Carnegie Learning, Inc.

Supplemental Spanish Mathematics, 6

Texas Supplemental Math Solution Grade 6 Spanish–Student 1 Year License

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798896388715**	**Digital**	**Adaptive**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	140	10	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	10 out of 18	56%
2. Progress Monitoring	14 out of 23	61%
3. Supports for All Learners	10 out of 33	30%
4. Depth and Coherence of Key Concepts	14 out of 16	88%
5. Balance of Conceptual and Procedural Understanding	28 out of 38	74%
6. Productive Struggle	11 out of 21	52%

Breakdown by Suitability Noncompliance and Excellence Categories

SUITABILITY NONCOMPLIANCE FLAGS BY CATEGORY	IMRA REVIEWERS	PUBLIC	Flags NOT Addressed by November Vote
1. Prohibition on Common Core	0	0	0
2. Alignment with Public Education's Constitutional Goal	0	0	0
3. Parental Rights and Responsibilities	0	0	0
4. Prohibition on Forced Political Activity	0	0	0
5. Protecting Children's Innocence	0	0	0
6. Promoting Sexual Risk Avoidance	0	0	0
7. Compliance with the Children's Internet Protection Act (CIPA)	0	0	0

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	1
Category 6: Promoting Sexual Risk Avoidance	0

IMRA Quality Report

1. Intentional Instructional Design

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

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	The materials do not include a rationale for learning paths across grade levels (vertical alignment), as designed in the materials.	3/4
1.1b	The materials do not include guidance for advanced learning.	2/3
1.1c	The materials do not include a TEKS correlation guide that provides recommended skill entry points based on diagnostic assessment results.	0/2
1.1d	The materials in grade 6 do not include a guide for unit and lesson internalization.	0/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	7/13

1.1a – Materials include an alignment guide outlining the TEKS, ELPS, and concepts covered, with a rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment) as designed in the materials.

In grade 6, materials are divided into several units. These units encompass several topics that outline the concepts covered, provide an overview of each concept, and are vertically aligned with the Texas Essential Knowledge and Skills (TEKS). For example, in Module 2 "Relating Quantities," Topic 2 "Percents," Lesson 3 "The Forest for the Trees," the material's MATHia connection includes a Percent Model lesson that outlines the specific TEKS covered. There is also a "View Standards Link" that outlines the TEKS for that assignment.

In grade 6, the materials provide MATHstream videos to connect prerequisite skills within the same grade level (horizontal alignment), but there is no vertical alignment across all courses.

The materials do not include the English Language Proficiency Standards (ELPS) because Supplemental Spanish Mathematics instruction does not address them.

1.1b – Materials include an implementation guide with usage recommendations and strategies for effective educator use, such as just-in-time supports, advanced learning, or as a course.

Grade 6 materials in the Texas Math Solution Support Center include an *Implementation Guide* and recommended practices in their "Creating an Engaged and Productive MATHia Classroom" document, which supports students in various content areas.

The materials do not provide recommendations or strategies for advanced learning.

The materials in grade 6 provide usage recommendations to personalize and tailor instructional materials based on individual student needs. The adaptive program provides immediate support for students, such as a glossary, step-by-step examples, sample problems, and hints.

Grade 6 materials also include a time management section, providing educators with recommended guidelines for using the materials effectively.

The materials provide a "Quickstart Guide" for using MATHia. Educators can use the guide to create a class, access course content, and build their modules.

1.1c – Materials include a TEKS correlation guide with recommended skill entry points based on diagnostic assessment results.

The materials do not include a TEKS correlation guide that provides recommended skill entry points based on diagnostic assessment results.

1.1d – Materials include protocols with corresponding guidance for unit and lesson internalization.

The materials in grade 6 do not include a guide for unit and lesson internalization.

1.1e – Materials include resources and guidance for instructional leaders to support educators with implementing the materials as designed.

Grade 6 materials include resources and guidance for instructional leaders to support educators with implementing materials as designed. The *Texas Supplemental Math Overview* document provides outlines, with detail, on how material components—such as MATHia and Mathstream—should be implemented in the classroom. This step-by-step guidance for instructional leaders provides an understanding of how to support grade 6 educators in lesson internalization and topic internalization (Appendix D).

