



**Quality Instructional
Materials Tool:
Grades K-8
Mathematics**

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About EdReports.org

Our Mission: EdReports.org is an independent nonprofit designed to improve K-12 education. EdReports.org increases the capacity of teachers, administrators, and leaders to seek, identify, and demand the highest quality instructional materials. Drawing upon expert educators, our reviews of instructional materials and support of smart adoption processes equip teachers with excellent materials nationwide.

Our Vision: All students and teachers will have access to the highest quality instructional materials that will help improve student learning outcomes.

Our Theory of Action: Credible information against quality criteria in a quickly changing marketplace helps educators make better purchasing decisions and improve student performance. Identifying excellence and improving demand for high quality, aligned instructional materials will improve the supply of quality materials over time, leading to better student achievement outcomes.

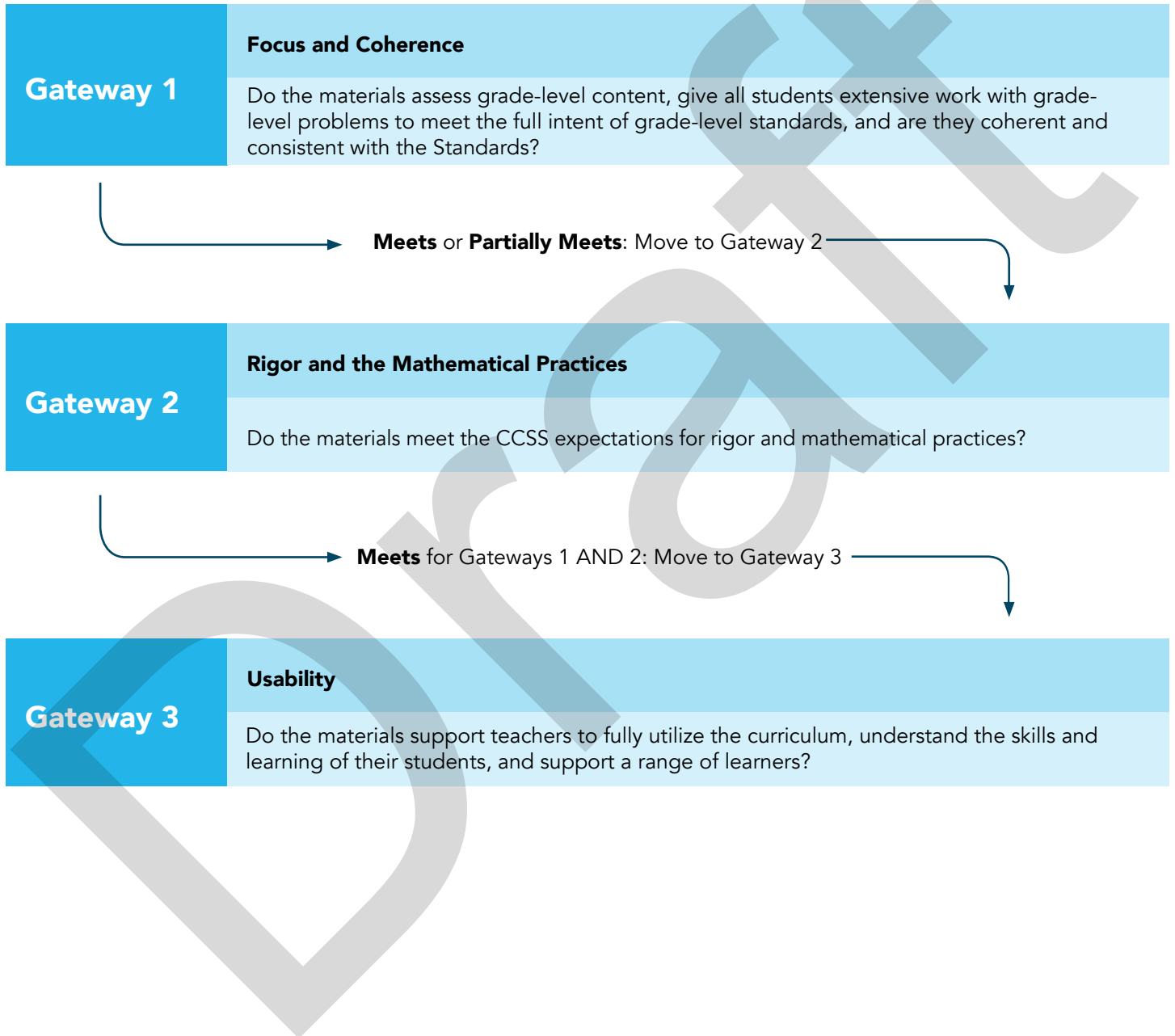
About Our Review Tools

EdReports reviewers use these review tools to create free, evidence-rich reports available on EdReports.org. These reports are developed to provide educators, stakeholders, and leaders with independent, evidence-rich information about the quality of instructional materials from those who will be using them in classrooms. Expert educators use our tools to evaluate full sets of instructional materials against criteria (see Figure 1). The tools are built from the experience of educators, curriculum experts, and leading rubric developers and organizations that have conducted reviews of instructional materials, lessons, and tasks.

To create our review tools, EdReports utilizes information from the Common Core State Standards (CCSS) and Next Generation Science Standards (NGSS). We also conduct research into the application of commonly used rubrics, gather input from hundreds of educators during nationwide listening tours, interview content experts, and convene Anchor Educator Working Groups of expert practitioners. Continuous improvement is important to this development, and each tool is used with multiple sets of materials before being finalized. In addition, the Anchor Educator Working Group has the opportunity to refine the tools after the initial round of implementation.

EdReports' Quality Instructional Materials Tool for year-long comprehensive programs has three major gateways (see Figure 1) to guide the evaluation process. Reviewers apply the three gateways sequentially to ensure EdReports reports convey to the field the extent to which materials are CCSS-aligned or designed for the NGSS, and are usable by educators. Those materials that meet or partially meet the expectations for Gateway 1 will move to Gateway 2. Only those materials that meet the expectations for both Gateway 1 and Gateway 2 (Alignment Indicators) will move to Gateway 3 (Usability Indicators).

