Instructional Materials Review and Approval (IMRA)

Mathematics Quality Rubric Focus Group

Introduction

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Agenda

- Introduction to HB 1605/IMRA Criteria
- Quality Rubric Development and Design
- Focus Group Feedback Process
- Quality Rubric Feedback
- Next Steps

Introduction to HB 1605/ Instructional Materials Review and Approval (IMRA) Criteria

Texas Education Agency

Current SBOE Instructional Materials Review Criteria

Current Criteria					
Standards Alignment Percentage	**Quality Review**	**Suitable & Appropriate***	**Factual Errors**	**Physical and Electronic Specifications**	**Parent Portal**
Materials cover a minimum % of standards as determined by SBOE.	Material quality supports student's ability to demonstrate proficiency in the standards. Also ensures compliance with three-cuing ban	Content in materials meet suitability requirements defined by SBOE and other provisions of TEC (e.g., §28.002(h)) * Also ensures no obscene or harmful content under CIPA, TEC §28.0022, Penal Code §43.22	Materials do not contain factual errors.	Material components meet physical and digital requirements.	Materials included on parent portal that meet transparency requirements

New SBOE IMRA Criteria (HB 1605)

Instructional Materials Review and Approval (IMRA) Criteria

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New SBOE IMRA Criteria (HB 1605) – Today's Focus

Instructional Materials Review and Approval (IMRA) Criteria

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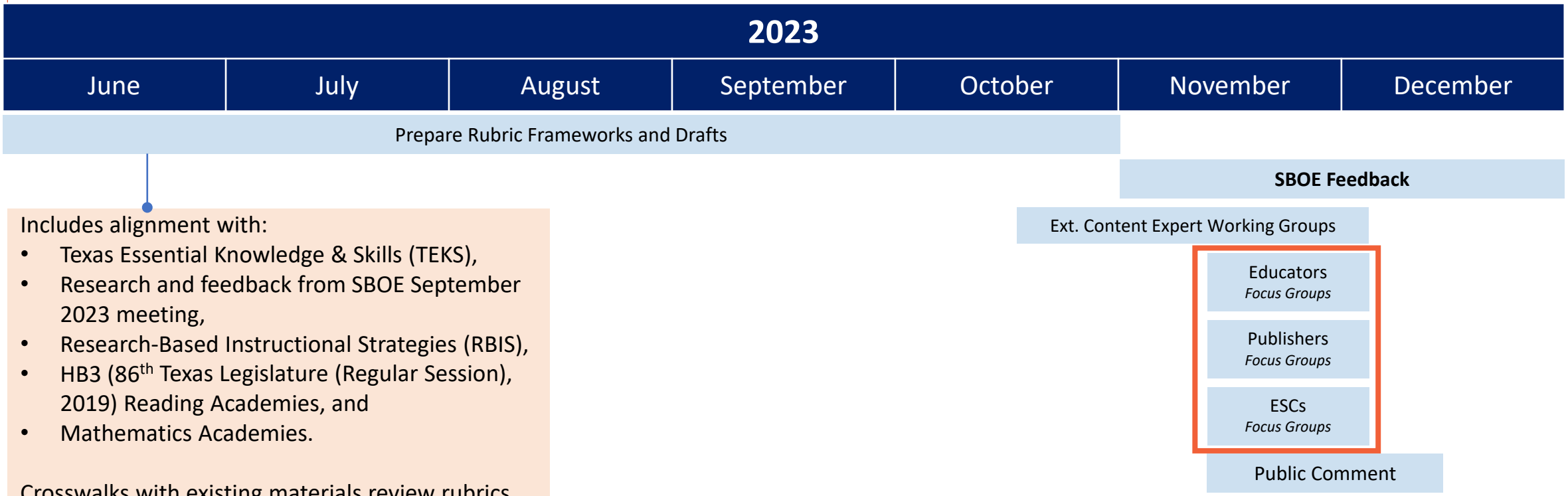
Quality Rubric Development and Design

IMRA Quality Rubrics: Development Timeline

HB 1605



Includes alignment with:

- Texas Essential Knowledge & Skills (TEKS),
- Research and feedback from SBOE September 2023 meeting,
- Research-Based Instructional Strategies (RBIS),
- HB3 (86th Texas Legislature (Regular Session), 2019) Reading Academies, and
- Mathematics Academies.

Crosswalks with existing materials review rubrics (developed with extensive external stakeholder feedback).

Instructional Materials

+

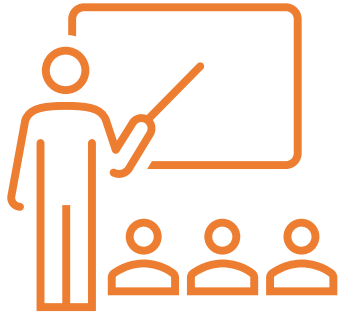
materials **students** use to learn & practice

materials **teachers** use to plan & teach

Quality Review Rubrics–Design

The design of the **Quality Review rubrics** is based on:

- what educators tell us they need to effectively implement instructional materials,
- the evidence that exists about the best ways to teach each subject, and
- the evidence that exists on the most effective ways for learning to occur.