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	This guidance is not applicable to the program.	N/A
1.2b	All criteria for guidance met.	3/3
1.2c	The materials do not include support for families in Spanish and English for each unit, with suggestions on supporting the progress of their student(s).	0/2
—	**TOTAL**	3/5

1.2a – If designed to be static, materials include detailed lesson plans with learning objectives, teacher and student materials, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

This guidance is not applicable because the program is not designed to be static.

1.2b – If designed to be adaptive, materials include detailed lesson overviews with learning objectives, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

Grade 6 materials are designed to be adaptive and include a "TEKS Dot Chart" that aligns with module topics. The Texas Math Solution Support Center offers additional resources to support effective implementation.

The materials in grade 6 provide detailed lesson overviews with learning objectives, include a variety of assessment resources aligned with the TEKS, and explain how to access and interpret assessment reports.

Grade 6 materials include topic pacing guides that align with each of the TEKS and provide a summary of the content covered. Additionally, Mid-Topic and End-of-Topic assessments are STAAR-aligned, ensuring alignment with the TEKS addressed in each topic.

Grade 6 materials provide a detailed overview of each module, topic, and lesson, including clearly stated learning objectives. When a teacher selects a specific module, topic, and lesson, the materials display the TEKS addressed in the MATHstream interactive video. A preview button is also available, offering educators an estimated timeframe for completing the lesson.

In Module 4, Topic 2 of the grade 6 materials, the MATHia Adaptive Problem-Solving lesson titled "Solving One-Step Addition and Subtraction Equations" includes the TEKS aligned to the lesson. The lesson description indicates that students will use an interactive balance tool to solve equations. The materials also provide an estimated median completion time of 6–14 minutes for the assigned Concept Builder workspace.

1.2c – Materials contain support for families in Spanish and English for each unit, with suggestions on supporting the progress of their student(s).

The "Family Letter" is not available in Spanish and does not support families for each unit.

2. Progress Monitoring

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

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	All criteria for guidance were met.	2/2
2.1b	All criteria for guidance were met.	2/2
2.1c	The materials do not include printable versions of digital assessments, nor do they provide accommodations such as text-to-speech, content and language supports, or calculators that educators can enable or disable to support individual students.	0/4
2.1d	The materials do not include diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.	0/4
2.1e	All criteria for guidance were met.	4/4
—	**TOTAL**	8/16

2.1a – Materials include the definition and intended purpose for the types of instructional assessments.

The materials in grade 6 include MATHstream, which provides a video for educators —"MATHstream Reports: Stream Progress Report Overview"—that defines the lesson stream questions (formative) and the dynamic skills practice (summative) in the provided video for teachers, and explains when these questions appear in each lesson.

The materials in grade 6 explain key differences between the various types of workspaces that students use. The MATHia Reports FAQs define the "Concept Builder" workspaces and the "Mastery" workspaces, as well as the intended use of each type of activity. In "Concept Builder" workspaces, students engage with a variety of instructional strategies to develop their understanding of math concepts for a set number of problems. In "Mastery" workspaces, students engage in self-paced, adaptive instruction to meet their individual needs and deepen their conceptual understanding.

The grade 6 materials include the intended purposes for the types of instructional assessments by providing an assessment description at the beginning of each assessment activity within the MATHia workspaces.

2.1b – Materials include guidance to ensure consistent and accurate administration of instructional assessments.

Grade 6 materials include the "Assigning Math Content in the Clear Learning Center" article, which supports educators in consistent administration of assessments through suggestions for estimating time allotments to complete assessments.

The grade 6 materials include a help article titled "Help Students Set MATHstream Goals" that offers suggestions for the educator to assist their students in creating individualized goals, ensuring consistent usage of the MATHstream component in the materials. One suggestion states that students can write a 3–2–1 stream summary and reflections on questions missed based on the MATHstream video watched.

Additionally, grade 6 materials include a "Getting Started" guide for MATHia to ensure consistent and accurate administration of instructional assessments via the online platform.

The grade 6 materials also include guidance to ensure consistent and accurate administration of instructional assessments through the portal's Help Center articles. For example, in the article "MATHia Grading Strategies," the materials guide the educator in grading strategies that would provide more reliable results interpretations. It also gives suggestions for when to assign benchmarks and a point value system to use based on the amount of time a student has invested in completing math problems.