Figure 1: Gateway Evaluation Process for Review of Mathematics Materials (Grades K-8)



Gateway 1

Focus and Coherence

To identify the Gateway rating, educators use evidence gathered to score indicators related to each criterion.

REMINDER:

- Materials must “Meet Expectations” or “Partially Meet Expectations” in Gateway 1 to be reviewed in Gateway 2.
- Materials must “Meet Expectations” in BOTH Gateway 1 and Gateway 2 to be reviewed in Gateway 3.

Students and teachers using the material as designed assess grade-level content and give all students extensive work with grade-level problems to meet the full intent of grade-level standards. Each grade’s materials are coherent and consistent with the Standards.

Gateway 1 Overview		Available Points
Criterion 1.1: Focus Indicators 1a-1b Materials assess grade-level content and give all students extensive work with grade-level problems to meet the full intent of grade-level standards.		6
Criterion 1.2: Coherence Indicators 1c-1g Each grade’s materials are coherent and consistent with the Standards.		8
Total Available Points in Gateway 1	14	Meets: 12-14 (*with no 0s) Partially Meets: 8-11 Does Not Meet: <8

▶ Criterion 1.1: Focus

Materials assess grade-level content and give all students extensive work with grade-level problems to meet the full intent of grade-level standards.

Indicators	Scoring
1a. Materials assess the grade-level content and, if applicable, content from earlier grades.	0 2
1b. Materials give all students extensive work with grade-level problems to meet the full intent of grade-level standards.	0 2 4

Total Available Points	6	Meets: 6 Does Not Meet: <6
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▶ Criterion 1.2: Coherence

Each grade's materials are coherent and consistent with the Standards.

Indicators	Scoring
1c. When implemented as designed, the majority of the materials address the major clusters of each grade.	0 2
1d. Supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade.	0 1 2
1e. Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade.	0 1 2
1f. Content from future grades is identified and related to grade-level work, and materials relate grade-level concepts explicitly to prior knowledge from earlier grades.	0 1 2
1g. In order to foster coherence between grades, materials can be completed within a regular school year with little to no modification.	Narrative Evidence Only

Total Available Points	8	Meets: 7-8 Partially Meets: 5-6 Does Not Meet: <5
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Gateway 1 Total	Total Available Points	14	Meets: 12-14 (*with no 0s) Partially Meets: 8-11 Does Not Meet: <8
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Gateway 2

Rigor and the Mathematical Practices

To identify the Gateway rating, educators use evidence gathered to score indicators related to each criterion.

REMINDER:

- Materials must "Meet Expectations" or "Partially Meet Expectations" in Gateway 1 to be reviewed in Gateway 2.
- Materials must "Meet Expectations" in BOTH Gateway 1 and Gateway 2 to be reviewed in Gateway 3.