What educators tell us they need

What evidence exists on the most effective ways for learning to occur

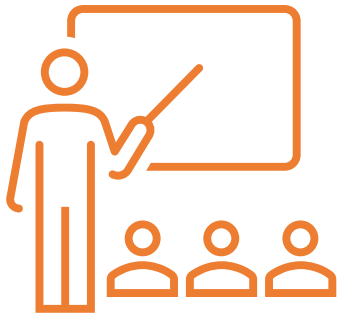
What evidence exists about the best ways to teach each subject

Quality Review Rubrics–Design

Quality Review rubrics are each designed with two **categories.**

Implementation Quality is similar for all content areas.

- Are the components that support effective implementation **present** in the materials?



Implementation Quality

Quality Review Rubrics–Design

Quality Review rubrics are each designed with two **categories.**

Learning Quality is unique to the subject being reviewed.

- Are the components **quality** and **aligned with research** on the best ways to teach the subject?
- When taught as designed, do the components support a student reaching **grade-level proficiency on the standards**?

Implementation Quality

Learning Quality

Quality Review Rubrics–Design

Quality Review rubrics are each designed with two **categories.**

Implementation Quality

Learning Quality

Quality Review Rubrics–Design

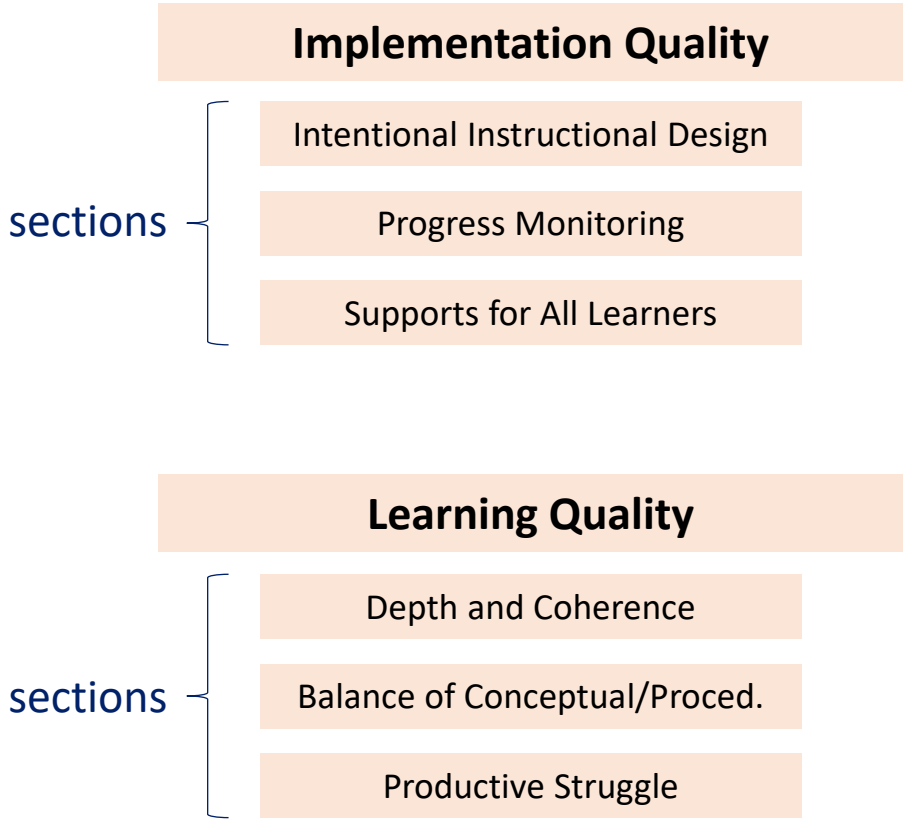
Quality Review rubrics are each designed with two **categories.**

