

ANCHORAGE SCHOOL DISTRICT  
ANCHORAGE, ALASKA

ASD MEMORANDUM #173 (2007-08)

January 28, 2008

TO: SCHOOL BOARD

FROM: OFFICE OF THE SUPERINTENDENT

SUBJECT: ELEMENTARY MATH MATERIALS RECOMMENDATION

*ASD Goal: Increase student academic achievement using data to guide adoption of curriculum, methods, maters and professional development specifically designed to ensure that each group as designated by No Child left Behind makes adequate yearly progress.*

RECOMMENDATION:

It is the Administration's recommendation that the School Board approve the adoption of the 2007 edition of Everyday Math as the math curriculum for grades K-6.

PERTINENT FACTS:

In 2005-2006, the Anchorage School District began a series of review processes to evaluate various components of its current math programs and materials. The following initiatives were part of this sequential timeline:

|               |   |
|---------------|---|
| 2005-2006     | K-12 Math Evaluation                      |
| 2006-2007     | K-8 Curriculum Review Survey              |
| April 2007    | K-8 Curriculum Review                     |
| May 2007      | Middle School Curriculum Materials Review |
| November 2007 | K-6 Curriculum Materials Review           |

Each of these initiatives had a specific purpose and involved the expertise and knowledge of numbers of representative stakeholders. The many facets of this elongated process ensured that it was transparent, inclusive and founded on the ownership of instructional staff. Dates, specific purposes, and participants are included in Attachment A.

During four days in November 2007, teachers from every elementary school, elementary principals, and participants from charter schools, Indian Education, special education, middle schools, bilingual education, Title I and the math

department staff reviewed seven curricula. Rubrics developed by ASD teaching staff from current research in best practices were used as the basis for a four-tiered evaluation tool. The evaluation tool is included as Attachment B. An analysis of survey data revealed certain areas of concern for ASD teaching staff. The 2007 edition of Everyday Math specifically addresses these areas:

- Language specific materials and differentiated lessons better address the needs of our diverse student population, including English Language Learners and low-performing students.
- Parents are provided with more information and tools to assist with student learning at home.
- A variety of embedded assessments allow teachers to more accurately and consistently monitor progress on Grade Level Expectations.
- The 2007 edition of Everyday Math includes more explicit skill practice throughout.
- Continuity of instruction is key to the successful achievement of our highly transient student population. This continuity is facilitated by a single district-wide curriculum.

Results from the K-6 Curriculum Review were compiled and analyzed by the Assessment and Evaluation Department. These results are included in Attachment C. An analysis of these results indicate the 2007 edition of Everyday Math is the curriculum that best fits the criteria designated by the evaluation tool.

CC/RG/ES/PM

Attachments

Prepared by: Enid Silverstein, Executive Director, Curriculum and Instructional Support  
Patricia McRae, Executive Director, Elementary Education

Approved by: Rhonda Gardner, Assistant Superintendent, Instruction

## Timeline of Review Processes

|              | Math Evaluation   | K-8 Curriculum Review Survey   | K-8 Curriculum Review 2006-07   | Curriculum Materials Review- Middle School  | Curriculum Materials Review K-6  |
|--------------|---|--|---|---|--|
| Dates        | 2005-06   | December 2006-February 2007  | April 11, 12, 24, 25  | May 2007  | November 2007  |
| Purpose      | Identify factors associated with high math performance                                      | Survey questions addressed the following topics; meeting the needs of all students, adopted and supplemental curriculum materials, curriculum content, parent component, transitions, and general math support | Examine the curriculum in a K-8 context, build a common knowledge base about district demographics, study current research on best instructional strategies, establish rubrics, analyze data of the Curriculum Review Survey, use rubrics to perform a fit-gap to identify strengths and weaknesses | Use the rubric evaluation tool (developed based on research of best practices in learning, teaching, assessment, and content) to examine various standards-based curricula and select the best fit to ASD's needs | Provide a demographic context, analyze grade level data summaries from the 2006-2007 Curriculum Review Survey, use rubric tools to examine/rate standards-based materials samples and those in current use in the district |
| Participants | 50 schools (33 elementary, all middle and all high schools; 593 teachers and 42 principals) | Teachers from 30 randomly selected elementary schools and all middle school math teachers  | 20 elementary teachers, 20 middle school teachers, 3 Special Education teachers, 1 Indian Education tutor, 2 bilingual teachers, 1 Special Education  | Materials were examined at each middle school by parents and teachers   | K-6 representatives from all elementary schools, 10 combination class teachers, 9 principals, staff  |

## Timeline of Review Processes

|  |  |  |   |  |  |
|--|--|--|---|--|--|
|  |  |  | Teacher expert, 4 math support teachers, the math coordinator, 1 elementary principal, 1 middle school assistant principal, 1 middle school principal |  | from 2 charter schools, 4 bilingual staff, 3 Indian Education staff, 4 Special Education staff, 4 Title I teachers, 3 parents, math coordinator, math support teachers |
|--|--|--|---|--|--|