2.1c – Digital assessments include printable versions and accommodations, including text-to-speech, content and language supports, and calculators, that educators can enable or disable to support individual students.

Digital assessments do include evidence of accommodations, such as text-to-speech, content and language supports, and calculators. The educator cannot turn these various features on or off to support students' individual needs or differentiate their learning needs.

Content language supports, including pop-up definitions and word glossaries for unfamiliar terms, are available to the students automatically and without exception. For example, in Module 4, Topic 4, in *MATHia Adaptive Problem Solving* “Understanding Financial, College, and Career Options “ on the first page there is a pop up for the term credit card that provides a definition of “a card that allows a person to borrow a certain amount of money and pay the borrowed money back at a later time.”

The materials do not include printable versions of the digital assessments or workspace questions. Educators must be able to enable or disable the features to support the individual's needs.

2.1d – Materials include diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

Grade 6 materials do not include a diagnostic assessment.

2.1e – Materials include a variety of formative assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

The grade 6 materials include formative assessments within the MATHia Adaptive Pathways and MATHstream Videos, which are TEKS-aligned and have varying levels of complexity, including Depth of Knowledge (DOK) 1 (recall), DOK 2 (solve), and DOK 3 (differentiate). The grade 6 materials include varying complexity levels through their MATHstream videos. For example, in Module 2, Topic 2 MATHstream Videos, "Lesson Stream: Benchmark Percents," students are asked to work through questions that vary in complexity levels. This TEKS-aligned lesson begins by having students compare two numbers: a percent and a decimal. The lesson then provides an explanation for ordering 11 numbers—including fractions, decimals, and percents—to reinforce their understanding. Students answer a problem and use a drag-and-drop item type to display their answer. The grade 6 materials include formative assessments aligned to the TEKS through their MATHia lessons. The lessons include more than two types of interactive item questions, including text-entry, drag-and-drop, and graphing.

Grade 6 materials provide more than two unique interactive item-type questions or tasks, including inline-choice, drag-and-drop, and text-entry throughout the MATHia Adaptive Pathways.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	The materials do not include a rationale for correct responses.	2/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	This guidance is not applicable to the program.	N/A
2.2e	All criteria for guidance met.	1/1
—	**TOTAL**	6/7

2.2a – Instructional assessments include scoring information and guidance for interpreting student performance, including rationale for each correct and incorrect response.

Grade 6 materials provide scoring information and guidance for interpreting student performance on MATHstream assessments and assignments. For example, the "MATHia Reports" in the Teacher's Toolkit labels scores greater than 70 percent as "Proficient." Scores between 50 percent and 70 percent indicate an "Approaching" level, whereas students with performance levels below 50 percent proficiency indicate "Needs Remediation."

Grade 6 materials include a LiveLab, which provides real-time feedback to students and educators regarding how students progress through their work, when they have mastered or not mastered a specific skill, and require additional support.

The grade 6 materials include a "Skills Report" in the Teacher's Toolkit that provides scoring information by skill, with levels labeled "Proficient," "Near Proficient," and "Remediation Suggested." This report helps educators to group students and identify skills that need additional support.

The materials provide rationales, called "just-in-time hints," for incorrect responses but do not provide rationale for correct responses through the LiveLab "Data Insights."

2.2b – Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.

Grade 6 materials guide the use of included tasks and activities to respond to learning gaps and increase student confidence. For example, students use the "3–2–1 Stream Forms" to record their answers to various prompts as they complete MATHstream Video assignments. These prompts ask students to reflect on their learning and write three takeaways, two examples, and one question they still have about the lesson. The grade 6 materials include a "Standards Report" in the Teacher's Toolkit that details student proficiency on specific standards, alerts the educator to any standards that need remediation, and guides educators to respond to student trends. Intervention resources are provided under each

module in the grade 6 materials. The intervention resources include multiple MATHstream Videos that include targeted TEKS that can be used to respond to a student's performance on assessments. The grade 6 materials include a "Skills Report" in the Teacher's Toolkit that breaks down student performance by specific skill areas ("Proficient," "Near Proficient," or "Needs Remediation"). This guide is for educators to identify student trends, group students based on their needs, and target skills that need more attention.

2.2c – Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth.