Implementation Quality

Learning Quality

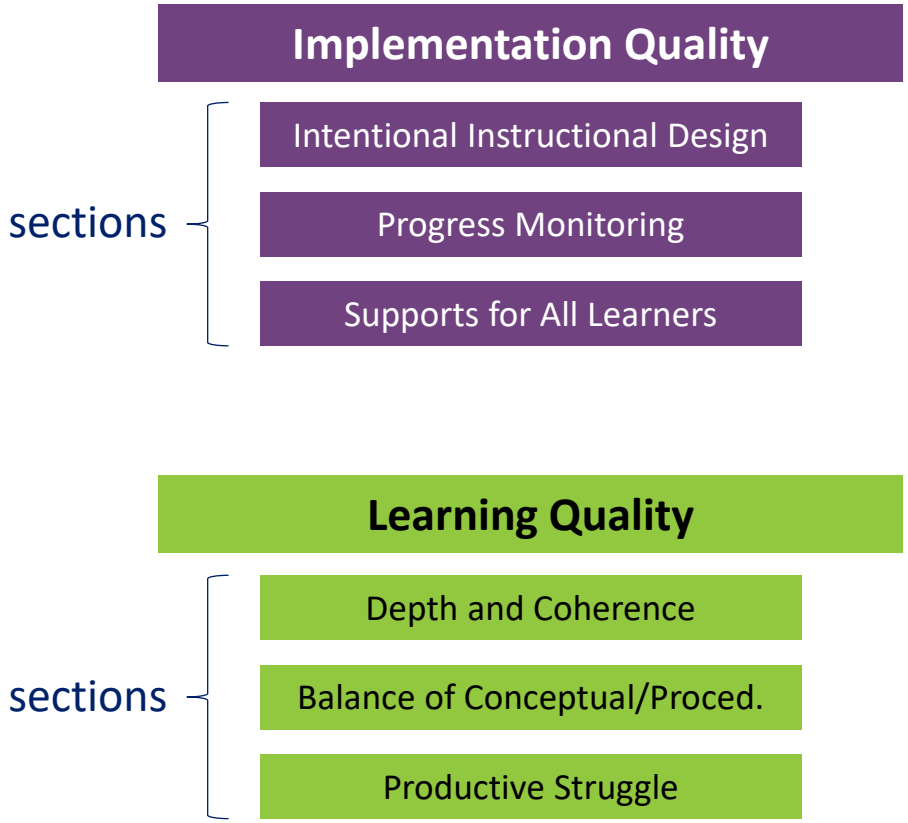
Quality Review Rubrics–Design

Each category has multiple **sections.**

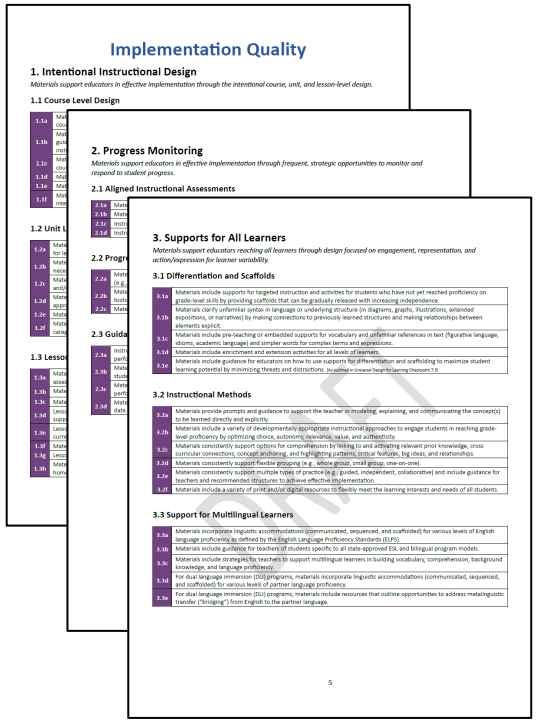


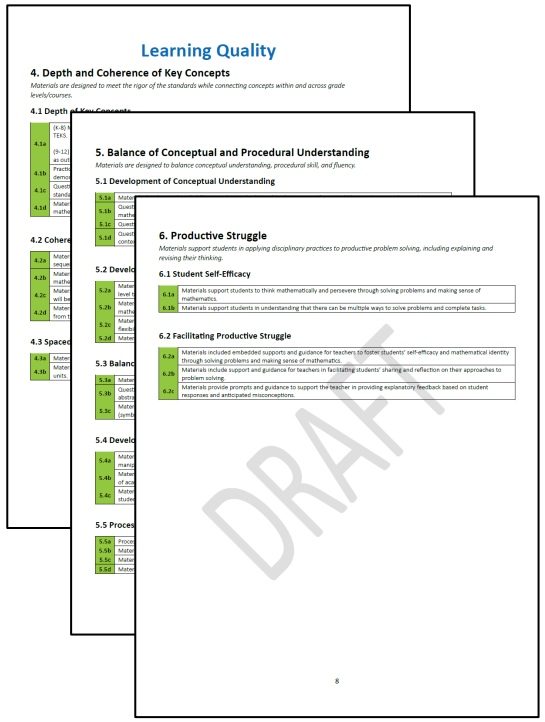
Quality Review Rubrics–Design

Categories and **sections** are color-coded in the rubrics for easy identification.



Quality Review Rubrics–Design





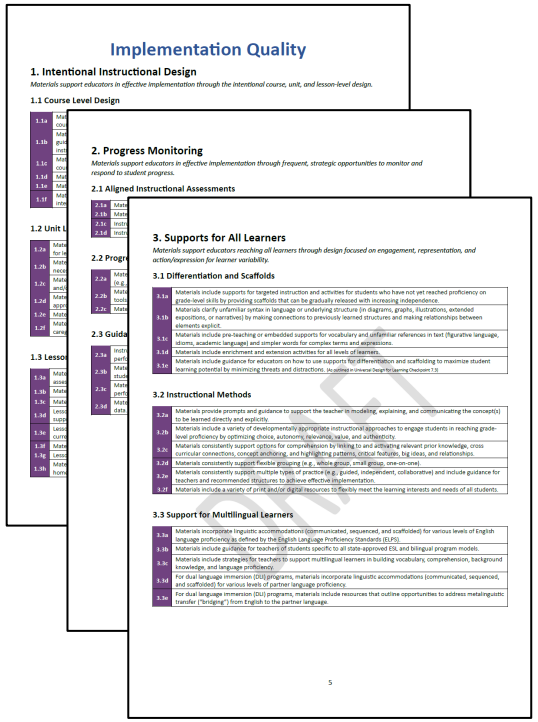
Implementation Quality

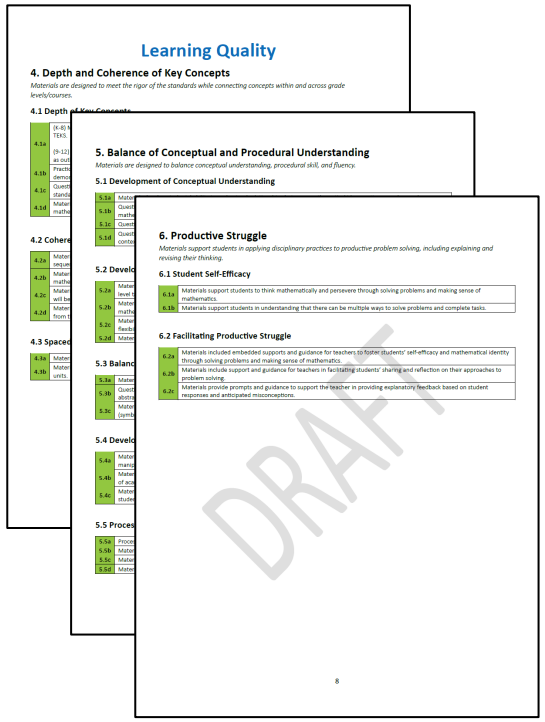
- Intentional Instructional Design
- Progress Monitoring
- Supports for All Learners

