Instructional Materials Evaluation - Student Standards Review

Louisiana educators engaged in a professional review of the state's academic standards for English language arts (ELA) and mathematics to ensure they continue to maintain strong expectations for teaching and learning aligned with college and workplace demands. The new ELA and math standards will be effective beginning with the 2016-2017 school year. As part of the Louisiana Department of Education's support for a seamless transition to these new standards, the LDOE identified the major changes of the standards and their potential impact upon criteria used to review instructional materials.

Title: **HMH Math Expressions** Grade: **K-5**

Publisher: **Houghton Mifflin Harcourt** Copyright: **2013**

Overall Rating: **Tier II, Approaching quality**

This Mathematics review has been examined for the following major shifts in alignment resulting from the Louisiana Student Standards Review:

- Include standards for money in grades K, 1, and 3 to ensure connections that provide smooth transitions from one grade to the next
- Provide developmentally appropriate content for all grades or courses while maintaining high expectations:
  - Additive area is moved to grade 4 from grade 3
  - The Statistics - Conditional Probability and the Rules of Probability (S-CP) domain is moved from Algebra II to Geometry
  - The standards provide extra clarity around the distinction between Algebra I and II

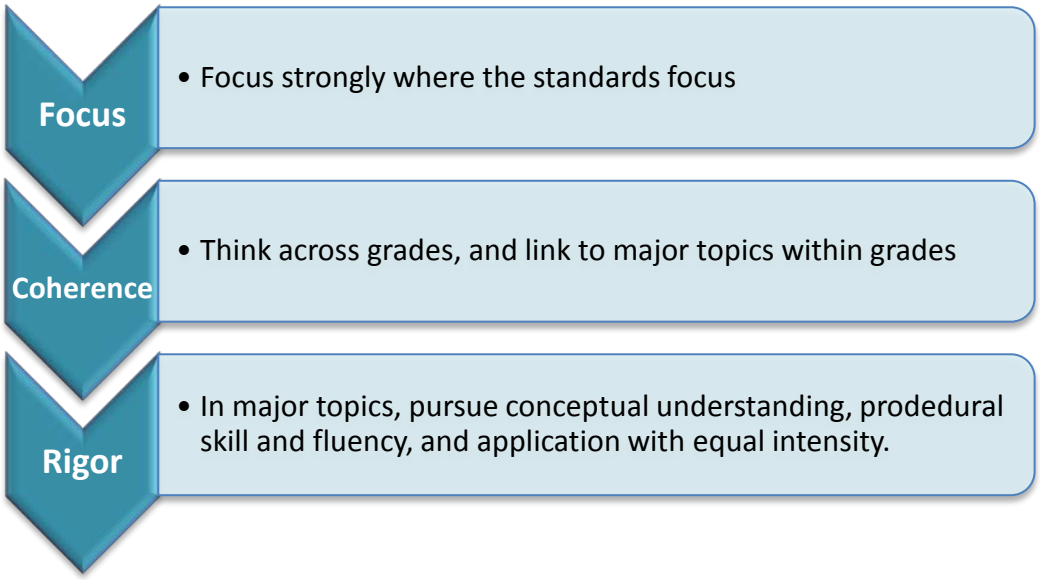
The following two indicators may be impacted:

- Focus on Major Work (Non-Negotiable)
- Consistent, Coherent Content (Non-Negotiable)

This review remains a Tier 2 rating. As a result of these changes, the following chart identifies the potential impact on specific elements in the current review. The LDOE recommends that district curriculum staff, principals, and teachers take these findings into consideration when using these instructional materials.

Criteria	Currently in the Rubric	Next Steps for Educators
Focus on Major Work (Non-Negotiable)	This program currently is reviewed as Yes for this criterion because the materials devote the majority of class time (ranging from 74% to 94%) to the major work of the grade and spend minimal time outside the appropriate grade level.	Make sure to review all assessment materials to ensure alignment to new clarifications/limitations and the revised, as well as, the placement of standards by grade/course.
Consistent, Coherent Content (Non-Negotiable)	This program currently is reviewed as Yes for this criterion because the instructional materials are coherent and consistent with the content in the standards. Supporting content is connected to major content. Supporting clusters are taught in isolation; however, they are scaffolded in a manner that connects them to the major content by the end of the unit through real world applications.	Make sure to review instructional materials focused on new supporting content (e.g., money in Grades K and 1) to ensure it supports the major work of the grade/course.

Strong mathematics instruction contains the following elements:



Title: **HMH Math Expressions** **Grade:** **K-5**

Publisher: **Houghton Mifflin Harcourt** **Copyright:** **2013**

Overall Rating: **Tier II, Approaching quality**

Tier I, Tier II, Tier III Elements of this grade band:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Alignment Criteria for Standards for Mathematical Practice *
Consistent, Coherent Content (Non-Negotiable)	Indicators of Quality
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	
*Stronger in Grade K only	

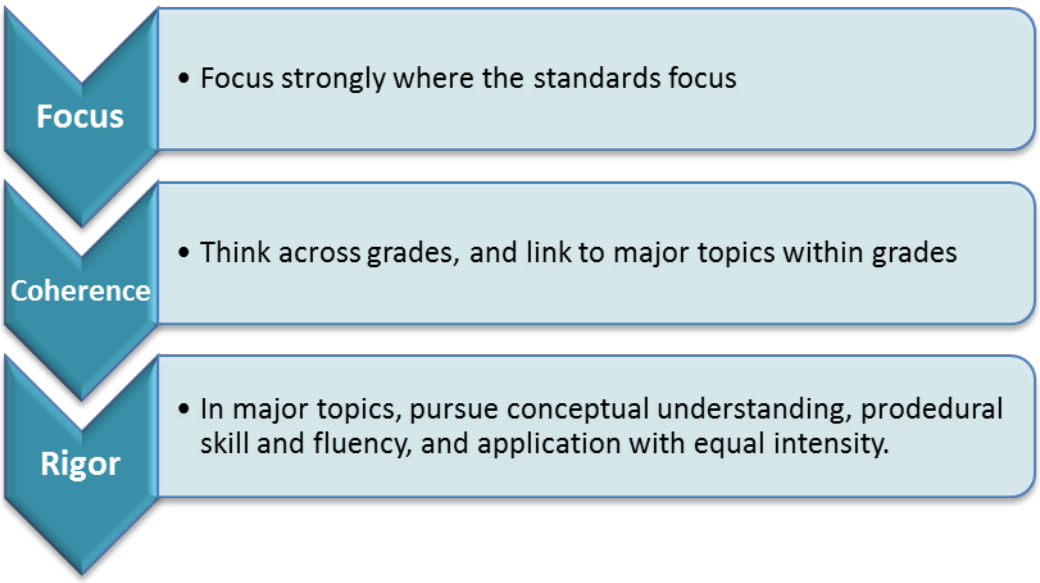
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings received a "Yes" for all Criteria 1–7.
Tier 2 ratings received a "Yes" for all non-negotiable criteria (Criteria 1–4), but at least one "No" for the remaining criteria.
Tier 3 ratings received a "No" for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

