

Research-Based Instructional Strategies (RBIS)

What are the RBIS?

As part of a broader strategy to significantly increase the number of students in Texas who have access to High-Quality Instructional Materials (HQIM), TEA (Texas Education Agency) has developed a set of Research-Based Instructional Strategies (RBIS) to articulate the key instructional shifts that are necessary to bring rigorous instruction to life for students.

RBIS are:

- A set of **research-based practices** that highlights common misconceptions in the field.
- Topics that require **conceptual or philosophical changes** in approach to instruction.
- A set of **practices that are supported by research** and should be present in classrooms, regardless of instructional materials.
- The **science of how students best learn** math and reading in K-12.

The RBIS also demonstrate why HQIM is important and what is required to implement HQIM well.

What are High-Quality Instructional Materials (HQIM)?

- Ensure full coverage of the **Texas Essential Knowledge and Skills (TEKS)**.
- Are **aligned to evidence-based best practices** in the relevant content area. This varies by content area and should align directly with the RBIS for a particular content area. Quality materials should be designed to directly support teachers in implementing the RBIS.
- **Support all learners**, including students with disabilities, emergent bilingual students, and students identified as gifted and talented.
- Enables **frequent progress monitoring** through embedded and aligned assessments.
- Includes **implementation supports** including teacher and student-facing lesson level materials.

HQIM provides equitable access of strong instruction to all students through:

- Providing **consistent and daily exposure** to rigorous, grade-level content to all students.
- Allowing **all students** to access the same materials across classrooms in an LEA.
- **Streamlining data collected** from formative and summative assessments to better understand where students are at.

Why are the RBIS and HQIM important?

RBIS and HQIM are one lever that LEAs can use to ensure that all students receive high-quality grade-level instruction. We believe that all students, including emergent bilingual students and students with learning differences, can access grade level learning, and deserve:

- Consistent opportunities to work on **grade-appropriate assignments**.
- **Strong instruction** where students do the majority of the thinking in a lesson.
- **Deep engagement** in what they're learning.
- Teachers who hold **high expectations** for students and believe they can meet grade-level standards.

TNTP. (2018). [The Opportunity Myth: What Students Can Show Us About How School Is Letting Them Down—and How to Fix It.](#)



What does each Math RBIS look like in the classroom?

Math RBIS 1 – [Balance Conceptual and Procedural](#)

Math RBIS 2 – [Depth of Key Concepts](#)

Math RBIS 3 – [Coherence of Key Concepts](#)

Math RBIS 4 – [Productive Struggle](#)

What does each RLA RBIS look like in the classroom?

RLA RBIS 1 – [Foundational Skills](#)

RLA RBIS 2 – [Text Complexity](#)

RLA RBIS 3 – [Knowledge Coherence](#)

RLA RBIS 4 – [Text-based Responses](#)

Math RBIS 1: Balance of Conceptual and Procedural

Pursue rigor by balancing conceptual understanding, procedural skill, and fluency. Apply this balanced understanding to mathematical applications as required by the standards in the TEKS.

Conceptual understanding

Students learn to represent, discuss, and make connections among mathematical ideas in multiple forms, demonstrating a deeper mathematical understanding and enhanced problem-solving abilities through the use of pictorial models, abstract representations and real-world application.

Procedural skills and fluency

Procedures should be connected to the underlying conceptual understanding and application to new situations. Students can choose flexibly among methods and strategies to solve.

Meet the rigor of the TEKS

Prepare students to identify appropriate concepts to tackle real-world, relevant tasks through alignment to the TEKS and a balance of conceptual and procedural fluency while adhering the full scope of the TEKS.

Look-fors in classroom observations:

- Lesson facilitation prioritizes most time within the lesson on the emphasis of the standard(s) being addressed (conceptual understanding, procedural fluency, or problem-solving skills).
- Lesson facilitation maintains integrity to grade-level conceptual understandings and procedures during modeling, student practice & student discussion. ("Tricks" are not used as a substitute for mathematical understanding.)
- Lesson facilitation supports students to understand mathematical concepts as the "why" behind mathematical procedures and provides multiple opportunities for students to articulate their emerging understandings.
- Lesson facilitation prioritizes time for students to complete pre-planned opportunities for practice of standards-aligned tasks.

Look-fors in materials:

- The lesson focuses on the depth of the grade/course-level cluster(s), grade/course-level content standard(s), or part(s) thereof.
- The lesson intentionally targets the emphasis of the standard(s) being addressed (conceptual understanding, procedural fluency, or problem-solving skills) and strengthens all students' conceptual understanding of the content.
- The lesson provides students an opportunity to build automaticity with fluency skills necessary to complete grade level tasks.
- Lesson materials follows a pathway that clearly outline how the conceptual understanding of key concepts relate to the procedural to create a throughline of mastery.
- Lesson materials provide students multiple practice opportunities comprised of standards-aligned tasks to work towards mastery of grade-level content.

