

Board of Education Executive Summary
Adoption of Mathematics Instructional Materials
June 5, 2014



implementation are earmarked for this purpose.

Instructional Materials	\$4,590,500
• Gr. K-6 Math - \$115/Student - (25,300 Students)	\$2,909,500
• Gr. 7-8 Math - \$150/Student - (6,660 Students)	\$999,000
• Integrated Math I- \$220/Student - (3,100 Students)	\$682,000

IV. Goals, Objectives and Measures

The district is fully committed to implementing a college- and career-ready curriculum aligned to the CCSS and ensuring that students graduate with a solid post-secondary foundation. As such, it endeavors to implement the CCSS with fidelity and provide an infrastructure of support based on research, reform initiatives, and exemplary practices. This includes high-quality standards aligned instructional materials and professional learning that is continuous and fosters a deepening of subject matter knowledge and a greater understanding of learning for improving classroom practice and student achievement.

The district will use multiple measures to assess the quality and effectiveness of the implementation of the CCSS-aligned instructional materials. Student achievement will be assessed using standardized measures such as the California Assessment of Student Performance and Progress (CAASPP) as well as locally developed benchmark assessments. The fidelity of implementation of the instructional materials will be determined via perception data through surveys, evaluations of professional learning, observations of instruction in the classroom, and examination of student work. All results will be used to inform programmatic and systemic changes.

V. Major Initiatives

SCUSD’s approach to selecting CCSS-aligned instructional materials for mathematics consisted of three key strategies including convening an instructional materials committee of stakeholders, displaying materials for public review and feedback, and facilitating presentations at staff meetings as well as with site-based parent/community stakeholder groups.

Instructional Materials Committee

During the spring of 2014, the district convened a committee of stakeholders to review and

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recommend mathematics textbooks and instructional materials for grades K-9 for Board approval. Teachers serving on this committee submitted an application and were selected based on their expertise with student populations represented within the SCUSD, including English Learners, students with special needs, GATE, and students in Program Improvement schools. Committee members meet weekly from February to May, and engaged in a thorough analysis of the mathematics instructional materials options. To do so, they utilized the localized criteria outlined in Board Policy 6161 as well as the Instructional Materials Evaluation Tool (IMET) which is based on a set of comprehensive and robust criteria developed and endorsed by the authors of the CCSS for use in evaluating instructional materials aligned to the CCSS. The committee narrowed the materials down to the top two selections for grades K-8 and Math-I. These materials were then placed on display for public review. Feedback from the public was analyzed for patterns and trends and then used to inform the committee's final recommendations.

Instructional Materials Caravan

To afford a wider range of teachers, school leaders, parents, students, and community members the opportunity to review materials, the district displayed the top two sets of instructional materials selected by the committee at the Serna Center and in an elementary, middle, and high school in each of the three geographic regions of the district. When possible, on-line access to instructional materials was provided. Stakeholders who reviewed materials were asked to provide feedback utilizing a paper or an electronic feedback form. Data from the feedback forms were gathered and analyzed by the instructional materials committee as an integral component of the decision-making process.

Stakeholder Engagement

In addition to the instructional materials caravan, district staff facilitated sessions with groups of parents and teachers during meetings such as School Site Council, PTSA, and staff meetings to share information about the instructional materials. When possible, staff utilized site-based computers to guide stakeholders through the process of reviewing materials online. Stakeholders were also introduced to the criteria used to solicit feedback and how to complete the online and/or paper feedback forms. Information gathered from these meetings was also used to inform the committee's recommendations.