Grade K (Tier 2)
Grade 1 (Tier 2)
Grade 2 (Tier 2)
Grade 3 (Tier 2)
Grade 4 (Tier 2)
Grade 5 (Tier 2)

Strong mathematics instruction contains the following elements:



Title: HMH Math Expressions **Grade: Kindergarten**

Publisher: Houghton Mifflin Harcourt **Copyright: 2013**

Overall Rating: Tier II, Approaching quality

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Indicators of Quality
Consistent, Coherent Content (Non-Negotiable)	
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	
Alignment Criteria for Standards for Mathematical Practice	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1–7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1–4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS ON MAJOR WORK[1]: Students and teachers using the materials as designed devote the large majority[2] of time in each grade K–8 to the major work of the grade. ■ Yes ☐ No	**REQUIRED** **1a)** 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.	**Yes**	The materials devote approximately 89% of class time to the major work of Grade K.
	REQUIRED **1b)** In any one grade, aligned materials should spend minimal time on content outside of the appropriate grade levels. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade in which they are introduced in the Standards.[3]	**Yes**	Other grade levels are addressed minimally.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards. ■ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	Supporting content is connected to major content. For example, in Unit 3 Lesson 10, K.MD.B.3, supporting content, is connected to K.CC.B.5 and K.CC.C.6, major work of the grade.
	REQUIRED **2b)** 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.[5]	**Yes**	When appropriate, connections are made among some clusters in a domain or among domains. For example, Unit 3 Lesson 2 connects two clusters of Counting and Cardinality and Numbers and Operations in Base Ten.

[1] For more on the major work of the grade, see Focus by Grade Level.
[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 #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I (continued): NON-NEGOTIABLE CRITERIA			
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.[6]	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and questions.	**Yes**	The materials help develop conceptual understanding through the problems and questions presented.
	REQUIRED **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. In grades K-6, materials help students make steady progress throughout the year toward fluent computation. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The lessons provide opportunities for students to build both skill and fluency.
■ Yes ☐ No	**REQUIRED** **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 including ample practice with single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving.	**Yes**	The materials are designed so that teachers and students can work on applications without losing focus on the major work. Improvement could be made by providing greater focus on application and practice with contextual problems.
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately.	**Yes**	There is a balance of the three aspects of rigor.
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.[7, 8]	**REQUIRED** **4a)** The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	**Yes**	The Teacher Edition clearly explains the connection between Math Practices and Standards.
■ Yes ☐ No	**REQUIRED** **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.	**Yes**	Standards for Mathematical Practice are evident and connected throughout each lesson with the activities.

[6] Refer also to criterion #4 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[7] Refer also to criterion #7 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[8] 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.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters) and across grades by staying consistent with the progressions in the standards.	**REQUIRED** **5a)** Materials base content progressions on the grade-by-grade progressions in the Standards. [9]	**Yes**	The Teacher Edition explains how the content in Kindergarten progresses to 1st grade.
	REQUIRED **5b)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.[10]	**Yes**	The materials provide extensive course-level problems and include ready-made *centers* that provide students with more experience.
	REQUIRED **5c)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.[10]	**Yes**	There are minimal prior knowledge requirements for Kindergarten. The materials however are designed so that prior knowledge extends to accommodate new knowledge.
■ Yes ☐ No	**5d)** Materials include learning objectives that are visibly shaped by CCSSM cluster headings.[10]	**Yes**	Each Unit Overview includes learning objectives shaped by the CCSSM cluster headings.
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. [11]	**Yes**	Standards are not taught in isolation which preserves the focus, coherence, and rigor.

[9] Refer also to criterion #5 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[10] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ■ Yes ☐ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[11] The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.	**Yes**	This is detailed in the overview pages of the Teacher Edition, as well as within each lesson.
	REQUIRED **6b)** Materials provide sufficient opportunities for 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). [12]	**Yes**	Appropriate opportunities for argument and critique are provided at the Kindergarten level.
	REQUIRED **6c)** Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.[12]	**Yes**	Problem solving, as a form of argument, is evident where appropriate.
	6d) Materials explicitly attend to the specialized language of mathematics.[12]	**Yes**	The materials attend to the specialized language of mathematics.

[11] Refer also to criterion #9 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[12] Refer also to criterion #10 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

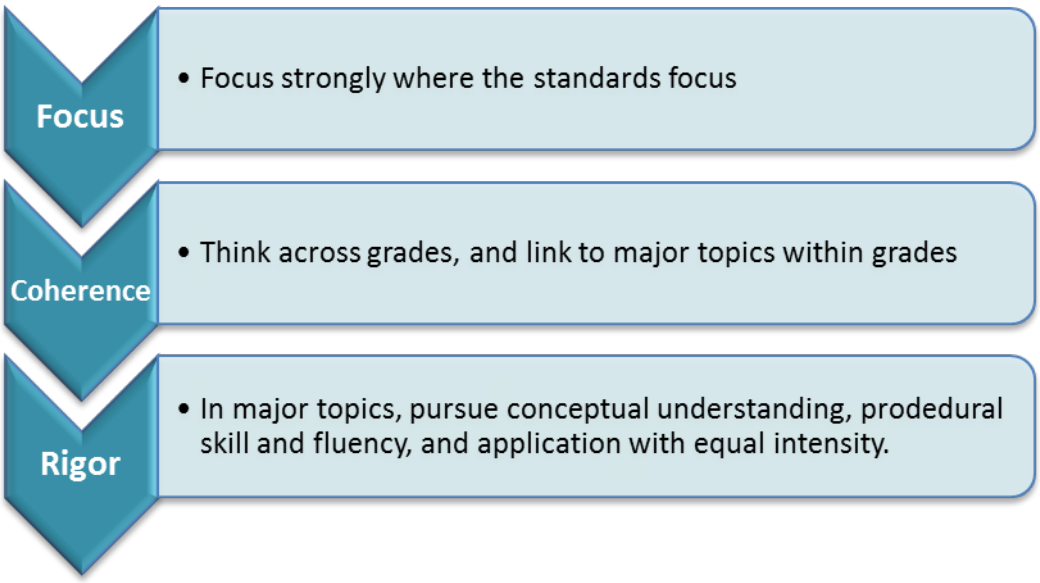
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**No**	There is no clear distinction between *Problems* and *Exercises,* and they are somewhat limited.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Yes**	*Exercises* build on previous lessons.
	REQUIRED **7c)** 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.	**Yes**	There is a variety of student products (e.g., writing and drawing pictures).
	REQUIRED **7d)** 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.	**Yes**	There is a separate section that explains to teachers how the state standards and student math practices are addressed within each unit. There is a section that shows teachers ways to help students avoid common errors within the unit.
	REQUIRED **7e)** 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.	**Yes**	Student support is clearly presented for use as needed within the lessons.
	7f) There is variety in the pacing and grain size of content coverage.[13]	**Yes**	There is variety in the pacing and grain size of content.
	7g) 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.	**Yes**	The materials are structured to support teachers through learning paths and active student participation.
	7h) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Yes**	Manipulatives are representative and connected to written methods, but predominantly paper cut outs for the Kindergartner.