Learning Quality

- Depth and Coherence
- Balance of Conceptual/Proced.
- Productive Struggle

Quality Review Rubrics–Design





Access the rubric using the link in the chat.

Implementation Quality

- Intentional Instructional Design
- Progress Monitoring
- Supports for All Learners

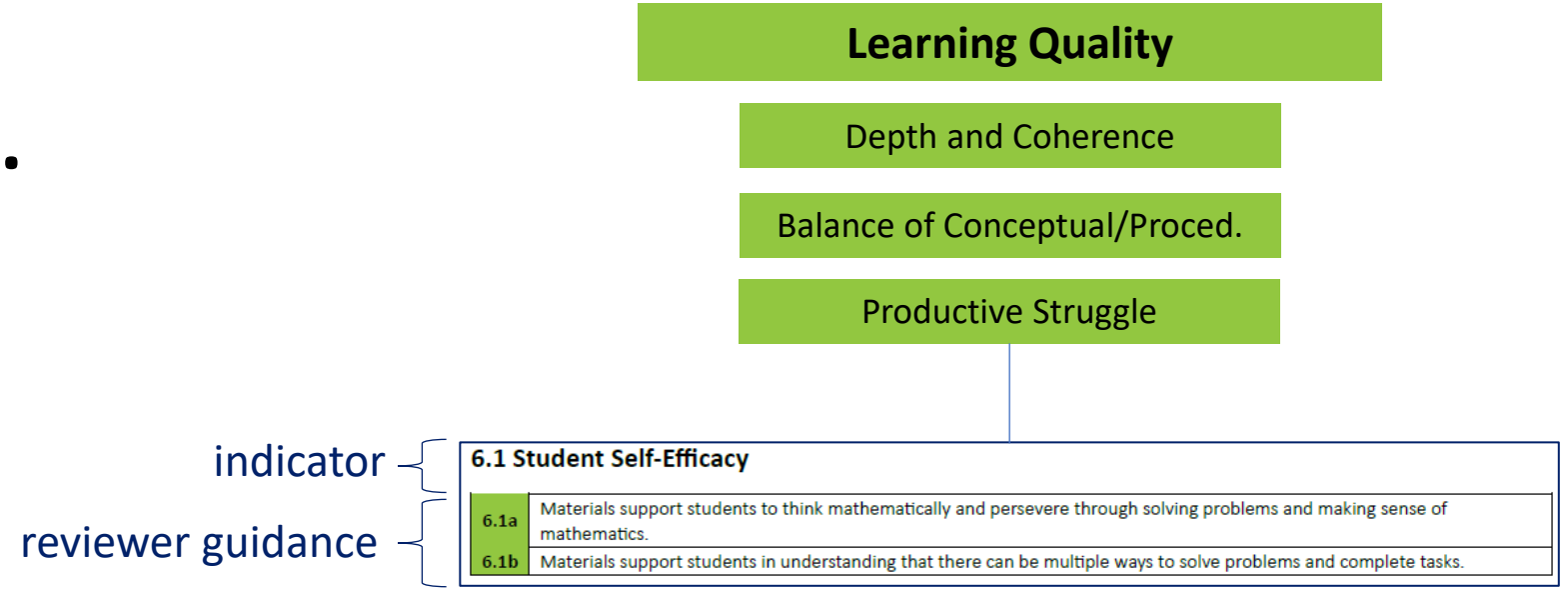
Learning Quality

- Depth and Coherence
- Balance of Conceptual/Proced.
- Productive Struggle