VI. Results

After an in-depth review of the mathematics programs, the Instructional Materials Committee recommended the following for Board adoption:

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- Elementary School: *enVision Math* (Pearson)
- Middle School: *Big Ideas Math* (Houghton Mifflin Harcourt)
- High School: *Mathematics I Integrated Pathway* (Walch)

A summary of the strengths and challenges of each program are outlined below:

	Strength	Challenge
<i>enVision</i>	<ul style="list-style-type: none"> • Coherence • Conceptual Development • Manipulatives • Problems/Practice • Lesson Progression • Multiple Modalities • Differentiated Instruction • Assessment • Teacher Support • Visual Tools with Video Embedded within the Lesson to Demonstrate Concepts • Digital Response to Intervention System (Rti) 	<ul style="list-style-type: none"> • Inconsistent Rigor • Math Practice Three - Early Grades • Limited Item Types with Online Assessments
<i>Big Ideas Math</i>	<ul style="list-style-type: none"> • Coherence • Integration of Standards • Standards for Mathematical Practice • Conceptual Development • Collaborative Group Activities • Conceptual Problems & Practice • Technology-based Journals and Games • Online Assessments 	<ul style="list-style-type: none"> • Differentiated Instruction • Problems with Multiple Solutions • Manipulatives • Online Assessments - Primarily Multiple Choice • Navigation of Technology not Always Intuitive
<i>Mathematics I Integrated Pathway</i>	<ul style="list-style-type: none"> • Coherence • Modeling • Design • Standards for Mathematical Practice • Problems/Practice • Concept Building • Discussion Guidelines • Different Options • Online Teacher Portal for Learning Management and Resources • Publisher Flexibility 	<ul style="list-style-type: none"> • Esthetics • Relevance to Students • Lots of Text • Manipulatives • Student Digital Resources Limited to Downloadable and CD format • Online Assessments - Primarily Multiple Choice



VII. Lessons Learned/Next Steps

Next steps in the district's implementation of the adopted instructional materials include, but are not limited to the following:

- Provide professional learning for leaders and teachers to build their capacity to effectively utilize the adopted instructional materials including addressing the challenge areas identified by the instructional materials committee
- Revise the mathematics curriculum maps to outline expectations and use of the newly adopted instructional materials and provide professional learning on their use
- Refine the district's CCSS-aligned assessment practices including the development of benchmark assessment items and scoring processes
- Develop and provide workshops for parents/guardians on effective use of the adopted instructional materials
- Assess the implementation and effectiveness of the instructional materials soliciting feedback from various stakeholders including teachers, school leaders, parents, and students

Instructional Materials Evaluation Tool for CCSS Alignment in Mathematics Grades K–8 (IMET) – Student Achievement Partners

Each set of materials submitted for adoption will be evaluated first against four non-negotiable criteria based on the Common Core State Standards (CCSS). Materials cannot be CCSS-aligned without fully meeting all of the non-negotiable criteria. There are additional criteria as well of indicators of quality to help evaluators determine materials that are more closely aligned. Please note that this tool is designed for evaluation of comprehensive materials only (print and digital) and will not be appropriate for evaluating supplemental materials.

BEFORE YOU BEGIN

ALIGNMENT TO THE COMMON CORE STATE STANDARDS:

Evaluators of materials should understand that at the heart of the Common Core State Standards is a substantial shift in mathematics instruction that demands the following:

- 1) Focus strongly where the Standards focus
- 2) Coherence: Think across grades and link to major topics within grade
- 3) Rigor: In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Evaluators of materials must be well versed in the Standards for the grade level of the materials in question, including understanding the major work of the grade¹ vs. the supporting and additional work, how the content fits into the progressions in the Standards, and the expectations of the Standards with respect to conceptual understanding, fluency, and application. It is also recommended that evaluators refer to the Spring 2013 K–8 Publishers' Criteria for Mathematics while using this tool (achievethecore.org/publisherscriteria).

ORGANIZATION

SECTION I: NON-NEGOTIABLE ALIGNMENT CRITERIA

All submissions must meet all of the non-negotiable criteria at each grade level to be aligned to CCSS and before passing on to Section II.

SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY

Section II includes additional criteria for alignment to the standards as well as indicators of quality. Indicators of quality are scored differently from the other criteria; a higher score in Section II indicates that materials are more closely aligned.

Together, the non-negotiable criteria and the additional alignment criteria reflect the 10 criteria from the K–8 Publishers' Criteria for Mathematics. The indicators of quality are taken from the K–8 Publishers' Criteria as well. For more information on these elements, see achievethecore.org/publisherscriteria.