[13] Refer also to page 18 in the K – 8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1-7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

FINAL EVALUATION			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Y/N**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	**Yes**	The materials devote approximately 89% of class time to the major work of Grade K. Greater focus on some of the major clusters would improve the materials.
	2. Consistent, Coherent Content	**Yes**	The instructional materials are coherent and consistent with the content in the standards for Kindergarten.
	3. Rigor and Balance	**Yes**	The components of conceptual understanding and fluency are clearly evident, but it could be improved.
	4. Practice-Content Connections	**Yes**	The Standards for Mathematical Practice are contained within the lessons of the materials, and are clearly addressed within lesson activities.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials foster focus and coherence by linking topics within Kindergarten (across domains and clusters) and to first grade by staying consistent with the progressions in the standards.
	6. Alignment Criteria for Standards for Mathematical Practice	**Yes**	The Standards for Mathematical Practice are clearly addressed and connected in activities in each lesson where appropriate.
	7. Indicators of Quality	**No**	Clarification is needed to understand the difference between problems/exercises in the program. In addition, they seem simplistic and sparse.
FINAL DECISION FOR THIS MATERIAL: <u>Tier II, Approaching Quality</u>			

Strong mathematics instruction contains the following elements:



Title: HMH Math Expressions **Grade: 1**

Publisher: Houghton Mifflin Harcourt **Copyright: 2013**

Overall Rating: Tier II, Approaching quality

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Alignment Criteria for Standards for Mathematical Practice
Consistent, Coherent Content (Non-Negotiable)	Indicators of Quality
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1–7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1–4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS ON MAJOR WORK[1]: Students and teachers using the materials as designed devote the large majority[2] of time in each grade K–8 to the major work of the grade. ■ Yes ☐ No	**REQUIRED** **1a)** 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.	**Yes**	Materials devote approximately 85% of class time to the major work of Grade 1.
	REQUIRED **1b)** In any one grade, aligned materials should spend minimal time on content outside of the appropriate grade levels. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade in which they are introduced in the Standards.[3]	**Yes**	Other grade levels are addressed minimally.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards. ■ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	Supporting content is connected to major content (e.g., when 1.MD.C.4, supporting content, is taught in Unit 6 Lesson 1, it is linked to 1.OA.A.1 and 1.OA.A.2, major work of the grade).
	REQUIRED **2b)** 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. [5]	**Yes**	When appropriate, connections are made among some clusters in a domain or among domains.

[1] For more on the major work of the grade, see Focus by Grade Level.
[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 #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I (continued): NON-NEGOTIABLE CRITERIA			
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.[6]	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and questions.	**Yes**	The materials help develop conceptual understanding through the problems and questions presented.
	REQUIRED **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. In grades K-6, materials help students make steady progress throughout the year toward fluent computation. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The lessons provide opportunities for students to build both skill and fluency.
■ Yes ☐ No	**REQUIRED** **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 including ample practice with single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving.	**Yes**	The materials are designed so that teachers and students can work on applications without losing focus on the major work. Improvement could be made by providing greater focus on application and practice with contextual problems.
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately.	**Yes**	There is a balance of the three aspects of rigor.
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.[7, 8]	**REQUIRED** **4a)** The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	**Yes**	The Teacher Edition clearly explains the connection between Math Practices and Standards.
■ Yes ☐ No	**REQUIRED** **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.	**Yes**	Standards for Mathematical Practice are evident and connected throughout each lesson with the activities.

[6] Refer also to criterion #4 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[7] Refer also to criterion #7 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[8] 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.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters) and across grades by staying consistent with the progressions in the standards. ■ Yes ☐ No	**REQUIRED** **5a)** Materials base content progressions on the grade-by-grade progressions in the Standards. [9]	**Yes**	The materials reflect the grade-by-grade progressions in the Standards (e.g., charts on page 185A of the Teacher Edition).
	REQUIRED **5b)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.[10]	**Yes**	Materials allow students extensive work with grade level appropriate problems.
	REQUIRED **5c)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.[10]	**Yes**	At the beginning of each unit, the standards from the unit are connected to standards from kindergarten.
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings.[10]	**Yes**	Learning objectives are clearly shaped by CCSSM cluster headings (e.g., Unit 2 Lesson 8 includes an objective shaped from a cluster -- Add and subtract within 20).
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. [11]	**Yes**	Materials preserve the focus, coherence, and rigor of the standards.

[9] Refer also to criterion #5 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[10] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ■ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[11] The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.	**Yes**	This is analyzed in depth in the overview of each Unit (e.g., see page 185Q of the Teacher Edition).
	REQUIRED **6b)** Materials provide sufficient opportunities for 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).[12]	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice (e.g., In Unit 3, Math Practice 3 is linked to all 12 lessons).
	REQUIRED **6c)** Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.[12]	**Yes**	Students engage in problem solving as the primary form of argument. Materials engage students in multi-step problems when appropriate (e.g., see Unit 7 Lesson 8).
	6d) Materials explicitly attend to the specialized language of mathematics.[12]	**Yes**	Materials explicitly attend to the language of mathematics.

[11] Refer also to criterion #9 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[12] Refer also to criterion #10 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

