



High Quality Instructional Materials Math Review Rubric

Subject: Mathematics K-8

Evaluator _____

Rating Committee _____

Publisher _____

Title of Textbook Series/Instructional Program _____

Grade Range of Textbook Series/Instructional Program _____ Specific Grade Evaluated _____

Mississippi defines High-Quality Instructional Materials (HQIM) as material that are aligned with the Mississippi College- and Career-Readiness Standards, externally validated, comprehensive, and include engaging texts, which include books-both digital and print; and multimedia material, rigorous problems, and aligned assessments. HQIM can be used to identify students' areas of strength and opportunities for growth and are sequentially mapped and designed to prepare students to graduate ready for college and the workforce, educative for teachers, and accessible to students with differentiated needs.

The High-Quality Instructional Materials Mathematics Review Rubric K-8

The High-Quality Instructional Materials Mathematics Review Rubric K-8 (HQIM²R²) identifies the criteria and indicators for high quality instructional materials. The K-8 Evidence Guides complement the K-8 Quality Instructional Materials Review Tool by elaborating details for each indicator including the purpose of the indicator, information on how to collect evidence, guiding questions and discussion prompts, and scoring criteria.

HQIM²R² Scoring Protocol and Criteria

1. For instructional materials for which there is an existing EdReports review, an adjusted EdReports (AER) review will include:
 - a. Alignment to MS CCR Standards
 - b. Revision of report structure to match Mississippi High-Quality Instructional Materials Review Rubric
 - c. Training for review of specific Mississippi
2. For instructional materials for which there is no existing EdReports review:
 - a. Training on the use of Mississippi High Quality Instructional Materials Review Rubric Evidence Guide

The HQIM²R² is comprised of three sections:

Section 1: Alignment to Standards, Learning Progressions, and Coherence - This is a requirement for submission.

Section 2: Alignment to Rigor, and the Standards for Mathematical Practice - This is a requirement for submission.

Section 3: Usability and Design of Materials

| HQIM ² R ² : Section 1: | | |
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| Alignment to Standards, Learning Progressions, and Coherence - This is a requirement for submission. | | |
| <ul style="list-style-type: none"> ● Criterion 1.1: Alignment and Accuracy - How well do the instructional materials align to the Standards for Mathematical Content? ● Criterion 1.2: Learning Progressions and Coherence - How well do the instructional materials attend to the learning progressions emphasized in the standards, so that the curriculum is coherent both within grades and across grade bands? | | |
| CRITERIA | INDICATORS OF SUPERIOR QUALITY | Guiding/Key Questions |
| Criterion 1.1: ALIGNMENT AND ACCURACY | | |
| <p>How well do the instructional materials align to the MS- CCR Standards for Mathematical Content?</p> <p>Materials adequately address the <i>Mississippi College- and Career-Readiness Standards (MS CCRS) for Mathematics</i></p> <p>_____ points out of 6</p> | <p>1a. The instructional materials assess the grade level content and, if applicable, content from earlier grades. (2)</p> | <p>Do assessments questions address grade-level standards?</p> <p>Note: Grades K-5 does not assess probability or statistics.</p> |
| | <p>1b. The majority of the <i>MS CCRS for Mathematics</i> K-8 are incorporated, across a grade-level. (4)</p> | <p>Does at least 65% of instructional time address the major work of the grade?</p> <p>Includes:</p> <ul style="list-style-type: none"> ● assessment ● supporting work connected to major work |
| Criterion 1.2. LEARNING PROGRESSIONS and COHERENCE | | |
| <p>How well do the instructional materials attend to the learning progressions</p> | <p>1c. Supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade. (2)</p> | <p>Is supporting content connected to the major work of the grade?</p> <p>Is supporting content addressed independently?</p> |

