

Instructional Materials Review and Approval

Mathematics K–12 Quality Rubric

Last updated 11.9.23

Implementation Quality

1. Intentional Instructional Design

Materials support educators in effective implementation through the intentional course, unit, and lesson-level design.

1.1 Course Level Design

1.1a	Materials include a detailed scope and sequence outlining the TEKS, ELPS, concepts, knowledge, and topics taught in the course.
1.1b	Materials include a year-at-a-glance document outlining the content standards addressed and the suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days – 165, 180, 210).
1.1c	Materials include explanations for the rationale of unit order and how concepts to be learned connect throughout the course.
1.1d	Materials include standards correlation documents outlining the TEKS and ELPS correlations for each unit.
1.1e	Materials include guidance, protocols, and/or templates for unit and lesson internalization.
1.1f	Materials include resources and guidance to help administrators support teachers in implementing the materials as intended.

1.2 Unit Level Design

1.2a	Materials include unit-level documents showing TEKS and ELPS alignment, objectives, calendars, resources, and time allotments for lesson pacing.
1.2b	Materials include a well-written unit introduction and overview to provide teachers with the background content knowledge necessary to effectively teach the concepts in the unit.
1.2c	Materials include components designed to strengthen pedagogical content knowledge for teachers new to the content and/or grade level.
1.2d	Materials include an overview of assessments and progress monitoring for each unit, as well as guidance for their appropriate and effective use.
1.2e	Materials include an overview of the resources and materials needed for each lesson in the unit.
1.2f	Materials contain well-written letters in both Spanish and English for each unit with suggestions for parents, guardians, or caregivers for supporting the progress of their student.

1.3 Lesson Level Design

1.3a	Materials include comprehensive, structured, detailed lesson plans that include questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson.
1.3b	Materials include lesson plans (as defined in 1.3a) that ensure coverage of all state standards for the course.
1.3c	Materials include a lesson overview outlining the suggested pacing for each lesson component.
1.3d	Lessons include guidance for teachers to identify students' current level of proficiency on the concept to be learned to support extension, enrichment, or acceleration.
1.3e	Lessons include differentiation to support students through multiple learning opportunities and access points based on their current level of proficiency.
1.3f	Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.
1.3g	Lesson-level checks for understanding and formative assessments are aligned to the objective of the lesson.
1.3h	Materials include guidance on the effective use of lesson materials for extended practice outside of the school day (e.g., homework, extension, enrichment, retrieval, additional practice).

1.4 Visual Design

1.4a

The visual design of the material (print and/or digital) is not distracting but supports students in engaging with the concept to be learned.

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2. Progress Monitoring

Materials support educators in effective implementation through frequent, strategic opportunities to monitor and respond to student progress.

2.1 Aligned Instructional Assessments

2.1a	Materials include a variety of instructional assessments that vary in types of tasks and questions at the unit and lesson level.
2.1b	Materials include definition and intended purpose for the types of instructional assessments included.
2.1c	Instructional assessments are aligned to the standards and objectives of the course, unit, or lesson.
2.1d	Instructional assessments include standards-aligned items at varying levels of complexity.

2.2 Progress Monitoring Tools

2.2a	Materials include progress monitoring / diagnostic tools that are appropriate for student grade-level and course content (e.g., observational, anecdotal, formal).
2.2b	Materials include teacher guidance to ensure consistent and accurate administration of progress monitoring / diagnostic tools.
2.2c	Materials include tools for students to track their own progress and growth.

2.3 Guidance for Data Analysis and Response

2.3a	Instructional assessments and scoring information provide sufficient guidance for interpreting and responding to student performance.
2.3b	Materials include teacher guidance on the use of included instructional tasks and activities included to respond to trends in student performance on instructional assessments.
2.3c	Materials support teachers with guidance and direction to respond to individual students' needs based on student performance on instructional assessments.
2.3d	Materials include guidance for administrators to support teachers in analyzing and responding to instructional assessment data.

3. Supports for All Learners

Materials support educators reaching all learners through design focused on engagement, representation, and action/expression for learner variability.

3.1 Differentiation and Scaffolds

3.1a	Materials include supports for targeted instruction and activities for students who have not yet reached proficiency on grade-level skills by providing scaffolds that can be gradually released with increasing independence.
3.1b	Materials clarify unfamiliar syntax in math formulas or underlying structure (in diagrams, graphs, illustrations, extended expositions, or narratives) through alternatives like highlighting structural relations to make them more explicit, making connections to previously learned structures, and making relationships between elements explicit.
3.1c	Materials include pre-teaching or embedded supports for vocabulary and symbols, alternate text descriptions for graphic symbols, and simpler wording for complex equations.
3.1d	Materials include enrichment and extension activities for all levels of learners.
3.1e	Materials include guidance for educators on how to use supports for differentiation and scaffolding to maximize student learning potential by minimizing threats and distractions. (As outlined in Universal Design for Learning Checkpoint 7.3)

3.2 Instructional Methods

3.2a	Materials provide prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned directly and explicitly.
3.2b	Materials include a variety of developmentally appropriate instructional approaches to engage students in reaching grade-level proficiency by optimizing choice, autonomy, relevance, value, and authenticity.
3.2c	Materials consistently support options for comprehension by linking to and activating relevant prior knowledge, cross curricular connections, concept anchoring, and highlighting patterns, critical features, big ideas, and relationships.
3.2d	Materials consistently support flexible grouping (e.g., whole group, small group, one-on-one).
3.2e	Materials consistently support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures to achieve effective implementation.
3.2f	Materials include a variety of print and/or digital resources to flexibly meet the learning interests and needs of all students.