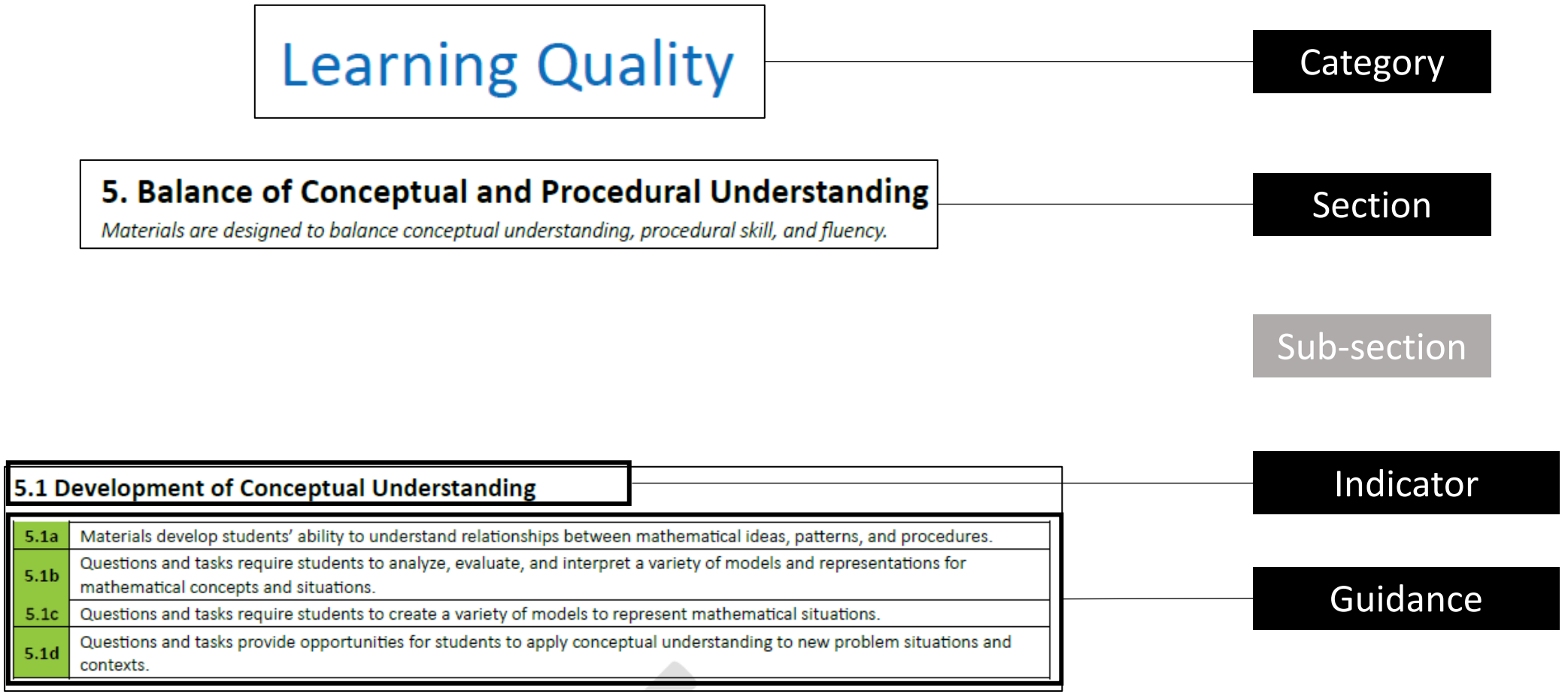
Quality Review Rubrics–Design

Each section (or sub-section) has **indicators** and **reviewer guidance.**

Reviewer guidance provides the "look-fors" for reviewers to gather evidence for during the quality review process.



Quality Review Rubrics–Design



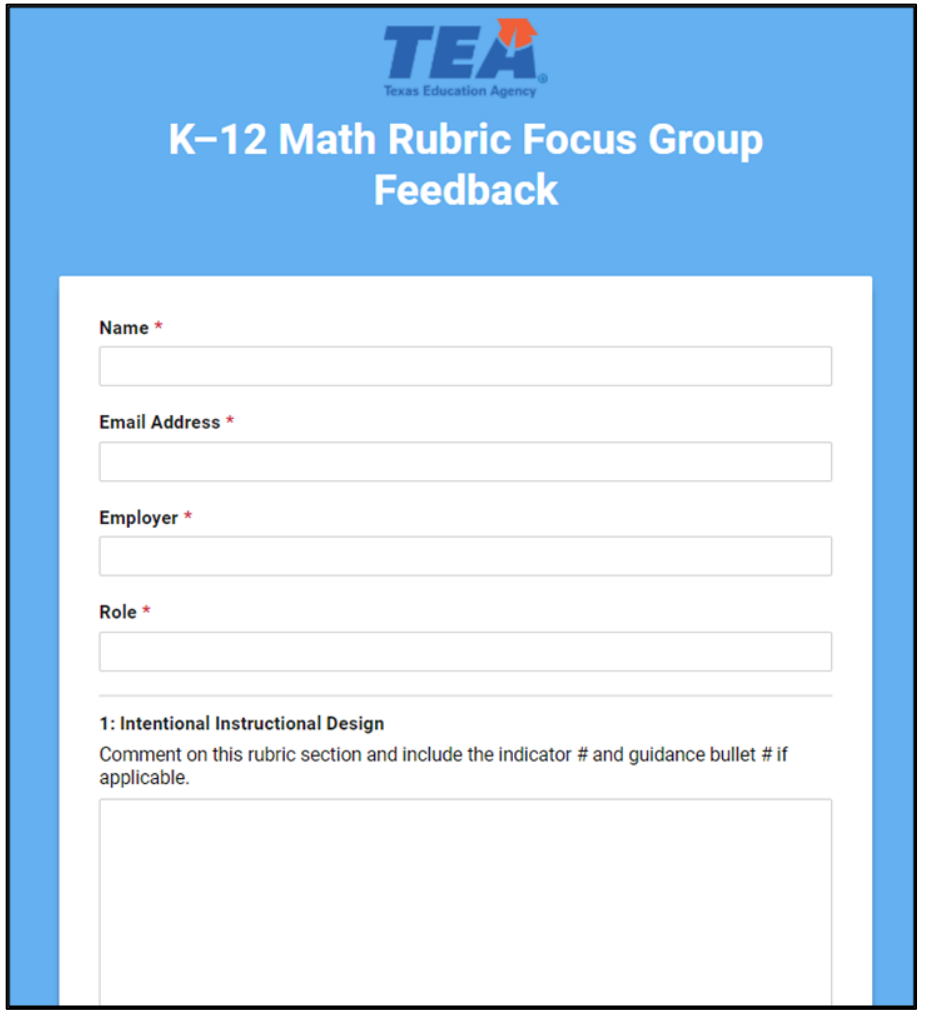
Focus Group Feedback Process

Feedback Process

Please open the feedback form.