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| <p>emphasized in the standards, so that the curriculum is coherent both within grades and across grade bands?</p> <p>Each grade's instructional materials are coherent and consistent with <i>the progressions</i> in the Standards.</p> <p>_____ points out of 8</p> | | |
| | <p>1d. The amount of content designated for one grade level is viable for one school year in order to foster coherence between grades. (2)</p> | Can the instructional materials reasonably be completed in one school year? |
| | <p>1e. Materials are consistent with the progressions in the Standards.</p> <p>Are the materials consistent with the progressions in the standards? (2)</p> | |
| | <p>1ei. Materials develop according to the grade-by-grade progression in the Standards. If there is content from prior or future grades, that content is clearly identified and related to grade-level work.</p> | Do materials concentrate on the mathematics of the grade as referenced in the Standards and Progression documents ? |
| | <p>1eii. Materials give all students extensive work with grade-level problems.</p> | <p>Are all grade-level standards present? Do the materials address the full intent of the standards?</p> <p>Is off-grade level content present? Is it a plausible extension or reinforcement of grade-level standards? Does it take time away from the work of the grade?</p> <p>Note where the full intent of a standard is not met, and where there are missing standards?</p> |
| | <p>1eiii. Materials relate grade level concepts explicitly to prior knowledge from earlier grades.</p> | Is grade-level content connected to specific standards from earlier grades? |
| | <p>1f. Materials foster coherence through connections at a single grade, where appropriate and required by the Standards</p> | |

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| | Are standards connected or are they presented as separate ideas? (2) | |
| | 1fi. Materials include learning objectives that are visibly shaped by MC CCR cluster headings. | Do learning objectives reflect the MS CCR cluster headings? |
| | 1fii. Materials include 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. | Are there problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade? |
| TOTAL SCORE (PART 1) | Criterion 1a-1b _____ out of 6 points Criterion 1c-1fii _____ out of 8 points Score Part 1: _____ out of 14 points | |

| HQIM ² R ² Section 2: | | |
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| Alignment to Rigor and The Standards for Mathematical Practices | | |
| <ul style="list-style-type: none"> ● Criterion 2a-2d: Rigor: Are all aspects of rigor (conceptual understanding, procedural skill and fluency, application, and balance across all three) attended to in the instructional materials? ● Criterion 2e-2giii: Standards for Mathematical Practice: Are the Standards for Mathematical Practice addressed so that students have opportunities to demonstrate independent mastery of these standards? | | |
| CRITERIA | INDICATORS OF SUPERIOR QUALITY | Guiding/Key Questions |
| Criterion 2a-d: Rigor | | |
| All aspects of rigor (conceptual understanding, procedural skill and fluency, application, and balance across all three) are attended to in the instructional materials. _____ points out of 8 | 2a. Attention to Conceptual Understanding: The materials support the intentional development of students’ conceptual understanding of key mathematical concepts, especially where called for in specific content standards or clusters. (2) | Do materials develop conceptual understanding? |
| | 2b. Attention to Procedural Skill and Fluency: The materials provide intentional opportunities for students to develop procedural skills fluently , especially where called for in specific content standards or clusters. (2) | Do materials develop procedural skill? Do students have opportunities to fluently engage with those standards that call for fluently? |
| | 2c. Attention to Applications: The materials support the intentional development of students’ ability to utilize mathematical concepts and skills in engaging applications, especially where called for in specific content standards or clusters. (2) | Do students apply mathematical knowledge/skills to real-world contexts? |
| | 2d. Balance: The three aspects of rigor are not always treated together and are not always treated separately. The three aspects are balanced with respect to the standards being addressed. (2) | Do materials balance the three aspects of rigor? |

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| Criterion 2e-giii: Standards for Mathematical Practice | | |
| <p>The Standards for Mathematical Practice are addressed so that students have opportunities to demonstrate independent mastery of these standards.</p> <p>_____ points out of 10</p> | <p>2e. The Standards for Mathematical Practice are identified and used to enrich mathematics content within and throughout each applicable grade. (2)</p> | <p>Are the Standards for Mathematical Practice identified?</p> <p>Do the Standards for Mathematical Practice enrich the content?</p> |
| | <p>2f. The materials carefully attend to the full meaning of each practice standard.¹ (2)</p> | <p>Is the full intent of the Standards for Mathematical Practices present?</p> |
| | <p>2g. Emphasis on Mathematical Reasoning: Materials support the Standards’ emphasis on mathematical reasoning by:</p> | |
| | <p>2gi. Materials prompt students to construct viable arguments and analyze the arguments of others concerning key grade-level mathematics details in the content standards. (2)</p> | <p>Do students have opportunities to construct viable arguments and analyze the arguments of others?</p> |
| | <p>2gii. Materials assist teachers in engaging students in constructing viable arguments and analyzing the arguments of others concerning key grade-level mathematics detailed in the content standards. (2)</p> | <p>Do the materials support teachers to engage students in constructing viable arguments and in analyzing the arguments of others?</p> |
| | <p>2giii. Materials explicitly attend to the specialized language of mathematics. (2)</p> | <p>Do materials attend to the specialized language of mathematics?</p> |

¹ Refer also to Criterion #9 (page 15) in the Publisher’s Criteria.

