edreports

Core Content Review Criteria v2.0

Mathematics

High School

About EdReports

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: If we identify excellence and increase demand for excellence, then we increase the number of students in classrooms with high-quality instructional materials.

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 the 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' Review Criteria 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 (Teacher and Student Supports).

A Note About Publishing Review Criteria Before Starting Reviews: This is the first time EdReports has made criteria publicly available before starting reviews. We made this decision for two main reasons: first, to provide equal access to all publishers of comprehensive, K–12 instructional materials to inform their planning for forthcoming program revisions. Second, to give states, districts, and partner organizations the earliest possible opportunity to consult these documents in support of their work to advise and conduct materials adoptions that align with local needs and policy requirements.

Please note that all version 2.0 Review Criteria are in a "final draft" state. They represent a robust foundation, but they remain subject to ongoing refinements until the publication of the first reports using the updated criteria. Over the course of the review process for each content area and grade band, we will fine-tune the criteria to maximize clarity and practical use for our educator reviewers.

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

Gateway 1	**Focus and Coherence**
	Do materials assess grade-level content and give all students extensive work with grade-level problems to meet the full intent of grade-level standards? Are each grade's materials coherent and consistent with the Standards?

Meets or **Partially Meets**: Move to Gateway 2

Gateway 2	**Rigor and Mathematical Practices**
	Do 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? Do materials meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice (MPs)?

Meets for Gateways 1 AND 2: Move to Gateway 3

Gateway 3	**Teacher & Student Supports**
	Do materials include opportunities for teachers to effectively plan and utilize with integrity to further develop their own understanding of the content? Are materials designed for each child's regular and active participation in grade-level/grade-band/series content? Do materials include a visual design that is engaging and references or integrates digital technology, when applicable, with guidance for teachers?

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 focus on grade-level content and spend the majority of instructional time on the major work of the grade. Each grade's materials are coherent and consistent with the college and career-ready standards.

**NOTE: Materials being reviewed must score above zero points in each indicator, otherwise the materials automatically do not proceed to Gateway 3.*

Gateway 1 Overview			Available Points
Criterion 1.1: Focus and Coherence Indicators 1a-1g Materials are coherent and consistent with "the high school standards that specify the mathematics which all students should study in order to be college and career ready" (p. 57 CCSSM).			24
Total Available Points in Gateway 1	24	Meets: XX-XX (with no 0s) Partially Meets: XX-XX Does Not Meet: < XX	

Criterion 1.1 Focus and Coherence	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 Criteria	Scoring
1a. Materials focus on the high school standards.	
1a.i. Materials attend to the full intent of the mathematical content contained in the high school standards for all students. • All aspects of all non-plus standards are addressed by the instructional materials of the series with only a few instances of exception.	0 2 4
1a.ii. Materials attend to the full intent of the modeling process when applied to the modeling standards. • The full intent of the modeling process is used to address all, or nearly all, of the modeling standards by the instructional materials of the series. • Materials intentionally develop the full intent of the modeling process throughout the series leading to culminating experiences that address all, or nearly all, of the modeling standards.	0 1 2
1b. Materials provide students with opportunities to work with all high school standards and do not distract students with prerequisite or additional topics that do not support the high school standards.	
1b.i. Materials, when used as designed, allow students to spend the majority of their time on the content from CCSSM widely applicable as prerequisites for a range of college majors, postsecondary programs, and careers. • Evidence clearly describes how the materials for the SERIES, when used as designed, allows students to spend the majority of their time (>50%) on the content widely applicable as prerequisites (WAPs) for a range of college majors, postsecondary programs, and careers.	0 2
1b.ii. Materials, when used as designed, allow students to fully learn each standard. • Evidence clearly describes how the materials for the series, when used as designed, enable students to fully learn all or most of the non-plus standards.	0 2 4
1c. Materials require students to engage in high school mathematics by focusing on problem contexts and attending to various types of real numbers. • Materials regularly use contexts appropriate for high school students, use various types of real numbers, and provide opportunities for students to apply key takeaways from grades 6-8.	0 1 2
1d. Materials are mathematically coherent by making meaningful connections in a single course and throughout the series, where appropriate and where required by the Standards. • Materials foster coherence through meaningful mathematical connections in a single course and throughout the series, where appropriate and where required by the Standards.	0 1 2
1e. Materials explicitly identify and build on knowledge from Grades 6-8 to the high school standards. • Connections between Grades 6-8 and high school concepts are present and allow students to extend their previous knowledge.	0 1 2
1f. Assessment information is included in the materials to indicate which standards are assessed. • Materials consistently identify the standards and practices assessed for formal assessments.	0 1 2
1g. Assessments include opportunities for students to demonstrate the full intent of grade-level/course-level standards and practices across the series. • Assessments include opportunities for students to demonstrate the full intent of grade-level/course-level standards and practices across the series.	0 2 4