Materials align with CCSS expectations for rigor and mathematical practices.

Gateway 2 Overview		Available Points
Criterion 2.1: Rigor and Balance Indicators 2a-2d Materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by giving appropriate attention to: developing students' conceptual understanding; procedural skill and fluency; and engaging applications.	8	
Criterion 2.2: Practice-Content Connections Indicators 2e-2i Materials meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice (MPs).	10	
Total Available Points in Gateway 2	18	Meets: 16-18 Partially Meets: 11-15 Does Not Meet: <11

▶ Criterion 2.1: Rigor and Balance

Materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by giving appropriate attention to: developing students' conceptual understanding; procedural skill and fluency; and engaging applications.

Indicators	Scoring
2a. Materials develop conceptual understanding of key mathematical concepts, especially where called for in specific content standards or cluster headings.	0 1 2
2b. Materials give attention throughout the year to individual standards that set an expectation for procedural skill and fluency.	0 1 2
2c. Materials are designed so that teachers and students spend sufficient time working with engaging applications of the mathematics.	0 1 2
2d. The three aspects of rigor are not always treated together and are not always treated separately. There is a balance of the three aspects of rigor within the grade.	0 1 2

Total Available Points	8	Meets: 7-8 Partially Meets: 5-6 Does Not Meet: <5
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**▶ Criterion 2.2:
Practice-Content Connections**

Materials meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice (MPs).

Indicators	Scoring
2e. Materials support the intentional development of MP1: Make sense of problems and persevere in solving them; and MP2: Reason abstractly and quantitatively, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards.	0 1 2
2f. Materials support the intentional development of MP3: Construct viable arguments and critique the reasoning of others, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards.	0 1 2
2g. Materials support the intentional development of MP4: Model with mathematics; and MP5: Choose tools strategically, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards.	0 1 2
2h. Materials attend to the intentional development of MP6: Attend to precision; and attend to the specialized language of mathematics for students, in connection to the grade-level content standards, as expected by the mathematical practice standards.	0 1 2
2i. Materials support the intentional development of MP7: Look for and make use of structure; and MP8: Look for and express regularity in repeated reasoning, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards.	0 1 2

Total Available Points	10	Meets: 9-10 Partially Meets: 6-8 Does Not Meet: <6
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Gateway 2 Total	Total Available Points	18	Meets: 16-18 Partially Meets: 11-15 Does Not Meet: <11
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Gateway 3

Usability

To identify the Gateway rating, educators use evidence gathered to score indicators related to each criterion.

REMINDER:

- Materials must "Meet Expectations" or "Partially Meet Expectations" in Gateway 1 to be reviewed in Gateway 2.
- Materials must "Meet Expectations" in BOTH Gateway 1 and Gateway 2 to be reviewed in Gateway 3.

Materials support teachers to fully utilize the curriculum, understand the skills and learning of their students, and support a range of learners.

Gateway 3 Overview		Available Points
Criterion 3.1: Teacher Supports Indicators 3a-3h Teacher Supports identifies opportunities for teachers to effectively plan and utilize materials with integrity and to further develop their own understanding of the content.	9	
Criterion 3.2: Assessment Indicators 3i-3m Assessment identifies how materials provide tools, guidance, and support for teachers to collect, interpret, and act on data about student progress towards the standards.	12	
Criterion 3.3: Student Supports Indicators 3n-3y Student Supports identifies how materials are designed for each child's regular and active participation in grade-level/grade-band/series content.	11	
Criterion 3.4: Intentional Design Indicators 3z-3ac Intentional Design identifies how materials support students and teachers with a visual design that is engaging and references or integrates digital technology (when applicable), with guidance for teachers.	Narrative Evidence Only	
Total Available Points in Gateway 3	32	Meets: TBD Partially Meets: TBD Does Not Meet: TBD

**▶ Criterion 3.1:
Teacher Supports**

Teacher Supports identifies opportunities for teachers to effectively plan and utilize materials with integrity and to further develop their own understanding of the content.