Grade 6 materials provide teachers with tools to track student progress and growth across Modules, Units, and Workspaces. After selecting "Data Insights" on the left sidebar of the Carnegie Grade 6 Homepage, select "MATHia Reports" to display the "Group Summary" report or select individual student names to view progress and growth by Modules, Units, and Workspaces.

Grade 6 materials provide students with tools to track their progress and growth within modules, units, and workspaces.

The grade 6 materials include a "Standards Report" within the Teacher's Toolkit that details student proficiency on specific standards, alerts educators to standards that need remediation, and guides educators to respond to student trends.

The grade 6 MATHia program includes a "Skillometer" component that displays each skill with a progress ring. When the progress ring turns green, the students have demonstrated mastery of a specific skill.

The grade 6 materials include tools within the MATHia Adaptive Pathways called "Progress Meter" and "Skillometer" for students to track their progress and growth.

2.2d – If designed to be static, materials provide prompts and guidance to support educators in conducting frequent checks for understanding at key points throughout each lesson or activity.

This guidance is not applicable because the program is not designed to be static.

2.2e – If designed to be adaptive, materials provide frequent checks for understanding at key points throughout each lesson or activity.

Grade 6 materials are adaptive and provide frequent checks for understanding while adjusting the difficulty throughout each lesson. For example, the Module 3, Topic 1, Lesson 4 MATHstream Interactive Video includes "Step-by-Step Examples" and "Hints" to assess student comprehension and check for understanding on finding points and/or labeling coordinates within the four quadrants of the coordinate plane.

Grade 6 adaptive materials provide frequent checks for understanding during key points throughout the lesson or activity. "Hints" within MATHia workspaces provide real-time feedback or hints to address student misunderstandings.

The grade 6 materials provide frequent checks for understanding within MATHia Adaptive Pathway questions by providing videos for immediate feedback.

The grade 6 materials include a LiveLab, which provides real-time insights on student progress and alerts teachers to students who need additional support.

The MATHstream videos in the grade 6 materials provide frequent checks for understanding at key points throughout the lesson. For example, in Module 4, Topic 2, Lesson 2, the MATHstream Interactive Video includes "Step-by-Step Examples" and "Hints" to help students practice writing and solving one-step equations.

3. Supports for All Learners

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

3.1 Differentiation and Scaffolds

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	The materials do not include explicit educator guidance for pre-teaching and embedded support for unfamiliar references.	2/4
3.1c	The materials do not include explicit educator guidance for enrichment and extension activities for students that have demonstrated proficiency at or above grade level.	0/2
3.1d	The materials do not include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.	0/3
3.1e	The materials do not include educator guidance on offering options and support for students to demonstrate understanding of mathematical concepts in various ways, such as perform, express, and represent.	0/2
—	**TOTAL**	3/12

3.1a – Materials include explicit educator guidance for lessons or activities scaffolded for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills.

Grade 6 materials include explicit educator guidance for lessons or activities scaffolded for students below the prerequisite or grade-level proficiency. For example, MATHia's LiveLab helps educators identify struggling students in real time and recommends remediation strategies. Educator Guidance is found in the Help Center, Math, Educators section, MATHia, 6–12, LiveLab article titled "What are Constructed Response prompts? How do you use them?" Grade 6 materials include explicit educator guidance for lessons or activities scaffolded for students below the prerequisite or grade-level proficiency. The adaptive interactive video lessons in MATHstream provide various learner supports, such as embedded "Pauses" at specific points to offer students engaging scaffolded learning opportunities, "Hints," "Answer Passes," and "Power-ups." Module 1, Topic 4, Lesson 2 "Adding and Subtracting Decimals" (TEKS 5.3K) includes real-world problems and a calculator game targeting subtracting positive rational numbers. The Grade 6 MATHia adaptive program includes AI support to guide students step by step through problems and provide hints based on student input. The virtual tutor adapts to students' individual learning needs, offering hints, step-by-step guidance, and remediation when students do not demonstrate mastery in prerequisite or grade-level concepts and skills.