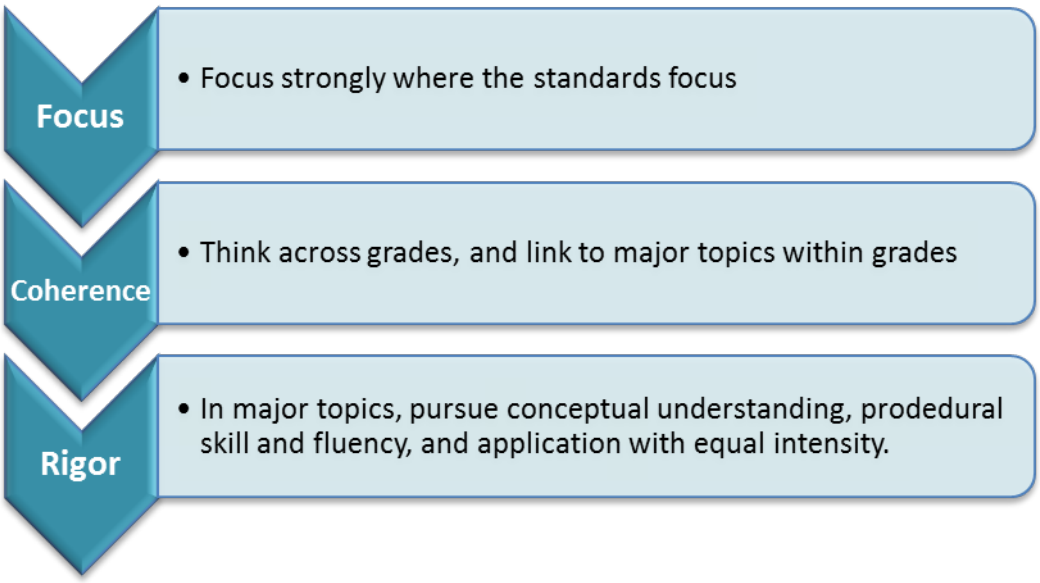
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**No**	There is no clear distinction between *Problems* and *Exercises*.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Yes**	Units and lessons build on previous learning in an intentional sequence.
	REQUIRED **7c)** 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.	**Yes**	There is a variety of student products (e.g., writing and drawing pictures).
	REQUIRED **7d)** 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.	**Yes**	There is a separate section that explains to teachers how the content standards and math practices are addressed within each unit. There is a section that shows teachers ways to help students avoid common errors within the unit.
	REQUIRED **7e)** 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.	**Yes**	Student support is clearly presented for use as needed within the lessons.
	7f) There is variety in the pacing and grain size of content coverage.[13]	**Yes**	There is variety in the pacing and grain size of content.
	7g) 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.	**Yes**	The materials are structured to support teachers through learning paths and active student participation.
	7h) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Yes**	Manipulatives are representative and connected to written methods.

[13] Refer also to page 18 in the K – 8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1-7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

FINAL EVALUATION			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Y/N**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	**Yes**	Materials devote approximately 85% of class time to the major work of Grade 1.
	2. Consistent, Coherent Content	**Yes**	Supporting content is connected to major content.
	3. Rigor and Balance	**Yes**	The components of conceptual understanding and fluency are clearly evident, but it could be improved.
	4. Practice-Content Connections	**Yes**	The Standards for Mathematical Practice are contained within the lessons and are clearly addressed within lesson activities.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials provided allow students extensive work with grade level appropriate problems and connections are clearly made to prior learning.
	6. Alignment Criteria for Standards for Mathematical Practice	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice.
	7. Indicators of Quality	**No**	There is no clear distinction between *Problems* and *Exercises.*
FINAL DECISION FOR THIS MATERIAL: <u>Tier II, Approaching quality</u>			

Strong mathematics instruction contains the following elements:



Title: HMH Math Expressions **Grade: 2**

Publisher: Houghton Mifflin Harcourt **Copyright: 2013**

Overall Rating: Tier II, Approaching quality

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Alignment Criteria for Standards for Mathematical Practice
Consistent, Coherent Content (Non-Negotiable)	Indicators of Quality
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1–7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1–4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS ON MAJOR WORK[1]: Students and teachers using the materials as designed devote the large majority[2] of time in each grade K–8 to the major work of the grade. ■ Yes ☐ No	**REQUIRED** **1a)** 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.	**Yes**	Materials devote approximately 94% of class time to the major work of Grade 2.
	REQUIRED **1b)** In any one grade, aligned materials should spend minimal time on content outside of the appropriate grade levels. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade in which they are introduced in the Standards.[3]	**Yes**	Other grade levels are addressed minimally.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards. ■ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	Supporting content is connected to major content (e.g., when 2.MD.C.8, supporting content, is taught in Unit 4 Lesson 1, it is linked to 1.OA.A.1 and 2.NBT.B.7, major work of the grade).
	REQUIRED **2b)** 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.[5]	**Yes**	When appropriate, connections are made among some clusters in a domain or among domains (e.g., see Unit 7 Lesson 1 connect an OA cluster with all three Geometry standards).

[1] For more on the major work of the grade, see Focus by Grade Level.
[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 #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I (continued): NON-NEGOTIABLE CRITERIA			
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.[6] ■ Yes ☐ No	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and questions.	**Yes**	The materials help develop conceptual understanding through the problems and questions presented.
	REQUIRED **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. In grades K-6, materials help students make steady progress throughout the year toward fluent computation. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The lessons provide opportunities for students to build both skill and fluency.
	REQUIRED **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 including ample practice with single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving.	**Yes**	The materials are designed so that teachers and students can work on applications without losing focus on the major work. Improvement could be made by providing greater focus on application and practice with contextual problems.
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately.	**Yes**	There is a balance of the three aspects of rigor.
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.[7, 8] ■ Yes ☐ No	**REQUIRED** **4a)** The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	**Yes**	The Teacher Edition clearly explains the connection between Math Practices and Standards.
	REQUIRED **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.	**Yes**	Standards for Mathematical Practice are evident and connected throughout each lesson with the activities.

[6] Refer also to criterion #4 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[7] Refer also to criterion #7 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[8] 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.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters) and across grades by staying consistent with the progressions in the standards. ■ Yes ☐ No	**REQUIRED** **5a)** Materials base content progressions on the grade-by-grade progressions in the Standards. [9]	**Yes**	The materials reflect the grade-by-grade progressions in the Standards (e.g., charts on page 351A of the Teacher Edition).
	REQUIRED **5b)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.[10]	**Yes**	Materials provided allow students extensive work with grade level appropriate problems.
	REQUIRED **5c)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.[10]	**Yes**	At the beginning of each unit, the standards from the unit are connected to standards from first grade.
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings.[10]	**Yes**	Learning objectives are clearly shaped by CCSSM cluster headings (e.g., Unit 7 Lesson 1 includes an objective shaped from two clusters -- Reason with shapes and their attributes and Work with equal groups of objects to gain foundations for multiplication).
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. [11]	**Yes**	Materials preserve the focus, coherence, and rigor of the standards.

[9] Refer also to criterion #5 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[10] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ☐ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[11] The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.	**Yes**	This is analyzed in depth in the overview of each Unit (e.g., see page 701N of the Teacher Edition).
	REQUIRED **6b)** Materials provide sufficient opportunities for 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).[12]	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice (e.g., In Unit 2, Math Practice 3 is linked to all 15 lessons).
	REQUIRED **6c)** Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.[12]	**Yes**	Students engage in problem solving as the primary form of argument. Materials engage students in multi-step problems when appropriate.
	6d) Materials explicitly attend to the specialized language of mathematics.[12]	**Yes**	Materials explicitly attend to the language of mathematics.