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| TOTAL SCORE (PART 2) | Criterion 2a-2d _____ points out of 8 points Criterion 2e-2giii _____ points out of 10 points Part 2: _____ out of 18 points | |
| TOTAL SCORE (PARTS 1 and 2) | Part 1: _____ out of 14 points Total score Parts 1 and 2: _____ out of 32 points. | |

HQIM²R² Section 3: Instructional Support, Usability, and Assessment

- **Criterion 3.1 Use and Design to Facilitate Student Learning** - Are materials well designed and take into account effective lesson structure and pacing?
- **Criterion 3.2 Teacher Planning and Learning for Success with the Mississippi College and Career Ready Standards** - Do materials support teacher planning, learning, and understanding of the Standards? Do materials provide teachers with guidance to build their own knowledge of mathematics and to give all students extensive opportunities and support to explore key concepts?
- **Criterion 3.3 Assessment** - Do materials offer teachers resources and tools to collect ongoing data about student progress on the Standards? Do materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed standards?
- **Criterion 3.4 Differentiation, Scaffolding, and Supports for All Learners** - Do materials give all students extensive opportunities and support to explore key concepts?
- **Criterion 3.5 Effective Use of Technology** - Do materials support effective use of technology to enhance student learning? Are digital materials accessible and available in multiple platforms?
- **Criterion 3.6 Supplemental Materials** - Do supplemental materials reinforce core instruction and provide ample and a variety of resources to support student learning?

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | Guiding/Key Question/s |
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| Criterion 3a-3e: Use and design facilitate student learning: Indicators 3a - 3e | | |
| Materials are well designed and take into account effective lesson | 3a. 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 | Do the materials provide problems and exercises? |

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| structure and pacing. ___ point out of 8 | working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose. (2) | Do all problems and exercises have a purpose? |
| | 3b. Design of assignments is not haphazard: exercises are given in intentional sequences. (2) | Are there any instances where the sequencing of assignments is haphazard in development, i.e. abstract before concrete, unnatural flow of material, etc.? Do materials have an intentional sequence for problems and exercises? |
| | 3c. There is variety in what students are asked to produce. (2) | Are students asked to produce many types of representations and/or solutions throughout the work they do? Are students asked to produce models, practice fluency, create arguments, justify their answers, attend to mathematical practices, and make real-world connections? Are students presented with tasks that have more than one answer? (May be better suited to indicators 2a and 2c.) |
| | 3d. Manipulatives are faithful representations of the mathematical objects they represent and when appropriate are connected to written methods. (2) | Are the manipulatives consistent representations of the mathematical objects? Are the manipulatives connected to written methods? |
| | 3e. The visual design (whether in print or digital) is not distracting or chaotic but supports students in engaging thoughtfully with the subject. (US) | Do the materials maintain a consistent layout for each lesson? |

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| | | Are the pictures and models supportive of student learning and engagement without being visually distracting? |
| | 3ei. The material incorporates a glossary, footnotes, recordings, pictures, and/or other features that aid students and teachers in using the book effectively. (US) | Do the materials include features (glossaries, footnotes, recordings, pictures, etc.) that aid students and teachers in using them effectively? |
| Criterion 3.2: Teacher Planning and Learning for Success with the Mississippi College and Career Ready Standards Indicators 3f-3i | | |
| <p>Materials support teacher planning, learning, and understanding of the Standards.</p> <p>Materials provide teachers with guidance to build their own knowledge and to give all students extensive opportunities and support to explore key concepts.</p> <p>_____ points out of 8</p> | 3f. Materials support teachers in planning and providing effective learning experiences by providing quality questions to help guide students' mathematical development. (2) | <p>Are there any overview sections and/or annotations that contain narrative information about the math content and/or quality questions to help guide students' mathematical development?</p> <p>Are the questions provided to teachers designed to elicit students' mathematical understanding?</p> |
| | 3g. Materials contain a teacher's edition with: (2) | <p>Are there overview sections and/or annotations that contain narrative information about the math content and/or ancillary documents that will assist the teacher in presenting the student material?</p> <p>Are there embedded technology links that will enhance the learning for all students?</p> <p>If technology support is embedded, is it overarching and accessible?</p> |
| | <ul style="list-style-type: none"> ● ample and useful annotations, ● suggestions on how to present the content in the student edition and in the ancillary materials. ● Where applicable, materials include teacher guidance for the use of embedded technology to support and enhance student learning. | Do the materials include annotations on how to present the information in the student editions to assist in full understanding of the standards |
| | 3h. Materials contain a teacher's edition that contains full, adult-level explanations and examples of the more advanced mathematics concepts in the lessons so that teachers can improve | |