REVIEW

Evaluator: _____ Book: _____ Grade: _____ Publisher: _____ Year: _____

¹ For more on the major work of the grade, see achievethecore.org/emphases.

SECTION I:	METRICS						
<p>Non-Negotiable 1. FOCUS ON MAJOR WORK: Students and teachers using the materials as designed devote the large majority² of time in each grade K–8 to the major work of the grade.^{3,4}</p>	Sample Worksheet 1 – Materials focus on the major clusters of each grade.⁵						
	Grade	Major Clusters	Days Spent on Cluster	% of Total Time Spent on Cluster	Additional or Supporting Clusters or Other ⁶	Days Spent on Cluster	% of Total Time Spent on Cluster
	1A. Kindergarten	K.CC: A, B, C			K.MD: A, B		
		K.OA: A			K.G: A, B		
		K.NBT: A			OTHER		
		Major Total:			Non-Major Total:		
	1B. Grade 1	1.OA: A, B, C, D			1.MD: B, C		
		1.NBT: A, B, C			1.G: A		
		1.MD: A			OTHER		
		Major Total:			Non-Major Total:		
	1C. Grade 2				2.OA: C		
		2.OA: A, B			2.MD: C, D		
		2.NBT: A, B			2.G: A		
		2.MD: A, B			OTHER		
	Major Total:			Non-Major Total:			
	1D. Grade 3				3.NBT: A		
		3.OA: A, B, C, D			3.MD: B, D		
		3.NF: A			3.G: A		
		3.MD: A, C			OTHER		
	Major Total:			Non-Major Total:			
	1E. Grade 4				4.OA: B, C		
		4.OA: A			4.MD: A, B, C		
		4.NBT: A, B			4.G: A		
		4.NF: A, B, C			OTHER		
	Major Total:			Non-Major Total:			
	1F. Grade 5				5.OA: A, B		
5.NBT: A, B				5.MD: A, B			
5.NF: A, B				5.G: A, B			
5.MD: C				OTHER			
Major Total:			Non-Major Total:				

² The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

³ Refer also to criterion #1 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

⁴ If materials show time in both block and standard 'days,' choose either but remain consistent.

⁵ Interactive worksheets for the evaluation of this non-negotiable can be found at achievethecore.org/materialsevaluationtoolkit

⁶ Other signifies content that is found in other grades of the CCSSM or that is not part of the CCSSM.

SECTION I (Cont):	METRICS						
Non-Negotiable 1. FOCUS ON MAJOR WORK: Students and teachers using the materials as designed devote the large majority of time in each grade K–8 to the major work of the grade.							
	1G. Grade 6				6.NS: B		
		6.RP: A			6.G: A		
		6.NS: A, C			6.SP: A, B		
		6.EE: A, B, C			OTHER		
		Major Total:			Non-Major		
	1H. Grade 7	7.RP: A			7.G: A, B		
		7.NS: A			7.SP: A, B, C		
		7.EE: A, B			OTHER		
		Major Total:			Non-Major		
	1I. Grade 8				8.NS: A		
		8.EE: A, B, C			8.G: C		
		8.F: A, B			8.SP: A		
		8.G: A, B			OTHER		
		Major Total:			Non-Major		
To be aligned to the CCSSM, materials should devote at least 65% and up to approximately 85% of class time to the major work of each grade with Grades K–2 nearer the upper end of that range, i.e., 85%. Each grade must meet the criterion; do not average across two or more grades.						Meet? (Y/N)	
Justification/Notes							