Materials must meet the expectations of all scoring criteria in order to receive full points for the indicator.

**NOTE: Materials being reviewed must score above zero points in each indicator, otherwise the materials automatically do not proceed to Gateway 3.*

Total Available Points	24	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX

Total Available Points in Gateway 1	24	Meets: XX-XX (with no 0s) Partially Meets: XX-XX Does Not Meet: < XX

Gateway 2

Rigor and 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: Standards for Mathematical Practices Indicators 2e-2l Materials meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice (MPs).	8
Total Available Points in Gateway 2	16

Meets: XX-XX
Partially Meets: XX-XX
Does Not Meet: < XX

Criterion 2.1 Rigor and Balance	Materials are coherent in design, scientifically accurate, and support grade-band endpoints made for all three dimensions.

Indicators + Scoring Criteria	Scoring
2a. Materials support the intentional development of students' conceptual understanding of key mathematical concepts, especially where called for in specific content standards or clusters. ● Materials develop conceptual understanding throughout the series. ● Materials provide opportunities for students to independently demonstrate conceptual understanding throughout the series.	0 1 2
2b. Materials provide intentional opportunities for students to develop procedural skills and fluencies, especially where called for in specific content standards or clusters. ● Materials develop procedural skills and fluencies throughout the series. ● Materials provide opportunities to independently demonstrate procedural skills and fluencies throughout the series.	0 1 2
2c. 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. ● Materials include multiple routine and non-routine applications of the mathematics throughout the grade level. ● Materials provide opportunities for students to independently demonstrate multiple routine and non-routine applications of the mathematics throughout the grade level.	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 as reflected by the standards. ● All three aspects of rigor are present independently and multiple aspects of rigor are engaged simultaneously to develop students' mathematics understanding of a single topic/unit of study throughout each grade level.	0 2

Materials must meet the expectations of all scoring criteria in order to receive full points for the indicator.

Total Available Points	8	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX

Criterion 2.2 Standards for Mathematical Practices	Materials meaningfully connect the Standards for Mathematical Content and Standards for Mathematical Practice (MPs).

Indicators + Scoring Criteria	Scoring
2e. Materials support the intentional development of MP1: Make sense of problems and persevere in solving them, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP1 to meet its full intent in connection to grade-level content.	0 1
2f. Materials support the intentional development of MP2: Reason abstractly and quantitatively, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP2 to meet its full intent in connection to grade-level content.	0 1
2g. Materials support the intentional development of MP3: Construct viable arguments and critique the reasoning of others, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP3 to meet its full intent in connection to grade-level content.	0 1
2h. Materials support the intentional development of MP4: Model with mathematics, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP4 to meet its full intent in connection to grade-level content.	0 1
2i. Materials support the intentional development of MP5: Choose tools strategically, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP5 to meet its full intent in connection to grade-level content.	0 1
2j. Materials support the intentional development of MP6: Attend to precision, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP6 to meet its full intent in connection to grade-level content.	0 1
2k. Materials support the intentional development of MP7: Look for and make use of structure, for students, in connection to the grade-level content standards, as expected by the mathematical practice standards. ● There is intentional development of MP7 to meet its full intent in connection to grade-level content.	0 1
2l. Materials support the intentional development of 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. ● There is intentional development of MP8 to meet its full intent in connection to grade-level content.	0 1

Materials must meet the expectations of all scoring criteria in order to receive full points for the indicator.