Indicators	Scoring
3a. Materials provide teacher guidance with useful annotations and suggestions for how to enact the student materials and ancillary materials, with specific attention to engaging students to guide their mathematical development.	0 1 2
3b. Materials provide a teacher’s edition that contains full, adult-level explanations, and examples when necessary, of the more advanced concepts so that teachers can improve their own knowledge of the subject.	0 1 2
3c. Materials provide a teacher’s edition that includes standards correlation information and explains the role of the standards in the context of the overall series.	0 1 2
3d. Materials provide strategies for informing all stakeholders, including students, parents, or caregivers about the program and suggestions for how they can help support student progress and achievement.	Narrative Evidence Only
3e. Materials provide explanations of the instructional approaches of the program and identification of the research-based strategies.	0 1 2
3f. Materials provide a comprehensive list of supplies needed to support instructional activities.	0 1
3g. <i>This is not an assessed indicator in Mathematics.</i>	
3h. <i>This is not an assessed indicator in Mathematics.</i>	

Total Available Points	9	Meets: TBD Partially Meets: TBD Does Not Meet: TBD
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▶ Criterion 3.2: Assessment

Assessment identifies how materials provide tools, guidance, and support for teachers to collect, interpret, and act on data about student progress towards the standards.

Indicators	Scoring
3i. Assessment information is included in the materials to indicate which standards are addressed.	0 2 4
3j. Assessments provide aligned rubrics and scoring guidelines that include sufficient guidance to teachers for interpreting student performance on assessments and suggestions for follow-up.	0 2 4
3k. Assessments include a variety of item types to measure grade-level/series standards.	0 1 2
3l. Assessments offer accommodations that allow students to demonstrate their knowledge and skills without changing the content of the assessment.	Narrative Evidence Only
3m. Assessments provide a system including multiple opportunities throughout the grade, course, and/or series to determine what students are learning and what they have learned.	0 1 2

Total Available Points	12	Meets: TBD Partially Meets: TBD Does Not Meet: TBD
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▶ Criterion 3.3: Student Supports

Student Supports identifies how materials are designed for each child's regular and active participation in grade-level/grade-band/series content.

Indicators	Scoring
3n. Materials regularly provide strategies and supports for students with unfinished learning to regularly participate and engage in learning grade-level/series mathematics.	0 1 2
3o. Materials provide strategies and supports for students in special populations to support their regular and active participation in learning grade-level/series mathematics.	0 1 2
3p. Materials provide extensions and/or opportunities for students to engage with grade-level/series mathematics at greater depth.	0 1 2
3q. Materials provide varied approaches to learning tasks over time and variety in how students are expected to demonstrate their learning.	Narrative Evidence Only
3r. Materials provide opportunities for students to monitor their own learning.	0 1
3s. Materials provide opportunities for teachers to use a variety of grouping strategies.	Narrative Evidence Only
3t. Materials provide strategies and supports for students who read, write, and/or speak in a language other than English to support their regular and active participation in learning grade-level mathematics.	0 1 2
3u. Materials provide a balance of images or information about people, representing various demographic and physical characteristics.	Narrative Evidence Only
3v. Materials provide guidance to encourage teachers to draw upon student home language to facilitate learning.	Narrative Evidence Only
3w. Materials provide guidance to encourage teachers to draw upon student cultural and social backgrounds to facilitate learning.	Narrative Evidence Only
3x. Materials provide supports for different reading levels to ensure accessibility for students.	Narrative Evidence Only
3y. Manipulatives, both virtual and physical, are faithful representations of the mathematical objects they represent and when appropriate are connected to written methods.	0 1 2

Total Available Points	11	Meets: TBD Partially Meets: TBD Does Not Meet: TBD
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▶ Criterion 3.4: Intentional Design

Intentional Design identifies how materials support students and teachers with a visual design that is engaging and references or integrates digital technology (when applicable), with guidance for teachers.

Indicators	Scoring
3z. Materials integrate technology such as interactive tools, virtual manipulatives/objects, and/or dynamic mathematics software in ways that engage students in the grade-level/series standards, when applicable.	Narrative Evidence Only
3aa. Materials include or reference digital technology that provides opportunities for teachers and/or students to collaborate with each other, when applicable.	Narrative Evidence Only
3ab. The visual design (whether in print or digital) supports students in engaging thoughtfully with the subject, and is neither distracting nor chaotic.	Narrative Evidence Only
3ac. Materials provide teacher guidance for the use of embedded technology to support and enhance student learning, when applicable.	Narrative Evidence Only

Total Available Points	Narrative Evidence Only	Meets: n/a Partially Meets: n/a Does Not Meet: n/a
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Gateway 3 Total	Total Available Points	32	Meets: TBD Partially Meets: TBD Does Not Meet: TBD
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