Texas Resource Review (TRR)

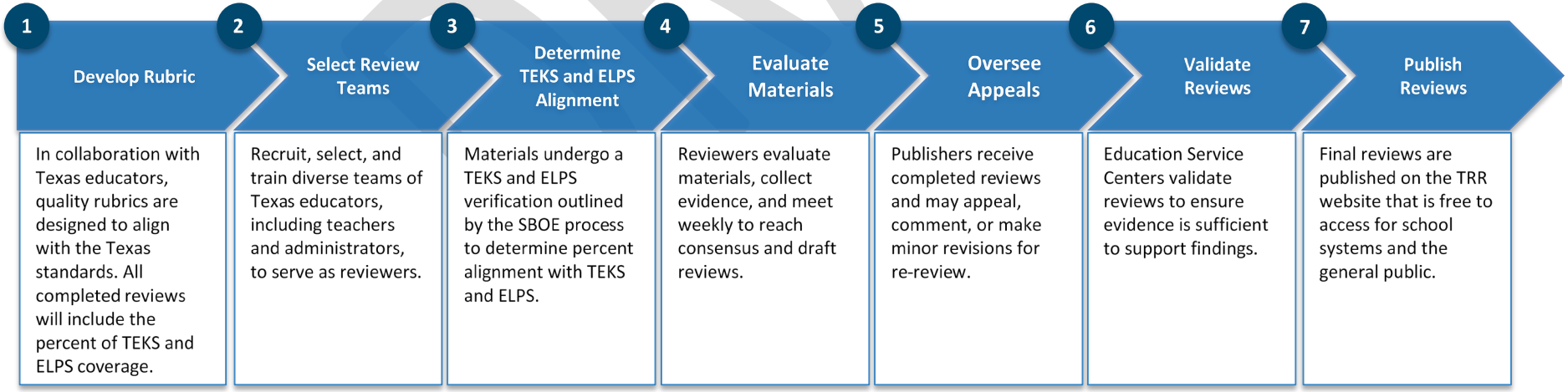
Mathematics Rubric K-8

Top performers in many fields note that the best way to increase productivity is to improve tools. For Texas school districts and schools, this means selecting high-quality instructional materials is critical to improving student achievement. This notion is backed by a growing body of research showing that using high-quality instructional materials is one of the most successful and cost-effective ways to improve student outcomes. Districts often find that determining the quality of materials that are the best fit for their students is a time intensive and uncertain process. This leaves many districts asking, "How can we give our classrooms better resources?"

To help districts answer this question, in 2017, the Texas legislature instructed the Texas Education Agency to facilitate an independent analysis of the quality of instructional materials (Texas Education Code § 31.081 and § 31.082). This process, called the Texas Resource Review (TRR), will empower and strengthen local decision-making and make it easier for educators at all levels to attend to the specific, unique needs of their students. Local Education Agencies (LEAs) will have complete autonomy to decide if and how they use the reviews as part of their local review and adoption processes.

Overview of the Process

A series of steps will be completed to ensure reviews provide districts with clear, transparent, and user-friendly information about the quality of instructional materials. A high-level overview of the steps is included in the graphic below:



Overview of the Quality Rubric Design

Overview of Rubric Sections

The quality rubric is made up of several sections outlined in the graphic on the next page. These sections are the broadest level of the rubric and can be thought about as the "forest view." Within each section, there are a series of indicators that make up the details of that section. These indicators can be thought about as the "trees" that make the "forest." Throughout this document, sections and indicators are organized in the format shown to the right.

Section X: Title		
Indicator	**Scoring**	**Guidance for Texas Quality**
X.1 - Description	Points	Additional guidance
X.2 - Description	Points	Additional guidance
Total Points Possible in Section		

Section 1: SBOE Process

The quality review process is designed to enhance and support the SBOE's established adoption process, the TEKS and ELPS alignment review (commonly referred to as TEKS alignment or TEKS coverage). All materials that are reviewed for quality will also complete the TEKS alignment review, which results in a percentage of TEKS coverage for a specific set of materials. Products that did not go through the SBOE's proclamation cycle will be reviewed for TEKS alignment by a state review panel as a part of the quality review process. This will ensure all products are evaluated for TEKS alignment. In the rubric, the outputs of the TEKS alignment review are captured in Section 1 and demonstrate ***what*** standards are met. To support this information, Sections 2 – 3 of this rubric are designed to capture ***how well*** the standards are addressed.