The grade 6 materials' online component, MATHia, automatically provides scaffolds for students who have not yet reached proficiency in grade-level concepts and skills. For example, in Module 1, Topic 4 "Multiplying Decimals," the educator is directed to choose the "Exploring Decimals Facts" lesson, which targets Grade 5 TEKS for students who may require practice in the previous grade level. Additionally, the educator can assign students up to three grade 6 lessons that build upon the others as scaffolds to deepen student understanding. Once a student receives their assigned MATHia lesson, the online platform offers students three hints for each question that is being asked.

3.1b – Materials include explicit educator guidance for language supports, including pre-teaching and embedded supports for developing academic vocabulary and unfamiliar references in text.

The grade 6 materials include an article in the Help Center titled "6–12: CL Math Solution Teaching Strategies," which explains that educators can preview the digital lessons and observe how new academic vocabulary terms are introduced to support pre-teaching. The article details that when a new term is introduced within a lesson video, the video pauses to provide clickable definitions, helping students grasp the meaning before continuing. The grade 6 materials have embedded supports for developing academic vocabulary. For example, the Module 5, Topic 1 MATHia lesson "Understanding the Statistical Process" introduces students to the term *statistical question*, which is underlined and stands out in blue font. Students can click on the vocabulary word to see the glossary definition and example as well as watch a video that represents what a statistical question is with an example of the heights of students in a classroom. The video also explains other academic vocabulary, such as *shape*, *center*, and *spread of data*. The grade 6 materials include explicit educator guidance for language support, including pre-teaching and embedded support, for developing academic vocabulary and unfamiliar references in text. For example, each lesson provided in MATHia contains a glossary to help students better identify an unknown word. In Module 2, Topic 2 "Calculating Parts and Wholes in Percent Problems," students can preview vocabulary for the following mathematical concepts: *acute*, *absolute value*, *45–45–90 triangles*, and *absolute deviation*, all with pictures and mathematical explanations.

The grade 6 materials do not include pre-teaching supports for unfamiliar references or embedded support for unfamiliar references.

3.1c – Materials include explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level and above grade-level content and skills.

The materials do not include explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade- or above-grade-level content and skills. For example, the materials do not provide general suggestions for educators with specificity, such as “For advanced learners, provide more challenging problems” or “Encourage students to explore topics further

on their own."

The materials do not provide enrichment and extension activities for in-grade-level content and skills, and do not include explicit educator guidance for implementing these activities within the materials. For example, the materials do not include specific prompts for advanced questioning or allow for in-depth content discussions, such as asking students to justify their problem-solving strategies or compare different mathematical approaches.

3.1d – Digital materials include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.

The grade 6 materials include a text-to-speech button to toggle for the MATHia component. The audio icon must be pressed for each sentence for which read-aloud assistance is desired. This support is provided to all students and cannot be enabled or disabled by educators for individual students.

The grade 6 materials include content and language support through word glossaries, where students can look up unfamiliar words. This support is available to all students and is not an option for educators to enable or disable for individual students.

The grade 6 materials do not include a calculator that educators can enable or disable to support individual students.

3.1e – Materials include educator guidance on offering options and supports for students to demonstrate understanding of mathematical concepts in various ways, such as perform, express, and represent.

Although students in grade 6 are shown and encouraged to use models to represent their conceptual understanding of multiplying fractions, mixed numbers, and whole numbers—such as in MATHia Adaptive Pathway Module 1, Topic 2 "Intervention Topic: Readiness Resources"—various ways for demonstrating understanding of mathematical concepts, such as performing, expressing, and representing, are not included in the grade 6 materials.

Grade 6 materials do not include educator guidance on supports for students to demonstrate understanding of mathematical concepts in various ways.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	The materials do not include explicit prompts and guidance for educators to build knowledge by highlighting and connecting key patterns, features, or relationships through multiple means of representation.	2/5
3.2b	This guidance is not applicable to the program.	N/A
3.2c	All criteria for guidance met.	3/3
3.2d	The materials do not include enrichment and extension methods that support various forms of engagement, and guidance to support educators in effective implementation.	0/2
3.2e	All criteria for guidance met.	2/2
—	**TOTAL**	7/12

3.2a – Materials include explicit (direct) prompts and guidance for educators to build knowledge by activating prior knowledge, anchoring big ideas, and highlighting and connecting key patterns, features, and relationships through multiple means of representation.

The materials include explicit prompts and guidance for educators to activate prior knowledge. For example, within the *Texas Supplemental Overview*, Appendix B provides recommended TEKS entry points that teachers can use to connect to students' prior learning.