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| | <p>their own knowledge of the subject, as necessary. (2)</p> | <p>and other supports that will assist a teacher in developing their own understanding allowing for seamless transitions of that knowledge to student learning?</p> |
| | <p>3i. Materials contain a teacher’s edition (in print or clearly distinguished/accessible as a teacher’s edition in digital materials) that <i>explains the role of the specific grade-level mathematics in the context of the overall mathematics curriculum</i> for kindergarten through High School. (2)</p> | <p>Are there chapter or lesson overviews that explain the progression of the content and how this specific course connects to previous and upcoming courses?</p> <p>Is there information given to allow for coherence, not just a single course above or below, but there are multiple course levels, if applicable, to allow a teacher to make prior connections and teach for connections to future content?</p> |
| | <p>3j. Materials provide a list of lessons in the teacher's edition (in print or clearly distinguished/accessible as a teacher’s edition in digital materials), <i>cross-referencing the standards addressed and providing an estimated instructional time for each lesson, chapter and unit</i> (i.e., pacing guide). (US)</p> | <p>Is there clear documentation that aligns standards to lessons/chapters/units/topics?</p> <p>Is there clear documentation that provides estimated instructional time for lessons/chapters/units/topics?</p> |
| | <p>3k. Materials contain strategies for informing parents or caregivers about the mathematics program and suggestions for how they can help support student progress and achievement. (unscored)</p> | <p>Do materials include strategies to inform parents or caregivers about the mathematical program and how they can support student progress?</p> |
| | <p>3l. Materials contain explanations of the instructional approaches of the program and identification of the research-based strategies. (unscored)</p> | <p>Do the materials contain research based strategies? Are these strategies identified?</p> <p>Do the materials contain explanation of the instructional approaches for the program?</p> |
| <p>Criterion 3.3 Assessment</p> | | |

| Indicators 3o-3q | | |
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| <p>Materials offer teachers resources and tools to collect ongoing data about student progress on the Standards.</p> <p>Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed standards.</p> <p>_____ points out of 10</p> | 3m. Materials provide strategies for gathering information on students prior knowledge and across grade levels. (2) | Do materials provide strategies to gather information on students' prior knowledge? |
| | 3n. Materials provide support for teachers to identify and address common student errors and misconceptions. (2) | Do materials help teachers identify and address common student errors and misconceptions? |
| | 3o. Materials provide opportunities for ongoing review and practice, with feedback, for students in learning both concepts and skills. (2) | Do materials include feedback to students on both concepts and skills? |
| | 3p. Materials offer ongoing formative and summative assessments. | |
| | 3pi. Assessments clearly denote which standards are <i>targeted</i> . (2) | Do materials denote what cluster/standard is being assessed by each item? |
| | 3pii. Assessments include aligned rubrics that provide sufficient guidance to teachers for interpreting student performance and suggestions for follow-up. (2) | Do materials include scoring guidance (rubrics, anchors, etc.)? Does the guidance include support for teachers to interpret student performance and suggestions for follow-up? |
| | 3piii. The assessment materials include embedded assessments that reflect a variety of knowledge levels. (unscored) | Do materials include assessments that reflect a variety of knowledge levels? |
| | 3piv. Multiple types of formative and summative assessments (performance-based tasks, questions, research, investigations, and projects) are embedded into the content materials and assess the learning targets. (unscored) | Do the materials include multiple types of formative and summative assessments? |
| 3q. Materials encourage students to monitor their own progress. (unscored) | Do materials provide opportunities for students to monitor their own progress? | |
| 3.4 Differentiation, Scaffolding, and Supports for all Learners | | |
| Indicators 3r-3y | | |
| <p>Materials give all students extensive opportunities and support to explore key concepts.</p> | 3r. Materials provide strategies to help teachers sequence or scaffold lessons so that the content is accessible to all learners. (2) | Do the materials provide specific strategies to help teachers sequence and/or scaffold lessons so the content is accessible to all learners? |
| | 3s. Materials provide teachers with strategies for meeting the needs of a range of learners. (2) | Do the materials provide appropriate suggestions to differentiate instruction to |