You will submit your form at the end of this session.

[K-12 Math Rubric: Focus Group Feedback]



Quality Rubric Feedback

Mathematics – Implementation Quality

Section	
Intentional Instructional Design	 **Implementation Quality**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Intentional Instructional Design (1/2)

Section	Question
Intentional Instructional Design	**Are the materials well-designed at the course, unit, and lesson level?**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Intentional Instructional Design (2/2)

Section	Guidance
Intentional Instructional Design	At the **unit** level, educators need materials that build their background knowledge to teach the unit effectively. Materials should also include an overview of assessments for each unit and how to use them, along with resources for home-school connections. **Lessons** should be comprehensive, detailed, and structured, including everything a beginning teacher would need to teach effectively, and an experienced teacher could customize based on their expertise. Finally, the **visual design** of the materials should support students engaging with the concept and not be distracting.
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Progress Monitoring (1/2)

Section	Question
Intentional Instructional Design	**Do the materials support educators and students through frequent, strategic opportunities to monitor and respond to student progress?**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Progress Monitoring (2/2)

Section	Guidance
Intentional Instructional Design	Materials should include **aligned instructional assessments** and **progress monitoring tools** which help identify what a student already knows (diagnostic), where a student may need additional support (formative), and if a student has reached proficiency (summative). But assessments alone are not enough. Materials should also include **guidance** to help educators respond to the information collected through these assessments. This includes how to interpret the data efficiently and effectively, how to use tasks and activities to respond to student trends in performance, and how to support individual students based on their needs.
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Supports for All Learners (1/2)

Section	Question
Intentional Instructional Design	**Do the materials provide supports to help educators effectively teach all learners?**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Supports for All Learners (2/2)

Section	Guidance
Intentional Instructional Design	This includes **differentiation and scaffolds**, such as supports for students who have not yet reached grade-level proficiency, pre-teaching and embedded supports for vocabulary development and complex terms, and guidance for teacher to design a learning environment that helps students focus on the content to be learned. Materials should support teachers with effective **instructional methods**, such as various instructional approaches, linking to what students have already learned, and flexible grouping. **Supports for multilingual learners** should be aligned to the English Language Proficiency Standards (ELPS), embedded throughout the materials, and designed to support dual language immersion (DLI) programs.
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Implementation Quality

Section	
Intentional Instructional Design	 **Implementation Quality**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Learning Quality

Section	
Intentional Instructional Design	
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Depth and Coherence (1/3)

Section	Question
Intentional Instructional Design	**Do the materials meet the rigor of the standards while connecting concepts across grade levels/courses?**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Depth and Coherence (2/3)

Section	Rationale
Intentional Instructional Design	"A focused, coherent progression of mathematics learning with an emphasis on proficiency with key topics, should become the norm in elementary and middle school mathematics curricula…by the term focused, [the authors] mean that curriculum must include (and engage with adequate depth) the most important topics underlying success in school algebra." (National Mathematics Advisory Panel, 2008)
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	"It is imperative that teachers be provided with curricular materials that clearly lay out well-reasoned organizations of student learning progressions with regard to mathematical content and reasoning. (NCTM, 2016)
Productive Struggle	

US Department of Education. (2008). Final report of the national mathematics advisory panel.

National Council of Teachers of Mathematics. (2016). Curricular coherence and open educational resources.

Mathematics – Depth and Coherence (3/3)

Section	Guidance
Intentional Instructional Design	Materials should be designed to focus on the **primary focal areas** of the grade level or course as outlined in the TEKS. **Questions and tasks** in the materials should progressively increase in rigor throughout the year, leading students to the depth of understanding required of the content standards. Additionally, materials should demonstrate **coherence** through a logically sequenced and connected scope and sequence. The design of the materials should support students in connect what they have previously learned to what they are currently learning.
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Balance of Conceptual and Procedural (1/3)

Section	Question
Intentional Instructional Design	**Are the materials designed to balance conceptual understanding, procedural skill, and fluency?**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Balance of Conceptual and Procedural (2/3)

Section	Rationale
Intentional Instructional Design	"To be mathematically proficient, students must develop conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition." (National Research Council, 2001) "With due consideration of contemporary literature and research regarding procedural and conceptual knowledge, [teachers should be aware that]: • We should be considering our practices to include Procedural knowledge *and* Conceptual knowledge, not Procedural Knowledge *or* Conceptual knowledge, [and] • Procedural knowledge and conceptual knowledge are both important and help to strengthen each other." (Hurrell, 2021)
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

National Research Council. (2001). Adding it up: Helping children learn mathematics.

Hurrell, Derek. (2021) Conceptual knowledge OR Procedural Knowledge OR Conceptual Knowledge AND Procedural knowledge: Why the conjunction is important for teachers. Australian Journal of Teacher Education.