[11] Refer also to criterion #9 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[12] Refer also to criterion #10 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

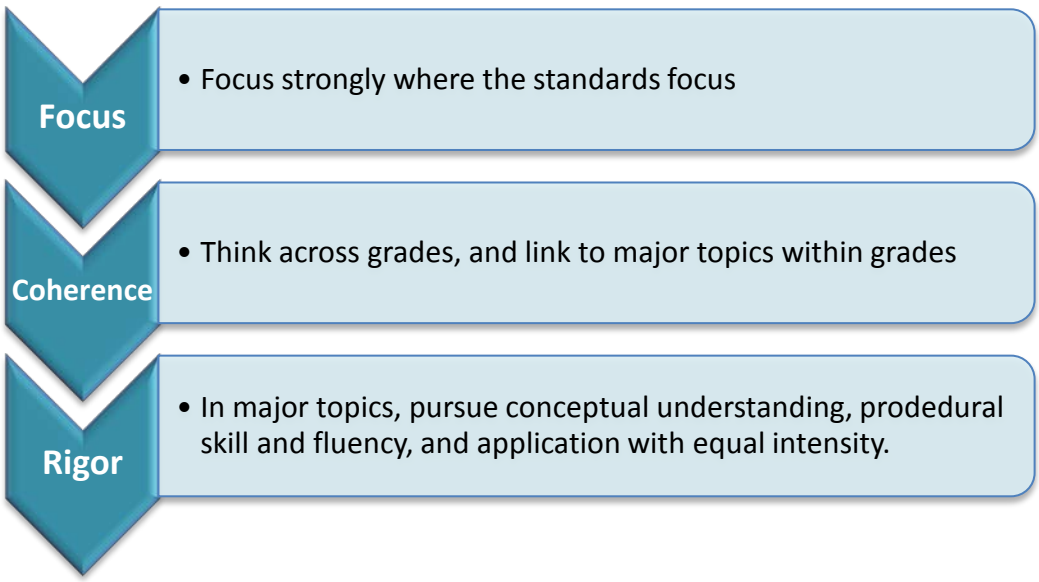
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**No**	There is no clear distinction between *Problems* and *Exercises*.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Yes**	Units and lessons build on previous learning in an intentional sequence.
	REQUIRED **7c)** 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.	**Yes**	There is a variety of student products (e.g., writing and drawing pictures).
	REQUIRED **7d)** 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.	**Yes**	There is a separate section that explains to teachers how the content standards and math practices are addressed within each unit. There is a section that shows teachers ways to help students avoid common errors within the unit.
	REQUIRED **7e)** 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.	**Yes**	Student support is clearly presented for use as needed within the lessons.
	7f) There is variety in the pacing and grain size of content coverage.[13]	**Yes**	There is variety in the pacing and grain size of content.
	7g) 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.	**Yes**	The materials are structured to support teachers through learning paths and active student participation.
	7h) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Yes**	Manipulatives are representative and connected to written methods.

[13] Refer also to page 18 in the K – 8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1-7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

FINAL EVALUATION			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Y/N**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	**Yes**	Materials devote approximately 94% of class time to the major work of Grade 2.
	2. Consistent, Coherent Content	**Yes**	Supporting content is connected to major content.
	3. Rigor and Balance	**Yes**	The components of conceptual understanding and fluency are clearly evident, but it could be improved.
	4. Practice-Content Connections	**Yes**	The Standards for Mathematical Practice are contained within the lessons and are clearly addressed within lesson activities.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials provided allow students extensive work with grade level appropriate problems and connections are clearly made to prior learning.
	6. Alignment Criteria for Standards for Mathematical Practice	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice.
	7. Indicators of Quality	**No**	There is no clear distinction between *Problems* and *Exercises.*
FINAL DECISION FOR THIS MATERIAL: <u>Tier II, Approaching quality</u>			

Strong mathematics instruction contains the following elements:



Title: HMH Math Expressions **Grade: 3**

Publisher: Houghton Mifflin Harcourt **Copyright: 2013**

Overall Rating: Tier II, Approaching quality

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Alignment Criteria for Standards for Mathematical Practice
Consistent, Coherent Content (Non-Negotiable)	Indicators of Quality
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1–7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1–4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS ON MAJOR WORK[1]: Students and teachers using the materials as designed devote the large majority[2] of time in each grade K–8 to the major work of the grade. ■ Yes ☐ No	**REQUIRED** **1a)** 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.	**Yes**	The materials devote approximately 70% of class time to the major work of Grade 3.
	REQUIRED **1b)** In any one grade, aligned materials should spend minimal time on content outside of the appropriate grade levels. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade in which they are introduced in the Standards.[3]	**Yes**	There are no aligned materials that focus on any topics that have not been introduced.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards. ■ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	Supporting clusters are taught in isolation; however, they are scaffolded in a manner that connects them to the major content by the end of the unit through real world applications.
	REQUIRED **2b)** 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.[5]	**Yes**	When appropriate, connections are made among some clusters in a domain or among domains (e.g., Unit 2 Lesson 1 connects all four clusters of Operations and Algebraic Thinking).

[1] For more on the major work of the grade, see Focus by Grade Level.
[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 #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

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.[6] ■ Yes ☐ No	**REQUIRED** **3a)** ***Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and questions.	**Yes**	Throughout the lessons, students are given the opportunity to discuss the content in a manner that will give them the deeper understanding of the material being addressed.
	REQUIRED **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. In grades K-6, materials help students make steady progress throughout the year toward fluent computation. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The majority of the lessons begin with a *Quick Start* led by the students who become faster or more accurate at a skill. There are other activities embedded in the lessons that allow students to practice fluency of the standards.
	REQUIRED **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 including ample practice with single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving.	**Yes**	The materials are designed to attend to the applications, but lack enough engaging applications. Most word problems use only fluency skills to solve. There are few multi-step contextual problems. More 2-step applications would better support student conceptual understanding, skill, and fluency.
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately.	**Yes**	The materials do a great job of balancing fluency, conceptual understanding, and application.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I (continued): NON-NEGOTIABLE CRITERIA			
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.[7, 8] ■ Yes ☐ No	**REQUIRED** **4a)** The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	**Yes**	Each lesson has the Mathematical Practices that are being covered that day as well as a detailed description of how.
	REQUIRED **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.	**Yes**	There are several sample questions to use with students having difficulty grasping the idea right away on their own through step by step guidance from the teacher.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters) and across grades by staying consistent with the progressions in the standards.	**REQUIRED** **5a)** Materials base content progressions on the grade-by-grade progressions in the Standards. [9]	**Yes**	Learning progressions for each standard are included before each unit
	REQUIRED **5b)** Materials give all students extensive work with grade-level problems. If present, below-grade work is minimal.[10]	**Yes**	Materials are on grade-level and based on the 3rd grade standards.
	REQUIRED **5c)** Materials relate grade level concepts explicitly to prior knowledge from earlier grades. Materials reorganize and extend prior knowledge to new grade-level knowledge. [10]	**Yes**	Material does connect to prior knowledge. For example, multiplication and division are taught as an extension of the addition and subtraction standards.
■ Yes ☐ No	**5d)** Materials include learning objectives that are visibly shaped by CCSSM cluster headings. [9]	**Yes**	Learning objectives are always visibly shaped by the cluster headings.
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. [9]	**No**	Measurement and shape standards are not used to establish coherence at the beginning of the units. While there is an application piece at the end of each unit, the standards are taught in total isolation.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ☐ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[10] The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.	**Yes**	This is analyzed in depth in the overview of each Unit (e.g., see page 173S of the Teacher Edition).
	REQUIRED **6b)** Materials provide sufficient opportunities for 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). [11]	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice (e.g., In Unit 2, Math Practice 3 is linked to all 15 lessons).
	REQUIRED **6c)** Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.[12]	**Yes**	This is evident in every lesson through the use of Math Accountable Talk.
	6d) Materials explicitly attend to the specialized language of mathematics.[12]	**Yes**	Materials explicitly attend to the language of mathematics.