3.3 Support for Multilingual Learners

3.3a	Materials incorporate linguistic accommodations (communicated, sequenced, and scaffolded) for various levels of English language proficiency as defined by the English Language Proficiency Standards (ELPS).
3.3b	Materials include guidance for teachers of students specific to all state-approved ESL and bilingual program models.
3.3c	Materials include strategies for teachers to support multilingual learners in building vocabulary, comprehension, background knowledge, and language proficiency.
3.3d	For dual language immersion (DLI) programs, materials incorporate linguistic accommodations (communicated, sequenced, and scaffolded) for various levels of partner language proficiency.
3.3e	For dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer (“bridging”) from English to the partner language.

Learning Quality

4. Depth and Coherence of Key Concepts

Materials are designed to meet the rigor of the standards while connecting concepts within and across grade levels/courses.

4.1 Depth of Key Concepts

4.1a	(K-8) Materials include a year-long scope and sequence that concentrates units on the primary focal areas outlined in the TEKS. (9-12) Materials include a year-long scope and sequence that concentrates units on the development of the course's content as outlined in the TEKS.
4.1b	Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate required depth of understanding aligned to content standards.
4.1c	Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.
4.1d	Materials are designed to intentionally develop student proficiency of math content standards through the integration of mathematical process standards.

4.2 Coherence of Key Concepts

4.2a	Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.
4.2b	Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.
4.2c	Materials demonstrate coherence across units by connecting what was learned in previous courses/grade levels, and what will be learned in future courses/grade levels, to the content to be learned in the current course/grade level.
4.2d	Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

4.3 Spaced and Interleaved Practice

4.3a	Materials provide routine spaced retrieval opportunities with previously learned skills and concepts across lessons and units.
4.3b	Materials provide routine interleaved practice opportunities with previously learned skills and concepts across lessons and units.

5. Balance of Conceptual and Procedural Understanding

Materials are designed to balance conceptual understanding, procedural skill, and fluency.

5.1 Development of Conceptual Understanding

5.1a	Materials develop students' ability to understand relationships between mathematical ideas, patterns, and procedures.
5.1b	Questions and tasks require students to analyze, evaluate, and interpret a variety of models and representations for mathematical concepts and situations.
5.1c	Questions and tasks require students to create a variety of models to represent mathematical situations.
5.1d	Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

5.2 Development of Fluency

5.2a	Materials routinely provide tasks that are designed to build student automaticity and fluency necessary to complete grade level tasks.
5.2b	Materials routinely provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit.
5.2c	Materials routinely provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit.
5.2d	Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.

5.3 Balance of Conceptual Understanding and Procedural Fluency

5.3a	Materials explicitly state how the conceptual or procedural emphasis of the TEKS are addressed.
5.3b	Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations, as appropriate for the content and grade level.
5.3c	Materials include supports for students in connecting concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts

5.4 Development of Academic Mathematical Language

5.4a	Materials routinely provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and other language development strategies.
5.4b	Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.
5.4c	Materials include embedded guidance for the teacher to support the application of appropriate mathematical vocabulary in student responses using exemplar responses to questions and tasks.

5.5 Process Standards Connections

5.5a	Process standards are integrated appropriately into the materials.
5.5b	Materials include a description of how process standards are incorporated and connect throughout the course.
5.5c	Materials include a description for each unit of how process standards are incorporated and connect throughout the unit.
5.5d	Materials include an overview of the process standards incorporated into each lesson.

6. Productive Struggle

Materials support students in applying disciplinary practices to productive problem solving, including explaining and revising their thinking.

6.1 Student Self-Efficacy

6.1a	Materials support students to think mathematically and persevere through solving problems and making sense of mathematics.
6.1b	Materials support students in understanding that there can be multiple ways to solve problems and complete tasks.

6.2 Facilitating Productive Struggle

6.2a	Materials included embedded supports and guidance for teachers to foster students' self-efficacy and mathematical identity through solving problems and making sense of mathematics.
6.2b	Materials include support and guidance for teachers in facilitating students' sharing and reflection on their approaches to problem solving.
6.2c	Materials provide prompts and guidance to support the teacher in providing explanatory feedback based on student responses and anticipated misconceptions.