Sections 2-3: Content and Instructional Concepts

Similar to the importance of TEKS coverage, these sections are the critical foundation of all programs and are therefore considered non-negotiable in the quality review process, meaning they are critical for student learning success across all districts, regardless of local context. Additional information is provided in the scoring methodology section of document.

Sections 4-6: Educator Supports

These sections are important to consider at the local district and school level and therefore categorized as context-specific. Information from these sections gives LEAs the opportunity to consider the specific, unique needs of their student populations and empowers LEAs to choose a program that best fits their local context. Additional information is provided in the scoring methodology section of this document.

Section 7: Additional Information

The information included in this section is not scored. It is collected from publishers to provide LEAs with additional information they may need when making adoption and purchasing decisions.

Mathematics Rubric – Grades K-8

Reviewers will use a quality rubric based on the seven sections below to evaluate instructional materials for quality. Each section is made up of a series of indicators for which reviewers will find evidence in the material they are evaluating.

SECTION 1: SBOE Process

1. TEKS & ELPS Alignment

SECTIONS 2 - 3: Content and Instructional Concepts

2. Concept Development and Rigor
3. Integration of Process Skills

SECTIONS 4 - 6: Educator Supports

4. Progress Monitoring
5. Support for All Learners
6. Implementation

SECTION 7: Additional Information

7.1 Technology
7.2 Cost
7.3 Professional Learning
7.4 Additional Language

Scoring Methodology

Quality evaluations are intended to support LEAs in making decisions that best meet their local context. To provide LEAs clear, transparent, and user-friendly information, instructional materials are scored at the indicator level and then rolled up into a section-level. Each score value is supported by evidence collected and published in final reports. Sections within the rubric are classified into different scoring types described below. The reason for scoring type classifications is to provide local school systems with guidance around how to approach reviewing each section.

Overview of Scoring Types

- **Non-negotiable** – Quality indicators are critical for student learning success across all districts, regardless of local context.
- **Context-specific** – Quality indicators help districts understand which products best support local needs.
- **Non-scoring** – Indicators provide information that is important to districts when making purchasing decisions but that does not impact quality. For this type, materials are not given a score and only information is provided.

The following provides an overview of the scoring methodology proposed to support LEAs in their review, adoption, and purchasing decisions.

Scoring Type	Section	Number of Indicators	Total Possible Points	Display on Report
Non-negotiable	1. TEKS and ELPS Alignment	N/A	Meets/Does Not Meet SBOE Criteria	%TEKS % ELPS
	2. Concept Development and Rigor	8 indicators	32 points	% of total section points
	3. Integration of Process Skills	7 indicators	28 points	% of total section points
Context-specific	4. Progress Monitoring	3 indicators	12 points	% of total section points
	5. Supports for All Learners	3 indicators	12 points	% of total section points
	6. Implementation	6 indicators	10 points	% of total section points
Non-scoring	7. Additional Information: Technology, Cost, Professional Learning, Additional Language	N/A	No point value	Information Provided

Section 1.

1. TEKS and ELPS Alignment (percent of standards met in materials)

State review panel members review instructional materials to determine the extent to which the TEKS and ELPS are covered and to identify factual errors. To be eligible for adoption, instructional materials must meet at least 51% of the TEKS and 100% of the required ELPS in the components intended for student use and the components intended for teacher use, be free from factual error, meet manufacturing specifications, be suitable for the intended course and grade level, and be reviewed by academic experts.

This section is a non-negotiable for products reviewed. Materials must achieve 51% or better TEKS alignment per the SBOE process to be considered for the State Board of Education adoption list.

Category	Student TEKS	Teacher TEKS	Student ELPS	Teacher ELPS
Does Not Meet Requirement	≤50%	≤50%	<100%	<100%
Meets Minimum Requirement	51-79%	51-79%	100%	100%
Recommended Percentages	80%+	80%+	100%	100%

Section 2.