[10] Refer also to criterion #9 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[11] Refer also to criterion #10 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

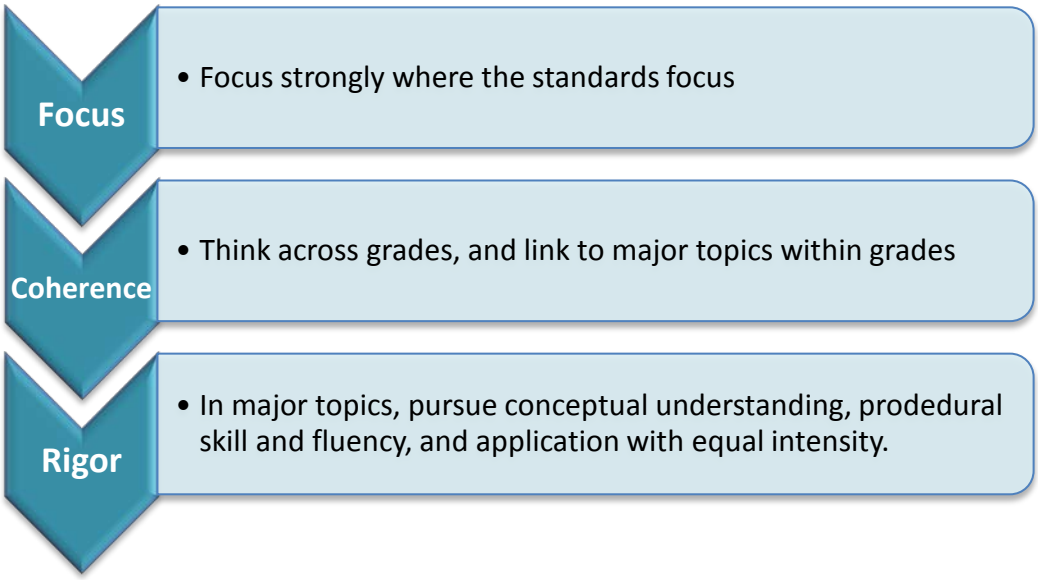
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**No**	There is no clear distinction between *Problems* and *Exercises*.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Yes**	Scaffolding is very evident throughout this curriculum. Standards are taught in intentional sequences throughout the year.
	REQUIRED **7c)** 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.	**Yes**	Students have the opportunity to argue and explain their answers, produce answers and solutions, and present mathematical models in each lesson
	REQUIRED **7d)** 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.	**Yes**	Purposeful questions are located throughout the teacher's manual to make sure that he/she is asking the right questions at the right time to ensure student mastery of the standards.
	REQUIRED **7e)** 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.	**Yes**	Support for English Language Learners is located in the margins of the Teacher Manual of the majority of the lessons.
	7f) There is variety in the pacing and grain size of content coverage.[12]	**Yes**	There is variety in the pacing and grain size.
	7g) 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.	**Yes**	Lessons are structured and support the teacher with active participation by students.
	7h) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Yes**	Manipulatives are representative and connected to written methods.

[12] Refer also to page 18 in the K – 8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

FINAL EVALUATION			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Y/N**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	**Yes**	The materials devote approximately 70% of class time to the major work for Grade 3.
	2. Consistent, Coherent Content	**Yes**	Supporting clusters are taught in isolation; however, they are scaffolded in a manner that connects them to the major content by the end of the unit through real world applications.
	3. Rigor and Balance	**Yes**	Real world applications, fluency quick checks, and conceptual understanding activities are shown in every lesson.
	4. Practice-Content Connections	**Yes**	Fluency, Conceptual Understanding, and Application are found throughout the material in purposeful and meaningful ways
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Supporting Clusters are taught in isolation from the major clusters instead of in conjunction with them.
	6. Alignment Criteria for Standards for Mathematical Practice	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice.
	7. Indicators of Quality	**No**	There is no clear distinction between *Problems* and *Exercises.*
FINAL DECISION FOR THIS MATERIAL: <u>Tier II, Approaching quality</u>			

Strong mathematics instruction contains the following elements:



Title: **HMH Math Expressions** **Grade:** **4**

Publisher: **Houghton Mifflin Harcourt** **Copyright:** **2013**

Overall Rating: **Tier II, Approaching quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Alignment Criteria for Standards for Mathematical Practice
Consistent, Coherent Content (Non-Negotiable)	Indicators of Quality
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS ON MAJOR WORK[1]: Students and teachers using the materials as designed devote the large majority[2] of time in each grade K–8 to the major work of the grade. ■ Yes ☐ No	**REQUIRED** **1a)** 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.	**Yes**	The materials devote approximately 78% of class time to the major work of Grade 4.
	REQUIRED **1b)** In any one grade, aligned materials should spend minimal time on content outside of the appropriate grade levels. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade in which they are introduced in the Standards.[3]	**Yes**	Minimal time is spent on content outside of grade 4 content. The concepts of range, mode, outliers, and clusters are used in Unit 6 Lesson 6 page 564 of the Teacher Edition. This content isn't introduced until 6th grade.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards. ■ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	Supporting clusters are taught in isolation; however, they are scaffolded in a manner that connects them to the major content by the end of the unit through real world applications.
	REQUIRED **2b)** 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.[5]	**Yes**	When appropriate, connections are made among some clusters in a domain or among domains (e.g., Unit 4 Lesson 12 connects all three clusters of Operations and Algebraic Thinking, a NBT cluster and a MD cluster).