Math RBIS 2: Depth of Key Concepts

Focus on math content that aligns to and meets the rigor of the TEKS for each grade level, while concentrating time and effort on going deep on the most important topics for the grade level.

Concentrate time and effort

Utilize high-quality instructional materials to ensure that the majority of class time is spent going deep on the most important topics for the grade level or course.

Most important topics

Identify the focal points that build coherence across grade levels and provide a foundation for strong mathematics understanding of algebra and beyond.

Meet the rigor of the TEKS

Prepare students to identify appropriate concepts to tackle real-world, relevant tasks through an alignment to the TEKS and a balance of conceptual and procedural fluency.

Look-fors in classroom observations:

- The lesson's focal points (as determined through what is facilitated, tasks selected for discussion or tasks selected for extended practice) prioritize depth of understanding.
- The teacher deepens all students' understanding of the content by sharing a variety of students' representations and solution methods.
- Students successfully complete tasks that require the depth of understanding aligned to the TEKS.

Look-fors in materials:

- Year-long scope and sequence concentrates student time and effort on most important topics for the grade-level or course, as defined by the TEKS.
- Lesson materials expose students to a variety of representations and solution methods that support depth of understanding.
- Practice opportunities and/or daily assessment require students to demonstrate depth of understanding aligned to the TEKS.

Math RBIS 3: Coherence of Key Concepts

Connect concepts within and across grades along a strategic progression of learning so that new understandings are built on previous foundations. Mathematics tells a continuous, connected story.

Within grade levels

During a school year, build new ideas on the foundation of what students learned in previous lessons.

Across grade levels

Build upon key concepts in previous and current grade levels as foundational knowledge that could serve as gatekeepers for new ideas in the next grade level and future math courses.

Continuous, connected story

Mathematics concepts and skills create an ongoing, coherent learning experience throughout a students' educational journey.

Look-fors in classroom observations:

- Through modeling, tasks and/or discussion, students activate prior knowledge of preceding concepts as an access point for building new mathematical understandings.
- Pre-planned scaffolds that convey the teacher's knowledge of the "story of mathematics" are provided to ensure all students have access to grade-level content.
- In response to student errors and misconceptions, teacher prompts and/or questioning leverages prior mathematical understandings the student has mastered as an access point to build towards grade level understandings.

Look-fors in materials:

- Year-long scope and sequence logically sequences topics across the year to tell a continuous, connected story of mathematics.
- Lesson materials activate student prior knowledge of preceding concepts and procedures to connect new mathematical knowledge and skills to prior understandings.
- Lesson materials embed pre-planned scaffolds that may span multiple grade-levels of understanding ("just in time interventions") to ensure grade-level content is accessible to all students.

Math RBIS 4: Productive Struggle

Students engage in productive problem solving, including multiple opportunities for practice, discussion, representations, and writing that requires them to explain and revise their thinking.

Maintains rigor

Provides students time to collaboratively problem solve using different representations and then asking them to explain their thinking.

Sets up all students to engage

Tasks should have multiple entry points so that students can use different solution paths to solve and make connections.

Develops independent problem solvers

Acknowledging when students' effort supports their thinking and mathematical understanding, thus developing their capacity to persevere in the face of challenging content,

Look-fors in classroom observations:

- Teacher provides students time to collaboratively problem solve using different representations and then asking them to explain their thinking.
- Teacher provides students time to engage in productive struggle and does not intervene too quickly.
- Teacher asks questions when students are stuck, utilizing Probing Guidance and Affordance rather than providing students the correct answer.
- Teacher encourages students to solve problems in multiple ways and does not suggest there is only one way to solve a problem.
- Teacher equally praises student effort on both successful and unsuccessful attempts – does not praise only correct answers.

Look-fors in materials:

- Lesson materials provide the intended coherence of the TEKS to provide practice opportunities to build student skill and confidence prior to engaging in tasks fully aligned to the on-grade level TEKS.
- Lesson materials and/or lesson plan provide opportunities for student discussion around the key concepts of the lesson.
- Lesson materials and/or lesson plan identify common, high-leverage errors or misconceptions students may have and pre-plan teacher moves as a solution pathway.

RLA RBIS 1: Foundational Skills

Instruction in foundational skills (FS) should be systematic, explicit, and include student practice.

- Systematic and sequenced K-2 instruction and intervention that follows an intentional research-based progression.
- Explicit and intentional daily instruction with opportunities for students to read, write, hear, and speak.
- Practice of specific skills in and out of text, including making meaning from what is read.
- Frequent formal and informal data collection drives feedback in the moment, small group instruction, and grade-level skill acceleration.