2. Concept Development and Rigor

Materials provide strategic and integrated instruction in all components of mathematical rigor: conceptual understanding, procedural fluency, and application.

Scoring: This section is non-negotiable.

Indicator	Scoring	Guidance for Texas Quality
2.1 Materials dedicate most attention to the **development of the primary focal area** for the grade-level.	0/2/4	• Materials spend the majority of concept development on the primary focal areas for the grade-level as outlined in the TEKS. • Materials provide students a variety of opportunities to develop, practice, and apply grade-level content.
2.2 Materials strategically **develop students' conceptual understanding** by following a progression of learning from **concrete to representational to abstract (CRA)** as is appropriate for the grade-level and content.	0/2/4	• Materials strategically and systematically develop student's content knowledge as appropriate for the concept and grade-level as outlined in the TEKS. • Materials include a variety of types of concrete manipulatives, pictorial representations, and abstract representations, as appropriate for the content and grade level. • Materials support teachers in understanding student's progression along the CRA continuum.
2.3 Materials **support coherence and connections** between and within content at the grade-level and across grade levels.	0/2/4	• Materials include supports for students to build their vertical content knowledge by accessing prior knowledge and understanding of concept progression. • Materials include support and guidance for teacher understanding of how concepts are developed. • Materials include tasks and problems that intentionally connect two or more concepts as appropriate for the grade-level. • Materials provide opportunities for students to explore relationships and patterns within and across concepts.

2.4 Materials **are built around quality tasks** that address content at the appropriate level of rigor and complexity.	0/2/4	• Tasks are designed to engage students in the appropriate level of rigor (conceptual understanding, procedural fluency, or application) as identified in the TEKS and as appropriate for the development of the content and skill. • Materials clearly outline for the teacher the mathematical concepts and goals behind each selected task. • Materials integrate contextualized problems throughout which provide students the opportunity to apply math knowledge and skills to new and varied situations. • Materials provide teacher guidance on anticipating student responses and strategies. • Materials provide teacher guidance on preparing for and facilitating strong discourse grounded in the quality tasks and concepts.
2.5 Materials **integrate fluency as appropriate** for the concept development and grade.	0/2/4	• Materials include specific fluency as appropriate for the concept development and grade-level. • Materials include teacher guidance and support for conducting fluency practice as appropriate for the concept development and grade. • Materials include student support for self-monitoring progress as appropriate for concept development and grade.
2.6 Materials support students in the **development and use of mathematical language**.	0/2/4	• Materials include repeated opportunities to develop and strengthen math vocabulary. • Materials include repeated opportunities to practice using math vocabulary that build towards fluent use of math vocabulary. • Materials include guidance for teachers on how to scaffold and support students' development and use of academic math vocabulary.
2.7 Materials **include cohesive, year-long plan** for students to develop fluency.	0/2/4	• Materials include a year-long plan for building fluency as appropriate for the concept development and grade. • Materials integrate fluency at appropriate time and with purpose as students' progress in the conceptual understanding. • Materials include scaffolds and supports for teachers to differentiate fluency development for all learners.
2.8 Materials contain **opportunities for students to**	0/2/4	• Material include tasks and problems that require students to apply mathematical knowledge and skills to real-world problems.

apply mathematical knowledge and skills to solve problems in new and varied contexts, including problems arising in everyday life, society, and the workplace.		• Materials include opportunities for students to weave knowledge and skills together to successfully problem solve and use mathematics efficiently.
Total Points Possible:	**32 points**	

Section 3.

3. Integration of Process Skills

Materials include instruction, practice and integration of mathematical process skills: problem solving, appropriate selection of tools and techniques, effective communication, use and analysis of mathematical relationships to communicate, and justification and argumentation using mathematical language.

Scoring: This section is non-negotiable.