Total Available Points	8	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX

Total Available Points in Gateway 2	16	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX

Gateway 3

Teacher & Student Supports

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-3i Materials include opportunities for teachers to effectively plan and utilize with integrity to further develop their own understanding of the content.	10
Criterion 3.2: Student Supports Indicators 3j-3q Materials are designed for each child's regular and active participation in grade-level/grade-band/series content.	6
Criterion 3.3: Intentional Design Indicators 3r-3u Materials include 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	16
Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX	

Criterion 3.1 Teacher Supports	Materials include opportunities for teachers to effectively plan and utilize with integrity to further develop their own understanding of the content.

Indicators + Scoring Criteria	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 in engaging students to guide their mathematical development. • Materials provide comprehensive guidance that will assist teachers in presenting the student and ancillary materials. • Materials include sufficient and useful annotations and suggestions that are presented within the context of the specific learning objectives.	0 1 2
3b. Materials contain explanations and examples of grade-level/course-level concepts and/or standards and how the concepts and/or standards align to other grade/course levels so that teachers can improve their own knowledge of the subject. • Materials contain explanations and examples of grade/course-level concepts and/or standards so that teachers can improve their own knowledge of the subject. • Materials contain explanations and examples of how the concepts and/or standards align to other grade/course levels so that teachers can improve their own knowledge of the subject.	0 1 2
3c. Materials include a year-long scope and sequence with standards correlation information. • Materials include a year-long scope and sequence with standards correlation information.	0 1
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. • Materials contain strategies for informing students, parents, or caregivers about the program. • Materials contain suggestions for how parents or caregivers can help support student progress and achievement. • Materials for parents (like letters home) have been translated into languages other than English.	Narrative Evidence Only
3e. Materials explain the program's instructional approaches, identify research-based strategies, and explain the role of the standards. • Materials explain the instructional approaches of the program. • Materials include and reference research-based strategies. • Materials include and reference the role of the standards in the program.	0 1 2
3f. Materials provide a comprehensive list of supplies needed to support instructional activities. • Materials include a comprehensive list of supplies needed to support the instructional activities.	0 1
3g. The assessment system provides consistent opportunities to determine student learning throughout the school year. The assessment system provides sufficient teacher guidance for evaluating student performance and determining instructional next steps. • The assessment system provides opportunities to determine student learning throughout the school year. • The assessment system provides sufficient teacher guidance for evaluating student performance. • The assessment system provides sufficient teacher guidance for interpreting student performance and determining next instructional steps.	0 1 2
3h. *This is not an assessed indicator in Mathematics.*	
3i. *This is not an assessed indicator in Mathematics.*	

Materials must meet the expectations of all scoring criteria in order to receive full points for the indicator.

Total Available Points	10	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX

Criterion 3.2 Student Supports	Materials are designed for each child's regular and active participation in grade-level/grade-band/series content.