[1] For more on the major work of the grade, see Focus by Grade Level.
[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 #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

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.[6] ■ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and questions.	**Yes**	Throughout the lessons, students are given the opportunity to discuss the content in a manner that will give them the deeper understanding of the material being addressed.
	REQUIRED **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. In grades K-6, materials help students make steady progress throughout the year toward fluent computation. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The majority of the lessons begin with a *Quick Start* led by the students become faster or more accurate at a skill therefore showing attention to procedural skill and fluency. There are also other activities embedded in the lessons that allow students to practice fluency of the standards.
	REQUIRED **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 including ample practice with single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving.	**Yes**	Word problems are written in a manner such that students have to solve multi step contextual problems that are developmental of 4th grade.
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately.	**Yes**	The balance of the three aspects are treated in a manner in which students can master the standards completely for 4th grade

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I (continued): NON-NEGOTIABLE CRITERIA			
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.[7, 8] ■ Yes ☐ No	**REQUIRED** **4a)** The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	**Yes**	Each lesson has the Mathematical Practices that are being covered that day as well as a detailed description of how.
	REQUIRED **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.	**Yes**	There are also several examples of questions to use with students that do not grasp the idea right away on their own with step by step guidance from the teachers.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters) and across grades by staying consistent with the progressions in the standards. ■ Yes ☐ No	**REQUIRED** **5a)** Materials base content progressions on the grade-by-grade progressions in the Standards. [9]	**Yes**	Learning progressions for each standard are included before each unit
	REQUIRED **5b)** Materials give all students extensive work with grade-level problems. If present, below-grade work is minimal.[10]	**Yes**	The majority of the material is on-level based on the 4th grade standards.
	REQUIRED **5c)** Materials relate grade level concepts explicitly to prior knowledge from earlier grades. Materials reorganize and extend prior knowledge to new grade-level knowledge. [10]	**Yes**	Materials connect to prior knowledge (e.g., the relationship between multiplication and division is used to generalize place value understanding for multi-digit whole numbers).
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings. [9]	**Yes**	Learning objectives are always visibly shaped by the cluster headings.
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. [9]	**No**	The measurement and shape standards do not have coherence at the beginning of the units. They are taught in total isolation. However, there is an application piece at the end of each.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ■ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[10] The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.	**Yes**	This is analyzed in depth in the overview of each Unit (e.g., see page 355 R of the Teacher Edition).
	REQUIRED **6b)** Materials provide sufficient opportunities for 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). [11]	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice (e.g., In Unit 4, Math Practice 3 is linked to all 12 lessons).
	REQUIRED **6c)** Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.[12]	**Yes**	This is evident in every lesson through the use of Math Accountable Talk.
	6d) Materials explicitly attend to the specialized language of mathematics.[12]	**Yes**	Materials explicitly attend to the language of mathematics.

[10] Refer also to criterion #9 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[11] Refer also to criterion #10 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

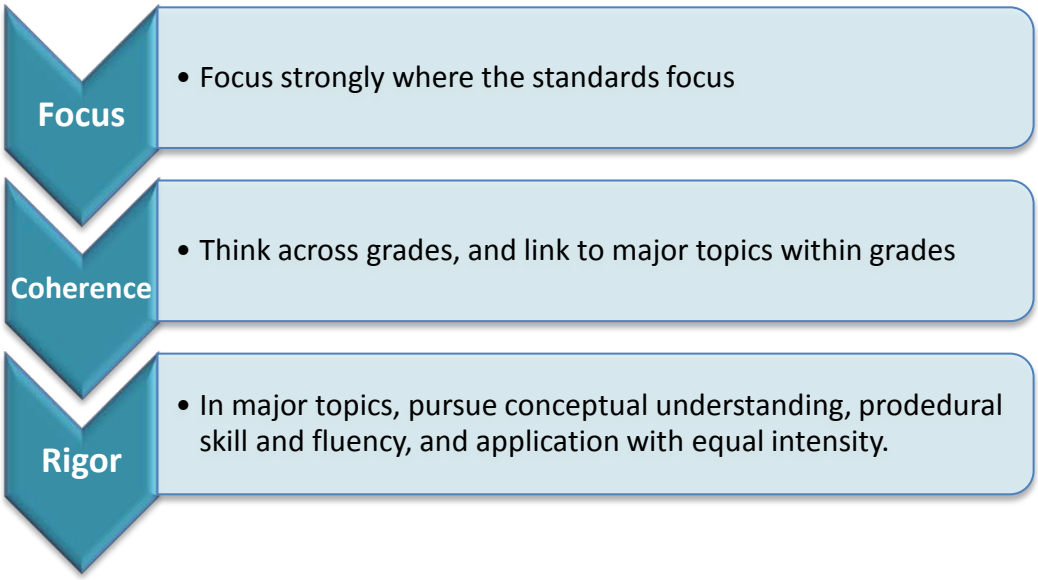
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**No**	There is no clear distinction between *Problems* and *Exercises*.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Yes**	Scaffolding is very evident throughout this curriculum. Standards are taught in intentional sequences throughout the year.
	REQUIRED **7c)** 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.	**Yes**	Students have the opportunity to argue and explain their answers, produce answers and solutions, and present mathematical models in each lesson
	REQUIRED **7d)** 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.	**Yes**	Purposeful questions are located throughout the teacher's manual to make sure that he/she is asking the right questions at the right time to ensure student mastery of the standards.
	REQUIRED **7e)** 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.	**Yes**	Support for English Language Learners is located in the margins of the Teacher Manual of the majority of the lessons.
	7f) There is variety in the pacing and grain size of content coverage.[12]	**Yes**	There is variety in the pacing and grain size.
	7g) 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.	**Yes**	Lessons are structured and support the teacher with active participation by students.
	7h) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Yes**	Manipulatives are representative and connected to written methods.

[12] Refer also to page 18 in the K – 8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1– 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

FINAL EVALUATION			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Y/N**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	**Yes**	The materials devote approximately 78% of class time to the major work of Grade 4.
	2. Consistent, Coherent Content	**Yes**	Supporting clusters are taught in isolation; however, they are scaffolded in a manner that connects them to the major content by the end of the unit through real world applications.
	3. Rigor and Balance	**Yes**	Real world applications, fluency quick checks, and conceptual understanding activities are shown in every lesson.
	4. Practice-Content Connections	**Yes**	Fluency, Conceptual Understanding, and Application are found throughout the material in purposeful and meaningful ways
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Supporting Clusters are taught in isolation to the major clusters instead of in conjunction with them.
	6. Alignment Criteria for Standards for Mathematical Practice	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice.
	7. Indicators of Quality	**No**	There is no clear distinction between *Problems* and *Exercises.*
FINAL DECISION FOR THIS MATERIAL: <u>Tier II, Approaching quality</u>			

Strong mathematics instruction contains the following elements:



Title: **HMH Math Expressions** **Grade:** **5**

Publisher: **Houghton Mifflin Harcourt** **Copyright:** **2013**

Overall Rating: **Tier II, Approaching quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
Focus on Major Work (Non-Negotiable)	Alignment Criteria for Standards for Mathematical Practice
Consistent, Coherent Content (Non-Negotiable)	Indicators of Quality
Rigor and Balance (Non-Negotiable)	
Practice-Content Connections (Non-Negotiable)	
Alignment Criteria for Standards for Mathematical Content	

To evaluate each set of submitted materials for alignment with the standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria to move to tier 2.			
Non-Negotiable 1. FOCUS ON MAJOR WORK[1]: Students and teachers using the materials as designed devote the large majority[2] of time in each grade K–8 to the major work of the grade. ■ Yes ☐ No	**REQUIRED** **1a)** 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.	**Yes**	The materials devote approximately 82% of class time to the major work of Grade 5.
	REQUIRED **1b)** In any one grade, aligned materials should spend minimal time on content outside of the appropriate grade levels. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade in which they are introduced in the Standards.[3]	**Yes**	There are no aligned materials that focus on any topics that have not been introduced.
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the standards. ■ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	Supporting content is connected to major content (e.g., when 5.MD.A.1, supporting content, is taught in Unit 2 Lesson 4, it is linked to 5.NBT.B.7, major work of the grade). For the most part, additional content is not connected to the major content in a meaningful way.
	REQUIRED **2b)** 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.[5]	**Yes**	When appropriate, connections are made among some clusters in a domain or among domains (e.g., Unit 7 Lesson 4 connects both clusters of Operations and Algebraic Thinking).