The materials also provide explicit prompts to anchor big ideas. Appendix D of the *Texas Supplemental Overview* guides educators in lesson internalization by outlining the big idea for each unit and its connection to the TEKS.

The materials do not include explicit prompts or guidance for highlighting and connecting key patterns, features, or relationships through multiple means of representation.

3.2b – If designed to be static, materials include educator guidance for effective lesson delivery and facilitation using various instructional approaches.

This guidance is not applicable because the program is not designed to be static.

3.2c – Materials include multi-tiered intervention methods for various types of practice and structures and educator guidance to support effective implementation.

Grade 6 materials include explicit (direct) prompts and guidance in the Help Center through several articles. One article within the "Educator" tab, "Creating an Engaged and Productive MATHia Classroom," offers strategies for effective implementation with facilitation and time management of multi-tiered

intervention methods using the MATHia workspaces. These strategies include having students work collaboratively in small, same-tiered groups on a problem-by-problem basis or independently for individualized practice. Since MATHia is an adaptive practice program, student groups and/or individual students can work at their skill level. Another article in the LiveLab tab, "Using LiveLab to Support Students," states that during LiveLab sessions, educators can monitor student progress, provide just-in-time, one-on-one problem-solving support for at-risk students, and provide just-in-time guided small group interventions. A third article, "What does collaboration look like in MATHia," provides the educator with guidance on using the groups created in the progress report and grouping two to three students per group. Students work together within a module using one computer and assist each other in completing questions and reviewing videos.

The grade 6 materials include multi-tiered guided and independent practice intervention methods. The adaptive materials adjust the level of difficulty based on student responses, and immediate feedback is provided when a student responds incorrectly. For example, in Module 2, Topic 3 of MATHia Adaptive Problem-Solving, "Converting within Ratios," when Question 1 is answered incorrectly three times, guiding hints assist the student.

The grade 6 materials include multi-tiered intervention methods for various types of practice. In the "Four Quadrants of the Coordinate Plane" MATHstream lesson under Module 3, Topic 1, Lesson 4, students view a 14-minute video, and a virtual teacher named Ms. Henson introduces a lesson on all four quadrants of the coordinate plane, along with essential vocabulary and examples (TEKS 6.11A). Within the video, there is opportunity for students to practice independently. The video completely stops and allows students to work on the question provided. Then, the program checks their answers for accuracy and continues the MATHstream lesson, in which the virtual teacher explains each correct answer.

The MATHstream Interactive videos in grade 6 provide multi-tiered intervention methods for various types of structures. For example, the Module 4, Topic 2, Lesson 2 MATHstream video titled "Writing and Solving One-Step Addition Equations" lends itself to a whole-group setting in the classroom. The MATHstream video format allows the educator to pause and explain the concept of using a double number line to solve equations further, if needed. The MATHstream video format is a multi-tiered intervention method, so students can work independently or in small groups on their laptops. Students would have the ability to stop the video and replay parts where they need repetition or further clarification.

The grade 6 materials include educator guidance to support effective implementation of multi-tiered intervention methods. The color-coding system used in the "Data Insights" MATHia reports lists students who need remediation by identifying their names with a red circle. The materials also include an "Intervention Resources" tab within each module.

3.2d – Materials include enrichment and extension methods that support various forms of engagement, and guidance to support educators in effective implementation.

The materials do not include enrichment or extension methods that support various forms of engagement. All students receive the same lessons regardless of level of achievement, and no differentiated assignments or activities are provided for students who have already demonstrated proficiency in grade-level or above-grade-level content. For example, in Module 5, Topic 1, the *MATHstream* lesson “Summarizing Numeric Data Sets in Context” (TEKS 6.12C) asks students to solve real-world problems using dot plots, stem-and-leaf plots, and histograms. Although the lesson includes a concluding question that prompts students to extend their thinking, the materials do not provide any follow-up assignments or structured activities that would function as true enrichment or extension.

The materials also do not include explicit educator guidance for the effective implementation of enrichment or extension methods. While articles are available in the *Help Articles Center*, these resources only describe the core lessons and re-engagement supports; they do not provide methods or strategies for extending student learning beyond grade-level proficiency.