SECTION I (continued): METRICS		Sample Worksheet 2 – Materials focus in K–8			
Topic	Grade level introduced in the Standards	Materials assess these topics only at, or after, the indicated grade level	Evidence	Meet? (Y/N)	
2A. Probability, including chance, likely outcomes, probability models.	7	T F			
2B. Statistical distributions, including center, variation, clustering, outliers, mean, median, mode, range, quartiles; and statistical association or trends, including two-way tables, bivariate measurement data, scatter plots, trend line, line of best fit, correlation.	6	T F			
2C. Similarity, congruence, or geometric transformations.	8	T F			
2D. Symmetry of shapes, including line/reflection symmetry, rotational symmetry.	4	T F			
<p>To be aligned to the CCSSM, materials cannot assess above-named topics before they are introduced in the CCSSM. All four of the T/F items above must be marked 'true' (T).</p>					
Justification/Notes					

⁷ Refer also to criterion #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

SECTION I (continued): METRICS		Sample Worksheet 3 – Rigor and balance within each grade			
		Aspects of Rigor	True/False	Evidence	
Non-Negotiable 3. RIGOR AND BALANCE: Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ⁸	3A. Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.	T F			
	3B. Attention to Procedural Skill and Fluency: Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency.	T F			
	3C. Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade.	T F			
	3D. Balance: The three aspects of rigor are not always treated together, and are not always treated separately	T F			
		To be aligned to the CCSSM, materials for each grade must attend to each element of rigor and must represent the balance reflected in the Standards. All four of the T/F items above must be marked 'true' (T).'			Meet? (Y/N)
		Justification/Notes			

⁸ Refer also to criterion #4 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

SECTION I (continued):		METRICS	
<p>Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS:</p> <p>Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.^{9, 10}</p>	<p align="center">Sample Worksheet 4 – Connections between the Standards for Mathematical Practice and Standards for Mathematical Content</p>		
	<p>Practice-Content Connections</p>	<p>True / False</p>	<p>Evidence</p>
	<p>4A. The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.</p> <p>4B. The developer provides a description or analysis, aimed at evaluators, which shows how materials meaningfully connect the Standards for Mathematical Practice to the Standards for Mathematical Content within each applicable grade.</p>	<p>T F</p> <p>T F</p>	
<p>To be aligned to the CCSSM, materials must connect the practice standards and content standards and the developer must provide a narrative that describes how the two sets of standards are meaningfully connected within the set of materials for each grade. Both of the T/F items above must be marked 'true' (T).</p>		<p>Meet? (Y/N)</p>	
<p>Justification/Notes</p>			
<p>Materials must meet all four non-negotiable criteria listed above to be aligned to the CCSS and to continue to the evaluation in Section II.</p>		<p># Met:</p>	

⁹ Refer also to criterion #7 in the K-8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹⁰ All items do not need to align to a Mathematical Practice. In addition, there is no requirement to have an equal balance among the Mathematical Practices in any set of materials or grade.

SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY

Materials must meet all four non-negotiable criteria listed above to be aligned to the CCSS and to continue to the evaluation in Section II.

Section II includes additional criteria for alignment to the Standards as well as indicators of quality. Indicators of quality are scored differently from the other criteria: a higher score in Section II indicates that materials are more closely aligned. Instructional materials evaluated against the criteria in Section II will be rated on the following scale:

- 2 – (meets criteria): A score of 2 means that the materials meet the full intention of the criterion in all grades.
- 1 – (partially meets criteria): A score of 1 means that the materials meet the full intention of the criterion for some grades or meets the criterion in many aspects but not the full intent of the criterion.
- 0 – (does not meet criteria): A score of 0 means that the materials do not meet many aspects of the criterion.

For Section II parts A, B, and C, districts should determine the minimum number of points required for approval. Before evaluation, please review sections A – C, decide the minimum score according to the needs of your district, and write in the number for each section.