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| _____points out of 12 | | support the varying needs of learners? |
| | 3t. Materials embed tasks with multiple entry- points that can be solved using a variety of solution strategies or representations. (2) | Do materials include tasks that provide multiple entry-points that can be solved using a variety of solution strategies or representations? |
| | 3u. Materials suggest support, accommodations, and modifications for English Language Learners and other special populations that will support their regular and active participation in learning mathematics (e.g., modifying vocabulary words within word problems). (2) | Do materials suggest supports, accommodations, and/or modifications for English Language Learners and other special populations to support their regular and active participation in learning mathematics? |
| | 3v. Materials provide opportunities for advanced students to investigate mathematics content at greater depth. (2) | Do the materials provide opportunities for advanced students to investigate mathematics content at greater depth? |
| | 3w. Materials provide a balanced portrayal of various demographic and personal characteristics. (2) | Do the materials provide a balanced portrayal of various demographic and personal characteristics. |
| | 3x. Materials provide opportunities for teachers to use a variety of grouping strategies.(unscored) | Do the materials present teachers with a variety of grouping strategies? |
| | 3y. Materials encourage teachers to draw upon home language and culture to facilitate learning. (unscored) | Do the materials provide guidance for teachers to draw upon home language and culture? |
| Criterion 3.5 Effective use of technology | | |
| Indicators 3z-3ad | | |
| Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms. All indicators are unscored (US), however qualitative evidence is | 3z. Materials integrate technology such as interactive tools, virtual manipulatives/objects, and/or dynamic mathematics software in ways that engage students in the Mathematical Practices. (unscored) | Do the materials integrate technology such as interactive tools, virtual manipulatives/objects, and/or dynamic mathematics software in ways that engage students in the Mathematical Practices. |
| | 3aa. Digital materials (either included as part of the core materials or as part of a digital curriculum) are web-based and compatible with multiple internet browsers (e.g., Internet Explorer, Firefox, Google Chrome, etc.). In addition, materials are “platform neutral” (i.e., are compatible with multiple operating systems such as Windows and Apple and are not proprietary to any single platform) and allow the use of tablets and mobile devices. (unscored) | Are digital materials (either included as part of the core materials or as part of a digital curriculum) web-based and compatible with multiple internet browsers? Are materials “platform neutral?” |

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| provided. | | |
| | 3ab. Materials include opportunities to assess student mathematical understandings and knowledge of procedural skills using technology. (unscored) | Do materials include opportunities to assess student mathematical understandings and knowledge of procedural skills using technology? |
| | 3ac. Materials can be easily customized for individual learners. | |
| | 3aci. Digital materials include opportunities for teachers to personalize learning for all students, using adaptive or other technological innovations. (unscored) | Do digital materials include opportunities for teachers to personalize learning for all students, using adaptive or other technological innovations? |
| | 3acii. Materials can be easily customized for local use. For example, materials may provide a range of lessons to draw from on a topic. (unscored) | Can materials be easily customized for local use. For example, materials may provide a range of lessons to draw from on a topic? |
| 3ad. Materials include or reference technology that provides opportunities for teachers and/or students to collaborate with each other (e.g. websites, discussion groups, webinars, etc.). (unscored) | Do materials include or reference technology that provides opportunities for teachers and/or students to collaborate with each other? | |
| Criterion 3.6 Supplemental Materials Indicators 3ae-3ah | | |
| Supplemental materials reinforce core instruction and provide ample and a variety of resources to support student learning. | 3ae. Supplemental materials employ a variety of reading levels and is grade/level appropriate . (unscored) | Do supplemental materials use a variety of reading levels that are grade-level appropriate? |
| | 3af. Supplemental materials provide ample resources that reinforce student learning through practice. (unscored) | Do supplemental materials reinforce student learning through practice? |
| | 3ag. All supplemental materials are aligned to the content of the core instructional materials. (unscored) | Are supplemental materials aligned to core materials? |
| | 3ah. Supplemental materials provide a variety of resources for student learning activities (e.g., journals/writing, cooperative group work, graphic organizers, etc.). (unscored) | Are there a variety of resources for student learning activities in supplemental materials |
| TOTAL SCORE (PART 3) | _____ out of 38 points | |

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| TOTAL SCORE (PART 1 and 2) | _____ out of 32 points | |
| TOTAL SCORE ALL PARTS | _____ out of 70 points | |