[1] For more on the major work of the grade, see Focus by Grade Level.
[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 #2 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[4] Refer also to criterion #3 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[5] Refer also to criterion #6 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

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.[6] ■ Yes ☐ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and questions.	**Yes**	Throughout the lessons, students are given the opportunity to discuss the content in a manner that will give them the deeper understanding of the material being addressed.
	REQUIRED **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. In grades K-6, materials help students make steady progress throughout the year toward fluent computation. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	**Yes**	The majority of the lessons begin with a *Quick Start* led by the students become faster or more accurate at a skill therefore showing attention to procedural skill and fluency. There are also other activities embedded in the lessons that allow students to practice fluency of the standards.
	REQUIRED **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 including ample practice with single-step and multi-step contextual problems that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem solving.	**Yes**	Word problems are written in a manner such that students have to solve multi step contextual problems that are developmental of 5th grade.
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together, and are not always treated separately.	**Yes**	The balance of the three aspects are treated in a manner in which students can master the standards completely for 5th grade

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION I (continued): NON-NEGOTIABLE CRITERIA			
Non-Negotiable 4. PRACTICE-CONTENT CONNECTIONS: Materials meaningfully connect the Standards for Mathematical Content and the Standards for Mathematical Practice.[7, 8] ■ Yes ☐ No	**REQUIRED** **4a)** The materials connect the Standards for Mathematical Practice and the Standards for Mathematical Content.	**Yes**	Each lesson has the Mathematical Practices that are being covered that day as well as a detailed description of how.
	REQUIRED **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.	**Yes**	There are also several examples of questions to use with students that do not grasp the idea right away on their own with step by step guidance from the teachers.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics within grades (across domains and clusters) and across grades by staying consistent with the progressions in the standards.	**REQUIRED** **5a)** Materials base content progressions on the grade-by-grade progressions in the Standards. [9]	**Yes**	Learning progressions for each standard are included before each unit.
	REQUIRED **5b)** Materials give all students extensive work with grade-level problems. If present, below-grade work is minimal.[10]	**Yes**	The majority of the material is on-level based on the 5th grade standards.
■ Yes ☐ No	**REQUIRED** **5c)** Materials relate grade level concepts explicitly to prior knowledge from earlier grades. Materials reorganize and extend prior knowledge to new grade-level knowledge. [10]	**Yes**	Materials connect to prior knowledge (e.g., place value understanding for multi-digit whole numbers is used to perform operations with multi-digit whole numbers and decimals to hundredths).
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings. [9]	**Yes**	Learning objectives are always visibly shaped by the cluster headings.
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. [9]	**No**	The additional standards were not incorporated smoothly (e.g., Unit 7 incorporates additional clusters from OA and an additional cluster from G, and the two domains are only connected in two of the seven lessons in the unit. Only one of the standards included in this unit is used in another unit).

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the standards rather than detract from the focus and include additional content/skills to teach which are not included in the standards. ☐ Yes ☐ No	**REQUIRED** **6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[10] The analysis for evaluators explains how the full meaning of each practice standard has been attended to in the materials.	**Yes**	This is analyzed in depth in the overview of each Unit (e.g., see page 1 R of the Teacher Edition).
	REQUIRED **6b)** Materials provide sufficient opportunities for 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). [11]	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice (e.g., Unit 1, Math Practice 3 is linked to all 13 lessons).
	REQUIRED **6c)** Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.[12]	**Yes**	This is evident in every lesson through the use of Math Accountable Talk.
	6d) Materials explicitly attend to the specialized language of mathematics.[12]	**Yes**	Materials explicitly attend to the language of mathematics.

[10] Refer also to criterion #9 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).
[11] Refer also to criterion #10 in the K–8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Y/N)	JUSTIFICATION/ COMMENTS
SECTION II (continued): ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** 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.	**No**	There is no clear distinction between *Problems* and *Exercises*.
	REQUIRED **7b)** Design of assignments is not haphazard: exercises are given in intentional sequences.	**Yes**	Scaffolding is very evident throughout this curriculum. Standards are taught in intentional sequences throughout the year.
	REQUIRED **7c)** 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.	**Yes**	Students have the opportunity to argue and explain their answers, produce answers and solutions, and present mathematical models in each lesson
	REQUIRED **7d)** 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.	**Yes**	Purposeful questions are located throughout the teacher's manual to make sure that he/she is asking the right questions at the right time to ensure student mastery of the standards.
	REQUIRED **7e)** 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.	**Yes**	Support for English Language Learners is located in the margins of the Teacher Manual of the majority of the lessons.
	7f) There is variety in the pacing and grain size of content coverage.[12]	**Yes**	There is variety in the pacing and grain size.
	7g) 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.	**Yes**	Lessons are structured and support the teacher with active participation by students.
	7h) Manipulatives are faithful representations of the mathematical objects they represent and are connected to written methods.	**Yes**	Manipulatives are representative and connected to written methods.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1– 7.

[12] Refer also to page 18 in the K – 8 Publishers' Criteria for the Common Core State Standards for Mathematics (Spring 2013).

Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

FINAL EVALUATION			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Y/N**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	**Yes**	The materials devote approximately 82% of class time to the major work of Grade 5.
	2. Consistent, Coherent Content	**Yes**	Supporting clusters are taught in isolation; however, they are scaffolded in a manner that connects them to the major content by the end of the unit through real world applications
	3. Rigor and Balance	**Yes**	Real world applications, fluency quick checks, and conceptual understanding activities are shown in every lesson.
	4. Practice-Content Connections	**Yes**	Fluency, Conceptual Understanding, and Application are found throughout the material in purposeful and meaningful ways
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	The additional standards were not incorporated smoothly.
	6. Alignment Criteria for Standards for Mathematical Practice	**No**	It is difficult to locate true examples of exercises focused on Math Practice 3 because a large number of lessons are connected to this Math Practice.
	7. Indicators of Quality	**No**	There is no clear distinction between *Problems* and *Exercises.*
FINAL DECISION FOR THIS MATERIAL: <u>Tier II, Approaching quality</u>			