provide a smooth transition for our students.

Recommendation and Rationale

Everyday Mathematics, University of Chicago School Mathematics Math Project
Publishers, Kindergarten and Grade One

Everyday Math from the University of Chicago School Mathematics Project and Houghton Mifflin *Expressions* are innovative math programs that embrace hands-on instruction and continuously spiral instruction of math concepts. It is our recommendation that kindergarten and grade 1 implement *Everyday Mathematics*. This is a program developed by the University of Chicago, and it is highly appropriate for young learners in that there is daily use of manipulatives, multiple ways of approaching the same concept, and the use of many modalities (movement, dance, rhythm, chanting/singing, listening, and visualizing) to engage all learners. Concepts are approached with a planned spiral, providing multiple opportunities throughout the course of the year to interact with key concepts. This spiral is intended to keep concepts current, provide frequent opportunities for students to deepen/gain understanding, and for teachers to continually observe and assess student progress toward grade level goals.

California Math, Houghton-Mifflin Harcourt School Publishers
Grades Two – Four

For grades 2-4, we recommend Houghton-Mifflin *Expressions*, which provides a program that is a nice bridge between *Everyday Mathematics* and the Holt materials they will encounter at

middle school. *Expressions* allows for more time on each concept. Each lesson provides a different way to engage learners with varied approaches to the topic. This provides students who need more time to develop understanding with that opportunity, but the different approaches keep those who have already grasped the basic understanding challenging new ways to interact with the material. There is also a spiral built into this program, while still maintaining focused, discrete units of study. These concrete units develop problem-solving skills and promote abstract thinking. Assessment is a key component of any well-designed curriculum, and there are multiple ways for teachers to be aware of student progress/understanding. This will facilitate differentiated instruction focused on the needs of students--whether for intervention, additional grade level practice, or enrichment.