3.a Problem Solving, Tools, and Techniques

Indicator	Scoring	Guidance for Texas Quality
3.a.1 Materials develop student ability to **use and apply a problem-solving model**.	0/2/4	• Materials guide students in developing and practicing using a problem-solving model that is transferrable across problem types. • Materials prompt students to apply a transferrable, problem-solving model. • Materials provide guidance to prompt students to reflect on their approach to problem solving. • Materials provide guidance for teachers to support student reflection of approach to problem solving.
3.a.2 Materials require students to **select appropriate tools** for the task, concept development and grade.	0/2/4	• Materials require students to select and use real objects, manipulatives, representations, and algorithms as appropriate for stage of concept development, grade, and task. • Materials require students to select and use technology (e.g., calculator, graphing program) as appropriate for the concept development and grade.
3.a.3 Materials require students to **select appropriate strategies** for the work, concept development and grade.	0/2/4	• Materials prompt students to select an appropriate strategy (mental math, estimation, number sense, generalization, or abstraction) to the work or problem. • Materials support teachers in understanding the appropriate strategies that could be applied and how to guide students to more efficient strategies.

3.a.4 Materials **develop student's self-efficacy and mathematical identity** by providing opportunities to share strategies and approach to tasks.	0/2/4	• Materials support students to see themselves as mathematical thinkers who can learn from solving problems, make sense of mathematics and productively struggle. • Materials support students in understanding that there can be multiple ways to solve problems and complete tasks. • Materials support and guide teachers in facilitating the sharing of student's approach to problem solving.

3.b Communication

Indicator	Scoring	Guidance for Texas Quality
3.b.1 Materials **prompt students to effectively communicate** mathematical ideas, reasoning, and their implications using multiple representations.	0/2/4	• Materials provide students opportunity to communicate mathematical ideas and solve problems using multiple forms (oral, written, symbolic). • Materials guide teachers in prompting students to communicate mathematical ideas and reasoning in multiple formats.
3.b.2 Materials provide opportunities to **discuss mathematical ideas** to develop and strengthen content knowledge and skills.	0/2/4	• Materials require students to engage in mathematical discourse in a variety of settings (e.g., whole group, small group, peer-to-peer). • Materials integrate discussion throughout to support student's development of content knowledge and skills as appropriate for the concept and grade-level. • Materials guide teachers in structuring and facilitating discussions as appropriate for the concept and grade-level.
3.b.3 Materials **require students to justify mathematical ideas** using multiple representations and precise mathematical language.	0/2/4	• Materials require students to construct and present arguments that justify mathematical ideas using multiple representations. • Materials assist teachers in facilitating students to construct arguments using appropriate mathematical ideas.
Total Points Possible:	**28 points**	

Section 4.

4. Progress Monitoring

Materials provide frequent, strategic opportunities to monitor and respond to student progress toward development of appropriate grade level and content skill development.

Scoring: This section is context-specific. Quality indicators help districts understand which products best support local needs.

Indicator	Scoring	Guidance for Texas Quality
4.1 Materials include **developmentally-appropriate diagnostic tools** (e.g formative and summative progress monitoring) and guidance for teachers and administrators to **monitor progress.**	0/2/4	• Materials include a variety of diagnostic tools that are developmentally appropriate (e.g., observational, anecdotal, formal). • Materials provide guidance to ensure consistent and accurate administration of diagnostic tools. • Materials include tools for students to track their own progress and growth. • Materials include diagnostic tools to measure all content and process skills for the grade level, as outlined in the TEKS and Mathematical Process Standards.
4.2 Materials include guidance for teachers to **analyze and respond to data from diagnostic tools.**	0/2/4	• Materials support teachers with guidance and direction to respond to individual students' needs in all domains, based on measures of student progress appropriate to the developmental level. • Diagnostic tools yield meaningful information for teachers to use when planning instruction and differentiation. • Materials provide specific activities, resources, or practices to respond to student data that are different from initial instruction on that content.
4.3 Materials include **frequent, embedded opportunities** for monitoring progress.	0/2/4	• Materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress. • Frequency of progress monitoring is appropriate for the age and content skill.
Total Points Possible	**12 points**	

Section 5.

5. Supports for All Learners

Materials provide guidance and support that help teachers meet the diverse learning needs of all students.
Scoring: This section is context-specific. Quality indicators help districts understand which products best support local needs.