II(A). ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT		SCORE	JUSTIFICATION/NOTES
1. Supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade. ¹¹		2 1 0	
2. Materials are consistent with the progressions in the Standards. ¹²			
2A. Materials base content progressions on the grade-by-grade progressions in the Standards.		2 1 0	
2B. Materials give all students extensive work with grade-level problems.		2 1 0	
2C. Materials relate grade level concepts explicitly to prior knowledge from earlier grades.		2 1 0	
3. Materials foster coherence through connections at a single grade, where appropriate and where required by the Standards. ¹³			
3A. Materials include learning objectives that are visibly shaped by CCSSM cluster headings.		2 1 0	
3B. Materials including problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.		2 1 0	
3C. Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.		2 1 0	
MUST HAVE _____ POINTS IN SECTION II(A) FOR APPROVAL¹⁴			Score:

¹¹ Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹² Refer also to criterion #5 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹³ Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹⁴ For district determination

SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY (Continued)		
II(B). ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE	SCORE	JUSTIFICATION/NOTES
4. Focus and Coherence via Practice Standards: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ¹⁵	2 1 0	
5. Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. ¹⁶	2 1 0	
6. Emphasis on Mathematical Reasoning: Materials support the Standards' emphasis on mathematical reasoning by ¹⁷ :		
6A. Materials prompt students to construct viable arguments and critique the arguments of other concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3).	2 1 0	
6B. Materials engage students in problem solving as a form of argument.	2 1 0	
6C. Materials explicitly attend to the specialized language of mathematics.	2 1 0	
MUST HAVE POINTS IN SECTION II(B) FOR APPROVAL¹⁸		Score:

¹⁵ Refer also to criterion #8 in the K-8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹⁶ Refer also to criterion #9 in the K-8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹⁷ Refer also to criterion #10 in the K-8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

¹⁸ For district determination

SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY (Continued)		
II(C). INDICATORS OF QUALITY ¹⁹	SCORE	JUSTIFICATION/NOTES
7. The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	2 1 0	
8. Design of assignments is not haphazard: exercises are given in intentional sequences.	2 1 0	
9. There is variety in the pacing and grain size of content coverage.	2 1 0	
10. There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	2 1 0	
11. Lessons are thoughtfully structured and support the teacher in leading the class through the learning paths at hand, with active participation by all students in their own learning and in the learning of their classmates.	2 1 0	
12. There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	2 1 0	
13. Manipulatives are faithful representations of the mathematical objects they represent.	2 1 0	
14. Manipulatives are connected to written methods.	2 1 0	
15. Materials are carefully reviewed by qualified individuals, whose names are listed, in an effort to ensure freedom from mathematical errors and grade-level appropriateness.	2 1 0	
16. The visual design isn't distracting or chaotic, but supports students in engaging thoughtfully with the subject.	2 1 0	
17. Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	2 1 0	
MUST HAVE _____ POINTS IN SECTION II(C) FOR APPROVAL²⁰		SCORE:

¹⁹ For background information on the indicators of quality in this section, refer to pp.18-21 in the K–8 Publishers' Criteria for Mathematics.

²⁰ For district determination

FINAL EVALUATION

In this section compile scores for Section I, Section II(A), Section II(B), Section II(C) to make a final decision for the material under review.

SECTION	PASS/FAIL (P/F)?	FINAL JUSTIFICATIONS/NOTES
Section I		
Section II(A)		
Section II(B)		
Section II(C)		
FINAL DECISION FOR THIS MATERIAL		PURCHASE (Y/N)?



**Come Review the Instructional Materials Being
Considered for Mathematics and English Language Arts**

**Materials on Display Monday - Friday
April 23, 2014 - May 16, 2014 (Extended Date)**

**Some materials can also be reviewed online at:
<http://www.scusd.edu/instructionalmaterialsonline>**

Elementary School Materials 8:00 am - 4:00 pm
James Marshall: 9525 Goethe Road
Ethel Baker: 5717 Laurine Way
John Cabrillo: 1141 Seamas Ave
Middle School Materials 8:00 am - 4:00 pm
Albert Einstein: 9325 Mirandy Dr
Will C Wood: 6201 Lemon Hill Ave
School of Engineering and Science: 7345 Gloria Dr.
High School Materials 8:00 am - 4:00 pm
Rosemont: 9594 Kiefer Blvd
Hiram Johnson High School: 6879 14 th Ave
C.K. McClatchy: 3066 Freeport Blvd

**All Materials Are on Display at the
Professional Resource Library, Serna Center
5735 47th Ave
8:00 am - 5:00 pm**