3.2e – Materials include prompts and guidance to support educators in providing timely feedback during lesson delivery.

Grade 6 materials include prompts to support educators in providing timely feedback during practice lessons, such as in LiveLab. According to the Help Center article in the LiveLab tab, "Using LiveLab to Support Students," educators can actively monitor student progress on the main Class Dashboard and are notified when students are working, idle, needing monitoring, or at-risk. For example, when an educator receives an alert prompt that a student is at-risk, a life preserver icon appears next to the student's current status.

An example of prompts and guidance for providing timely feedback in grade 6 materials appears in the active monitoring of students working in Module 5, Topic 1 of MATHia Adaptive Problem-Solving within the Concept Builder Workspace, "Analyzing Distributions with Shape, Center, and Spread." In this example, students who answer questions incorrectly are provided timely feedback, such as automatic grading or hints to guide student understanding. The article "Scaffolding Support in MATHia," found in the Math Help Center "Educators" tab, recommends that during monitoring, the educator may provide one-on-one target instruction of previous standards when a student works in MATHia, or the educator may provide timely feedback as students work on a Concept Builder Workspace together in a small group. The article additionally recommends providing guided, timely feedback during instruction of a Step-by-Step example within the MATHia Adaptive Problem-Solving Workspace with the whole class. The grade 6 adaptive materials provide immediate feedback when a student responds incorrectly. For example, in Module 2, Topic 3 of MATHia Adaptive Problem-Solving, "Converting Within Ratios," when Question 1 is answered incorrectly 3 times, guiding hints are provided to remediate the student. The grade 6 materials include prompts to support educators in providing timely feedback during the lesson.

For example, in Module 3, Topic 1, Lesson 4, the MATHstream video titled "The Four Quadrants of the Coordinate Plane" there is an intentional pause in the video for students to work out a given example. This pause allows educators to provide feedback as they monitor students' work and responses. This example applies to the MATHstream video being played in a whole group setting.

3.3 Support for Emergent Bilingual Students

An emergent bilingual student is a student who is in the process of acquiring English and has another language as the primary language. The term emergent bilingual student replaced the term English learner in the Texas Education Code 29, Subchapter B after the September 1, 2021 update. Some instructional materials still use English language learner or English learner and these terms have been retained in direct quotations and titles.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	This guidance is not applicable to the program.	N/A
3.3b	This guidance is not applicable to the program.	N/A
3.3c	The materials do not include implementation guidance to support educators in effectively using the materials in state-approved bilingual/English as a Second Language (ESL) programs.	0/1
3.3d	The materials do not include embedded guidance to support emergent bilingual (EB) students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.	0/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	0/9

3.3a – If designed to be static, materials include educator guidance on providing and incorporating linguistic accommodations for all levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

This guidance is not applicable because the program is not designed to be static.

3.3b – If designed to be adaptive, materials include embedded linguistic accommodations for all levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

This guidance is not applicable because the adaptive Spanish program does not require guidance on providing and incorporating linguistic accommodations.

3.3c – Materials include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs.

The materials do not include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs. While the materials provide general guidance for EB support in the Help Center, no evidence of implementation in state-approved programs is provided.

3.3d – Materials include embedded guidance to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.

The materials do not include embedded guidance to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, or making cross-linguistic connections through oral or written discourse. The "Making Sense of Mathematics in Texas Supplemental Math" under "Developing and Using Academic Mathematical Language" provides general guidance for developing academic language but does not specifically include strategies to support EB students. For example, the materials do not provide students with structured opportunities for written or oral discourse of the academic content. While the materials provide general guidance for EB support in the Help Center, no evidence of guidance for support through oral and written discourse is present.

The materials provide a glossary for students under the “Tools” tab and other resources without integrating vocabulary instruction into the lessons. The glossary does not differentiate or provide vocabulary support to EB students, and there are no additional embedded vocabulary support resources.

The materials do not provide students with opportunities to develop academic vocabulary, increase comprehension, build background knowledge, or make cross-linguistic connections through oral or written discourse. Lessons consist primarily of individual activity sheets or tasks without structured opportunities for students to discuss or write about the content

3.3e – If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

This guidance is not applicable because the program is not designed for dual language immersion (DLI) programs.