Mathematics – Balance of Conceptual and Procedural (3/3)

Section	Guidance
Intentional Instructional Design	Materials should develop students' ability to understand **relationships** between mathematical ideas, patterns, and procedures. In addition to building conceptual understanding, materials should support students' development of **fluency** and **automaticity** appropriate to the grade-level TEKS. **Academic mathematical language** should be developed throughout the materials using visuals and manipulatives.
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Productive Struggle (1/3)

Section	Question
Intentional Instructional Design	**Do the materials provide support to students and teachers to encourage persevering through problem solving and making sense of mathematics?**
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Mathematics – Productive Struggle (2/3)

Section	Rationale
Intentional Instructional Design	"…students expend effort to make sense of mathematics, to figure something out that is not immediately apparent…The struggle we have in mind comes from solving problems that are within reach and grappling with key mathematical ideas that are comprehensible but not yet well formed." (Hiebert et al., 2007) "…productive struggle comprises the work that students do to make sense of a situation and determine a course of action when a solution strategy is not stated, implied, or immediately obvious…every student must have the opportunity to struggle with challenging mathematics and to receive support that encourages their persistence without removing the challenge." (NCTM, 2017)
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Hiebert, J., & Grouws, D.A. (2007). The effects of classroom mathematics teaching on students' learning, Second Handbook of Research in Mathematics Teaching and Learning.

NCTM. (2017). Taking action: Implementing effective mathematics teaching practices in grades 9-12.

Mathematics – Productive Struggle (3/3)

Section	Guidance
Intentional Instructional Design	Materials should support students in seeing themselves as **mathematical thinkers** who can solve problems and make sense of mathematics. Materials should also support teachers in facilitating the **sharing of students' approaches to problem solving**.
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

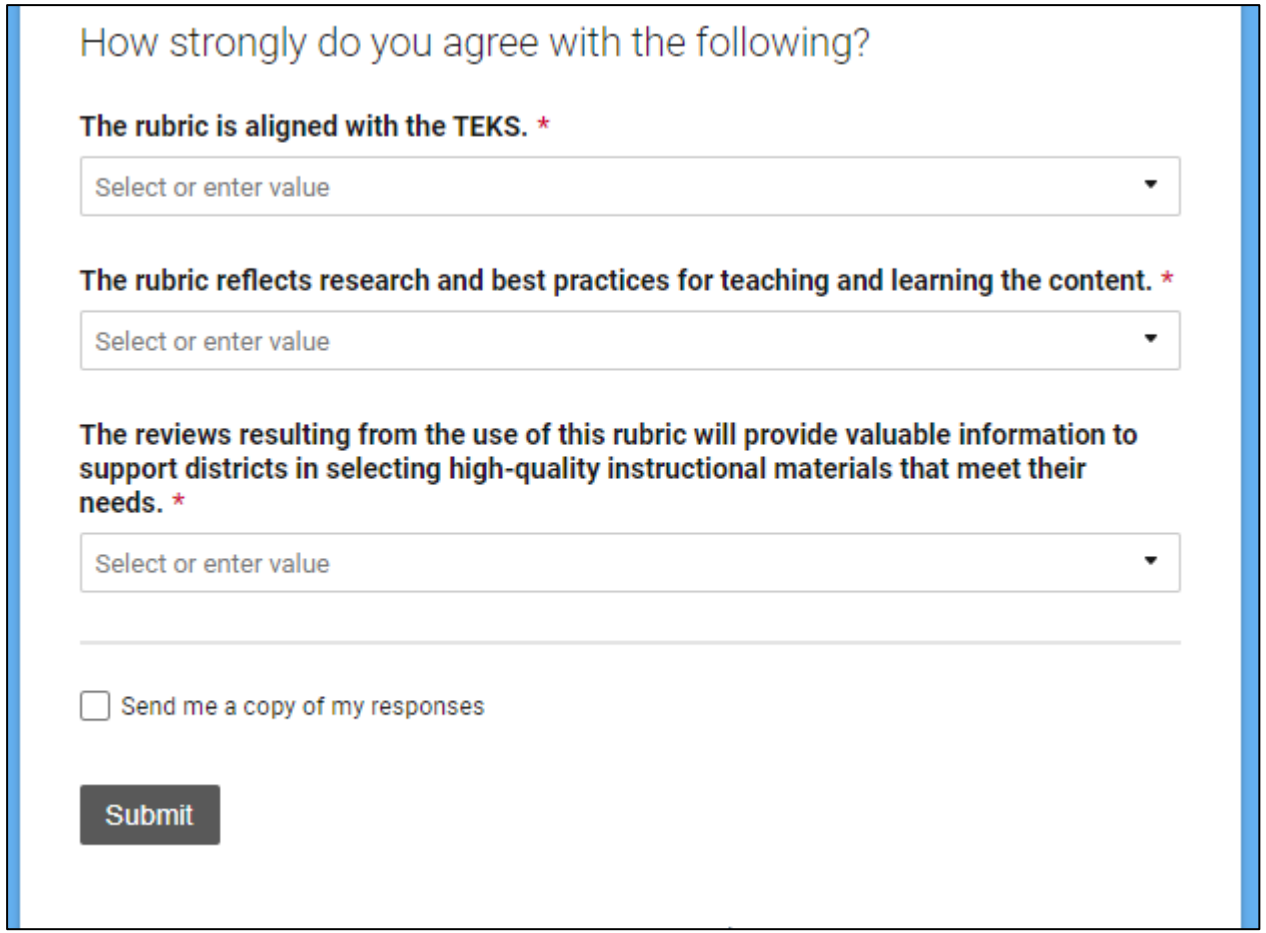
Mathematics – Learning Quality

Section	
Intentional Instructional Design	
Progress Monitoring	
Supports for All Learners	
Depth and Coherence of Key Concepts	
Balance of Conceptual and Procedural Understanding	
Productive Struggle	

Learning Quality

Feedback Process

Answer the questions at the bottom of the form and submit.



