

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.G: A, B		
		7.RP: A			7.SP: A, B, C		
		7.NS: A			OTHER		
		7.EE: A, B			Non-Major		
		Major Total:					
	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		
	<p>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.</p>						<p>Meet? (Y/N)</p>
	<p>Justification/Notes</p>						

SECTION I (continued):	METRICS			
Non-Negotiable 2. FOCUS IN K–8: Materials do not assess any of the following topics before the grade level indicated.⁷	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
	2A. Probability , including chance, likely outcomes, probability models.	7	T F	
	2B. Statistical distributions , including center, variation, clumping, 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	
To be aligned to the CCSSM, materials cannot assess above-named topics before they are introduced in the CCCSSM. All four of the T/F items above must be marked ‘true’ (T).				Meet? (Y/N)
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		
<p>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</p>	Sample Worksheet 3 – Rigor and balance within each grade		
	Aspects of Rigor	True/False	Evidence
	<p>3A. Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.</p>	T F	
	<p>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.</p>	T F	
	<p>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.</p>	T F	
	<p>3D. Balance: The three aspects of rigor are not always treated together, and are not always treated separately</p>	T F	
<p>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).’</p>			Meet? (Y/N)
<p>Justification/Notes</p>			

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		
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.^{9, 10}	Sample Worksheet 4 – Connections between the Standards for Mathematical Practice and Standards for Mathematical Content		
	Practice-Content Connections	True / False	Evidence
	4A. The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	T F	
	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.	T F	
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).			Meet? (Y/N)
Justification/Notes			
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.			# Met:

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)?