Indicators + Scoring Criteria		Scoring
3j.	Materials provide strategies and support for students in special populations to work with grade-level content and meet or exceed grade-level standards, which support their regular and active participation in learning. • Materials provide strategies, supports, and resources for students in special populations to support their regular and active participation in grade-level mathematics work.	0 1 2
3k.	Materials regularly provide extensions and/or opportunities for advanced students to engage with grade-level/course-level mathematics at greater depth. • Materials regularly provide multiple extensions and/or opportunities for advanced students to engage with grade-level/course-level mathematics at greater depth. • There are no instances of advanced students doing more assignments than their classmates.	0 1 2
3l.	Materials provide varied approaches to learning tasks over time and variety in how students are expected to demonstrate their learning with opportunities for students to monitor their learning. • Materials provide varied tasks for students to show their thinking and make meaning. • Students have opportunities to share their thinking, to demonstrate changes in their thinking over time, and to apply their understanding in new contexts. • Materials leverage the use of a variety of formats over time to deepen student understanding and ability to explain and apply mathematical ideas. • Materials provide for ongoing review, practice, self-reflection, and feedback. Materials provide multiple strategies, such as oral and/or written feedback, peer or teacher feedback, and self-reflection. • Materials provide a clear path for students to monitor and move their own learning.	Narrative Evidence Only
3m.	Materials provide opportunities for teachers to use a variety of grouping strategies. • Materials provide grouping strategies for students. • Materials provide guidance for varied types of interaction among students. • Materials provide guidance for the teacher on grouping students in a variety of grouping formats.	Narrative Evidence Only
3n.	Assessments offer accommodations that allow students to demonstrate their knowledge and skills without changing the content of the assessment. • Materials offer accommodations that ensure all students can access the assessment (e.g., text-to-speech, increased font size) without changing its content. • Materials include guidance for teachers on the use of provided accommodations. • Materials include guidance for teachers about who can benefit from these accommodations. • Materials do not include modifications to assessments that alter grade level/expectations.	Narrative Evidence Only
3o.	Materials provide a range of representation of people and include detailed instructions and support for educators to effectively incorporate and draw upon students' different cultural, social, and community backgrounds to enrich learning experiences. • Materials provide a range of representation of people, ensuring a broad range of cultural, racial, gender, and ability backgrounds are accurately and authentically represented. • Materials provide detailed instructions and support for teachers on incorporating and drawing upon students' different cultural, social, and community backgrounds to enrich learning experiences.	Narrative Evidence Only
3p.	Materials provide supports for different reading levels to ensure accessibility for students. • Materials identify strategies to engage students in reading and accessing grade-level mathematics. • Materials identify multiple entry points to help struggling readers access and engage in grade-level mathematics.	Narrative Evidence Only
3q.	Manipulatives, both virtual and physical, are accurate representations of the mathematical objects they represent and, when appropriate, are connected to written methods. • Manipulatives are accurate representations of mathematical objects and are connected to written methods.	0 1 2

Materials must meet the expectations of all scoring criteria in order to receive full points for the indicator.

Total Available Points	6	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX

Criterion 3.3 Intentional Design	Materials include a visual design that is engaging and references or integrates digital technology, when applicable, with guidance for teachers.

Indicators + Scoring Criteria		Scoring
3r.	Materials integrate technology such as interactive tools, virtual manipulatives/objects, and/or dynamic software in ways that engage students in the grade-level/series standards, when applicable. ● Digital technology and interactive tools, such as data collection tools and/or modeling tools are available to students. ● Digital tools support student engagement in mathematics. ● Digital materials can be customized for local use (i.e., student and/or community interests).	Narrative Evidence Only
3s.	Materials include or reference digital technology that provides opportunities for teachers and/or students to collaborate with each other, when applicable. ● Materials include or reference digital technology that provides opportunities for teachers and/or students to collaborate with each other, when applicable.	Narrative Evidence Only
3t.	The visual design (whether in print or digital) supports students in engaging thoughtfully with the subject, and is neither distracting nor chaotic. ● Images, graphics, and models support student learning and engagement without being visually distracting. They also clearly communicate information or support student understanding of topics, texts, or concepts. ● Teacher and student materials are consistent in layout and structure across lessons/modules/units. ● Materials' organizational features (table of contents, glossary, index, internal references, table headers, captions, etc.) are clear, accurate, and error-free.	Narrative Evidence Only
3u.	Materials provide teacher guidance for the use of embedded technology to support and enhance student learning, when applicable. ● Teacher guidance is provided for the use of embedded technology to support and enhance student learning, when applicable.	Narrative Evidence Only

Materials must meet the expectations of all scoring criteria in order to receive full points for the indicator.

Total Available Points	Narrative Evidence Only

Total Available Points in Gateway 3	16	Meets: XX-XX Partially Meets: XX-XX Does Not Meet: < XX