ASD K-8 Mathematics Program  
Elementary Materials Review

TEXT: \_\_\_\_\_ GRADE: \_\_\_\_\_  
PUBLISHER: \_\_\_\_\_  
NAME OF REVIEWER: \_\_\_\_\_  
DATE: \_\_\_\_\_

|                                 |   |   |   |   |
|---------------------------------|---|---|---|---|
| Overall rating (complete last): |   |   |   |   |
| Student                         | 4 | 3 | 2 | 1 |
| Teacher                         | 4 | 3 | 2 | 1 |
| Content                         | 4 | 3 | 2 | 1 |
| Assessment                      | 4 | 3 | 2 | 1 |

- The curriculum materials will be reviewed using the student, teacher, content, and assessment rubrics developed by the K-8 Mathematics Curriculum Review committee.
- After you finish completing pages two and three, give an overall rating for each of the four categories (see above).
- Please complete a separate form for each series you review

|                            |
|----------------------------|
| <b>Rating Scale</b>        |
| 4 Exceeds standard         |
| 3 Meets standard           |
| 2 Partially meets standard |
| 1 Does not meet standard   |
| NA Not applicable          |

## I. Student Lens

| The materials provides the following for the needs/rights of students:  | Rating<br>4,3,2,1 | Comments |
|---|-------------------|----------|
| a. The purpose of learning, including objectives, standards, goals, criteria and evaluation rubrics are clear for students  |                   |          |
| b. Students can choose from a variety of strategies to explore, solve, and communicate math concepts  |                   |          |
| c. Students are engaged through a variety of activities which may include independent projects, cooperative learning, manipulatives, technology, collaborative work, etc. |                   |          |
| d. Students have opportunities for self-monitoring and self-reflection  |                   |          |
| e. Materials make connections to real life applications   |                   |          |
| f. There is support for individual learning levels  |                   |          |

## II. Teacher Lens

| The materials provide support for the teacher to:  | Rating<br>4,3,2,1 | Comments |
|--|-------------------|----------|
| a. use a variety of instructional and assessment strategies (differentiated instruction, cooperative learning, exploration & learning extensions, use of manipulatives and technology, and other best teaching practices). |                   |          |
| b. clearly state classroom expectations, and content and language objectives.  |                   |          |
| c. communicate with parents.   |                   |          |
| d. understand the pedagogy, content, and vertical alignment of curriculum).  |                   |          |

### III. Content Lens

| The materials:   | Rating<br>4,3,2,1 | Comments |
|--|-------------------|----------|
| a. align with ASD standards: Numeration, Measurement, Estimation & Computation, Functions & Relationships, Geometry, Statistics & Probability, Problem Solving |                   |          |
| b. bridge the gap between elementary and middle school.  |                   |          |
| c. provide clearly stated content and language objectives and a suggested pacing guide.  |                   |          |
| d. provide options to meet the needs of a variety of students.   |                   |          |
| e. provide opportunities for interdisciplinary connections.  |                   |          |
| f. integrate the use of technology in the classroom to develop and maintain conceptual understanding.  |                   |          |
| g. provide an online component for teachers, students, and parents.  |                   |          |
| h. provide opportunities for students to process, reflect, justify, and communicate their understanding.   |                   |          |
| i. provide opportunities for students to revisit, maintain, and apply previous knowledge.  |                   |          |
| j. are designed to promote self-direction and self-monitoring.   |                   |          |
| k. will provide students with the opportunity to move conceptual understanding from concrete to abstract with the use of manipulatives.                        |                   |          |
| l. provide parental support for student learning.  |                   |          |

### IV. Assessment Lens

| The materials provide support for  | Rating<br>4,3,2,1 | Comments |
|--|-------------------|----------|
| a. Assessments to be aligned to ASD and Alaska GLEs.   |                   |          |
| b. Evaluation criteria to be given to students prior to assessments.   |                   |          |
| c. A variety of methods to be used to assess student learning.   |                   |          |
| d. Formative assessment to be diagnostic and ongoing. It will provide data to guide instruction and give specific feedback to students to allow for self-adjustment. |                   |          |
| e. Benchmarks to be used to periodically check on student and class progress and trends.   |                   |          |
| f. Summative assessment that incorporate performance-based projects and skills level competencies.   |                   |          |

**K-6 Math Materials Review Survey, November 2007**

**Table 1:** Teachers Mean Response to Math Curriculum Survey Questions by Curriculum

|            |                         | <b>Student</b> | <b>Teacher</b> | <b>Content</b> | <b>Assessment</b> |
|------------|-------------------------|----------------|----------------|----------------|-------------------|
| Curriculum | <b>Bridges</b>          | 2.84           | 2.84           | 2.68           | 2.81              |
|            | <b>EveryDay Math</b>    | 3.07           | 3.41           | 3.12           | 3.47              |
|            | <b>Investigations</b>   | 2.88           | 3.03           | 2.83           | 2.88              |
|            | <b>Math Expressions</b> | 2.56           | 2.88           | 2.61           | 2.54              |
|            | <b>MathScape</b>        | 3.06           | 3.13           | 3.06           | 3.25              |
|            | <b>Saxon</b>            | 2.19           | 2.50           | 2.36           | 2.62              |
|            | <b>Trailblazers</b>     | 2.28           | 2.31           | 2.28           | 1.97              |