Next Steps

IMRA Quality Rubrics: Public Comment

Submit comments on the Instructional Materials Review and Approval (IMRA) rubrics.

House Bill 1605 (88th Texas Legislature, Regular Session, 2023) requires the Texas Education Agency (TEA) to develop rubrics in consultation with and approved by the State Board of Education that will be used to evaluate the quality of instructional materials.

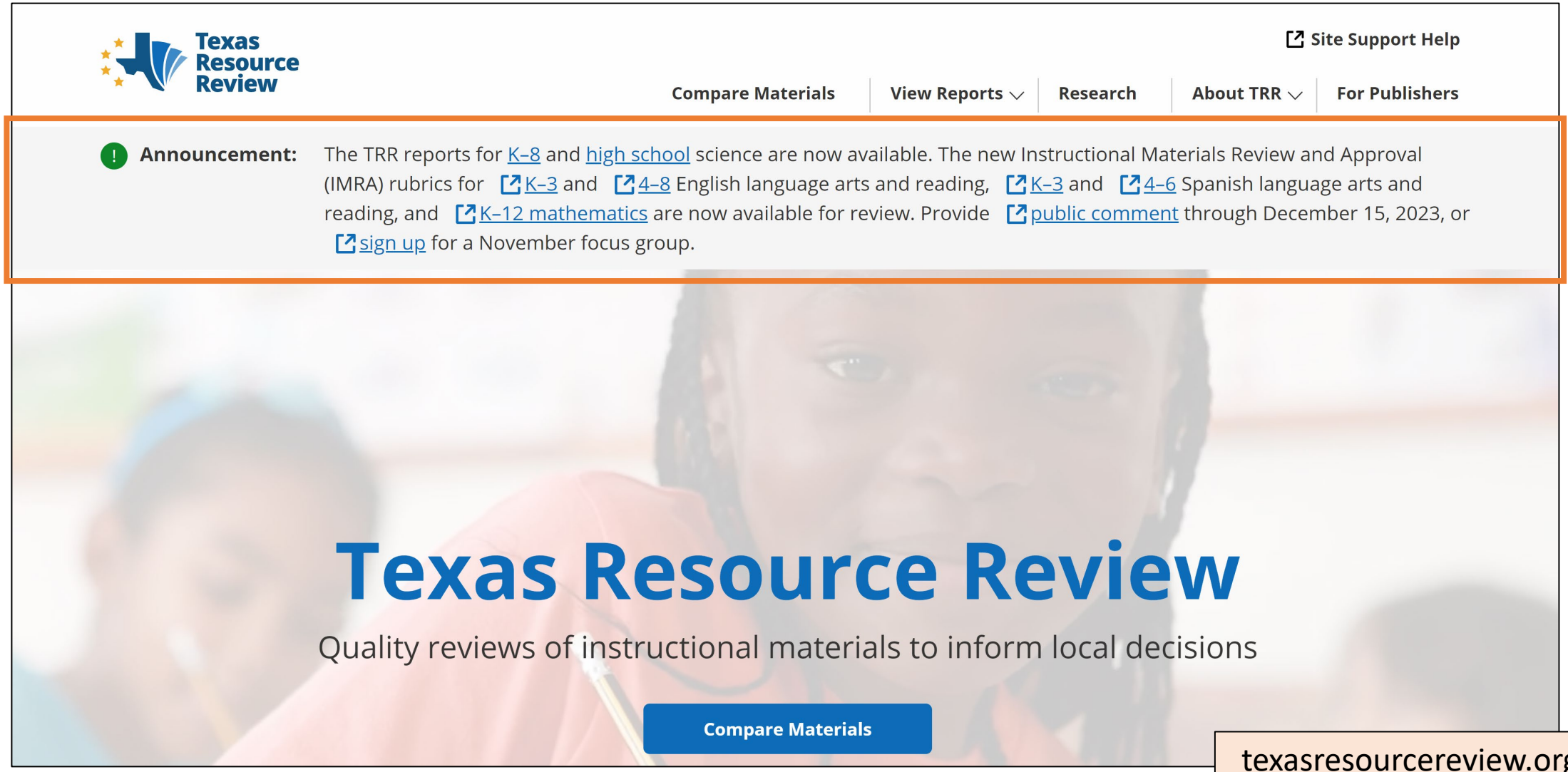
TEA was directed by the SBOE to develop rubrics for K–8 English language arts and reading, K–6 Spanish language arts and reading, and K–12 mathematics . TEA is seeking your feedback on the draft rubrics.

Submit feedback by **December 15th** by filling out the *Public Comment Submission Form*.

As we collect and review submitted feedback, we will track all changes on a memo of changes and post it to the HB 1605 webpage and will release a second draft of the rubric that incorporates those changes. We hope to have the rubric finalized in January 2024. Products will be reviewed using the SBOE-approved rubrics in spring 2024 and reports will be available in fall 2024.

Visit the HB 1605 webpage for more information or submit a help desk ticket if you have questions related to IMRA.

IMRA Quality Rubrics: Public Comment



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