Indicator	Scoring	Guidance for Texas Quality
5.1 Materials include **guidance, scaffolds, supports, and extensions** that maximize student learning potential.	0/2/4	• Materials provide recommended targeted instruction and activities for students who struggle to master content. • Materials provide recommended targeted instruction and activities for students who have mastered content. • Materials provide additional enrichment activities for all levels of learners.
5.2 Materials provide a variety of **instructional methods** that appeal to a **variety of learning interests and needs.**	0/2/4	• Materials include a variety of instructional approaches to engage students in mastery of the content. • Materials support developmentally appropriate multimodal instructional strategies (e.g. visual, auditory, kinesthetic, tactile, etc.) • Materials support flexible grouping (e.g. whole, small, individual). • Materials support multiple types of practices (e.g. guided, independent, collaborative) and provide guidance and structures to achieve effective implementation.
5.3 Materials include **supports for English Learners (EL)** to meet grade-level learning expectations.	0/2/4	• Materials must include accommodations for linguistics (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency. • Materials provide scaffolds for English Learners. • Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English (e.g., to enhance vocabulary development).
Total Points Possible:	**12 points**	

Section 6.

6. Implementation

Materials provide support for implementation including clear and easy-to-follow guidance and support for teachers.
Scoring: This section is context-specific. Quality indicators help districts understand which products best support local needs.

Indicator	Scoring	Guidance for Texas Quality
6.1 Materials include **year-long plans and supports for teachers to identify needs of students and provide differentiated instruction** to meet the needs of a range of learners to ensure grade-level success.	0/1/2	• Materials provide an overarching year-long plan for teachers to engage students in multiple grouping (and other) structures. Plans are comprehensive and attend to differentiation to support students via many learning opportunities. • Materials include a cohesive, year-long plan to build students' mathematical concept development and consider how to vertically align instruction that builds year to year. • Materials provides spiraled review and practice of mathematical knowledge and skills throughout the span of the curriculum.
6.2 Materials include **implementation support for teachers and administrators.**	0/1/2	• Materials are accompanied by a TEKS-aligned scope and sequence outlining the essential knowledge and skills that are taught in the program, the order in which they are presented, and how knowledge and skills build and connect across grade levels. • Materials include supports to help teachers implement the materials as intended. • Materials include resources and guidance to help administrators support teachers in implementing the materials as intended. • Materials include a school years' worth of math instruction, including realistic pacing guidance and routines.
6.3 Materials **provide implementation guidance** to meet variability in programmatic design and scheduling considerations.	0/1/2	• Materials provide guidance for strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. • Materials are designed in a way that allow LEAs the ability to incorporate the curriculum into district, campus, and teacher programmatic design and scheduling considerations.

6.4 Materials provide guidance on **fostering connections between home and school.**	0/1/2	• Materials support development of strong relationships between teachers and families. • Materials specify activities for use at home to support students' learning and development.
6.5 The visual design of student and teacher materials (whether in print or digital) is **neither distracting nor chaotic.**	0/1/2	• Materials include appropriate use of white space and design that supports and does not distract from student learning. • Pictures and graphics are supportive of student learning and engagement without being visually distracting.
6.6 **If present, technology or online** components included are appropriate for grade level students and provide support for learning.	NOT SCORED	• Technology, if present aligns to the curriculum's scope and approach to mathematics skill progression. • Technology, if present, supports and enhances student learning as appropriate, as opposed to distracting from it, and includes appropriate teacher guidance.
Total Points Possible:	**10 points**	

Section 7.

7. Additional Information

The following information will appear on the Texas Resource Review website for end users to provide additional information about the set of materials being reviewed.

Non-Scoring: Indicators provide information that is important to districts when making purchasing decisions but that does not impact quality.

Indicator	Scoring	Guidance for Texas Quality
7.1 **Technology** components are identified per the information requirement checklist.	N/A	• Technology checklist is completed.
7.2 **Cost** worksheet completed.	N/A	• Cost worksheet is completed.
7.3 **Professional learning** opportunities meet criteria for implementation.	N/A	• Professional learning indicators built by TEA.
7.4 **Additional language supports** worksheet completed.	N/A	• Additional language worksheet is completed.