Look-fors in classroom observations:

- The FS being taught are aligned to the Texas Essential Knowledge and Skills (TEKS) for this grade level.
- FS instruction is explicit and systematic, including teacher modeling and student practice.
- Students, including diverse learners, have sufficient opportunities to practice reading, listening, speaking, and writing newly acquired foundational skills.
- All students, including diverse learners, are provided with learning materials and activities that support greater depth of mastery and application of the skills they are still working to develop, ensuring rigorous challenges for all learners.
- Use of home language(s) is supported and encouraged to access new materials, for example: the use of cognate walls, metalinguistic connections, individualized vocabulary journals, bilingual dictionaries, translators, etc., as applicable.

Look-fors in materials:

- The instructional plan includes teacher modeling and student practice in all language domains.
- The instructional plan provides students with learning materials and activities that support greater depth of mastery and application of the skills they are still working to develop, ensuring rigorous challenges for all learners.
- Students, including diverse learners, have access to all materials needed to provide sufficient opportunities to practice reading, listening, speaking, and writing newly acquired FS.
- Use of material in home language(s) is supported to facilitate new learning as applicable.

RLA RBIS 2: Text Complexity

Regular practice with grade-level, complex text, and its academic language.

Look-fors in classroom observations:

- Students, including diverse learners, spend the majority of the lesson listening to, reading, writing, and/or speaking about text(s).
- Questions and tasks – written and oral - address the specific text(s) at hand by attending to its particular structure, concepts, ideas, events and/or details.
- Questions are sequenced to build meaning and understanding of the text.
- Diverse learners have access to the same complex text and content objective as peers, with strategic linguistic scaffolding provided only as needed to provide equitable access.

Look-fors in materials:

- The text(s) are at or above the complexity level expected for the grade and time in the school year.
- The text(s) exhibit exceptional craft and thought and/or provide useful information. Where appropriate, the texts are richly illustrated and represent the students' backgrounds and experiences.
- Assignments are based on complex texts that are grade appropriate with opportunities for differentiation and appropriate scaffolds.
- Questions and tasks address the specific text(s) at hand by attending to its particular structure, concepts, ideas, events and/or details.
- Integrate grade-level reading, writing, speaking, and listening, and/or language TEKS and ELPS in service of deep understanding of the text(s) and/or topics under consideration.
- Materials provide appropriate scaffolds and differentiation opportunities to ensure all students have access to the text.

RLA RBIS 3: Knowledge Coherence

Building knowledge and vocabulary through text in all content areas.

Look-fors in classroom observations:

- Facilitation of student practice and student discussion leads towards deeper understanding of the meaning of the grade-level text.
- Lesson facilitation appropriately provides all students context or background knowledge before engaging in the text.
- Lesson facilitation uses grade-level text as a tool for building student knowledge of relevant content – whether text is literary or informational.
- Attend to words, phrases, and sentences within the text that matter most to build students' vocabulary and deepen understanding of the text.

Look-fors in materials:

- Questions and tasks integrate grade-level reading, writing, speaking, and listening, and/or language TEKS and/or ELPS in service of deep understanding of the text(s) and/or topics under consideration.
- Questions and tasks build towards student understanding of the meaning of the grade-level text.
- Lesson design appropriately provides students context or background knowledge before engaging in the text.
- Materials create opportunities to attend to words, phrases, and sentences within the text that matter most to build students' vocabulary and deepen understanding of the text.
- When appropriate, materials should have visuals to support key words to deepen meaning and understanding.

RLA RBIS 4: Text-based Responses

Reading, writing, and speaking grounded in evidence from text, both literary and informational.

Look-fors in classroom observations:

- Students engage in questions and tasks that require use of details, and when appropriate, evidence from the text to demonstrate understanding and/or support their ideas about the text.
- During student discourse, if students provide responses that lack evidence, the teacher – or other students – prompt the student to provide evidence from the grade-level text.
- During student discourse if students attempt to provide relevant textual evidence but struggle to do so (verbally or in writing), the teacher prompts students to refine their thinking while maintaining the cognitive demand of the task.
- Student evidence is consistently grounded in the grade-level text.
- Students, including diverse learners, have access to scaffolds to help guide their text-based responses (via teacher modeling, anchor charts, student exemplars, etc.).

Look-fors in materials:

- The majority of questions and tasks require students to use details from the text to demonstrate understanding and/or support their ideas about the text.
- The instructional plan supports student comprehension of text such that they will reasonably be able to provide relevant textual evidence within the time allotted for lesson tasks.
- The instructional plan supports student comprehension of questions and tasks such that they will reasonably be able to provide relevant textual evidence within the time allotted for lesson tasks.
- The instructional plan provides opportunities for all students to take part in constructing text-based responses in both discussion and writing.