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

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	The materials do not include questions or tasks, nor enrichment or extension materials, that increase in rigor and complexity, leading to above-grade-level proficiency.	2/4
—	**TOTAL**	4/6

4.1a – Practice opportunities throughout learning pathways (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

Grade 6 materials provide practice opportunities through MATHia Adaptive Problem-Solving, which requires students to demonstrate their depth of understanding aligned with the TEKS.

The grade 6 materials provide students with several practice opportunities to demonstrate their depth of understanding aligned to the TEKS. For example, in Module 4, Topic 2, Lesson 5, the "Mathstream" video introduces students to adding, subtracting, multiplying, and dividing by positive numbers with inequalities. The lesson begins by explaining and having students practice graphing an inequality on a number line. Then, the students are asked to write inequalities from a word problem. Next, the students write their inequality and graph it on a number line.

Grade 6 materials provide instructional assessments through MATHia Adaptive Problem-Solving, which require students to demonstrate their depth of understanding aligned to the TEKS.

The grade 6 materials provide students opportunities to demonstrate their depth of understanding of the TEKS through their MATHia component. This adaptive problem-solving component assesses students' knowledge by providing different item types, stimuli, and real-world examples. For example, in Module 4, Topic 2 "MATHia: Solving One-Step Inequalities," students solve inequalities by selecting a verbal description of each step they are computing. Then, they graph their inequality on a number line.

4.1b – Questions and tasks, including enrichment and extension materials, increase in rigor and complexity, leading to grade-level and above grade-level proficiency in the mathematics TEKS.

The grade 6 materials include topics in the Course Homepage Modules that address grade-level TEKS with practice questions and videos that build toward grade-level proficiency. For example, in Module 4,

Topic 2, *MATHia: Solving One-Step Inequalities,* the materials provide on-grade-level questions aligned to TEKS 6.10A and 6.3D. These questions increase in rigor and complexity, supporting students in reaching grade-level proficiency.

The grade 6 materials also include MATHstream videos that provide enrichment and extension activities that reinforce grade-level proficiency in the mathematics TEKS. For example, the *LessonStream: Similar Figures and Calculating with Scale Factor* video guides students to apply proportional reasoning when solving for missing measurements in scale factors. These enrichment tasks increase in rigor and complexity while reinforcing grade-level proficiency.

While the "Features and Functionalities" article references above-grade-level TEKS, the student lessons do not include questions, tasks, or enrichment opportunities that lead to above-grade-level proficiency in the mathematics TEKS.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	All criteria for guidance met.	1/1
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	6/6

4.2a – Materials demonstrate coherence across concepts horizontally within the grade level by connecting patterns, big ideas, and relationships.

The "Course Overview Grade 6" video in the "Course Navigator" tab explains how topics are interconnected in the Texas Grade 6 Scope and Sequence. One example explains that students reflect on previously learned aspects of positive and negative integers and how they apply this knowledge when working with plotting or identifying coordinates on the four quadrants of the coordinate plane. The grade 6 materials include a MATHia Unit Overview at the beginning of each module, consisting of a checklist of skills and key terms to demonstrate coherence of concepts within the grade level. For example, the student dashboard for each unit indicates to students "What You'll Learn" and key terms, along with all of the related topics within that unit. This overview connects big ideas and relationships within the unit content. The grade 6 materials demonstrate coherence across concepts horizontally within grade level. In Module 4, Topic 1 of the MATHia Adaptive Problem-Solving section, the materials include four separate lessons related to expressions, which allow students to make connections about this big idea. The materials in grade 6 group lessons are grouped into modules within the "Course" tab, showing the coherence across concepts for grade 6.

4.2b – Materials demonstrate coherence vertically across concepts and grade bands, including connections from grades 3–12, by connecting patterns, big ideas, and relationships.

Grade 6 materials demonstrate coherence vertically across concepts and grade bands by connecting concept patterns. For example, in Module 4, Topic 1 "Intervention Resources: Top Readiness Resources," the "SkillStream: Adding and Subtracting Fractions" resource connects the concept of equivalent fractions (3.3F) with the concept of adding and subtracting fractions with unlike denominators (5.3H). In the grade 6 materials in Module 1, Topic 4 "Multiplying Decimals," the first "MATHia Connection" contained four grade 5 TEKS to connect the grade level learning vertically. The grade 6 materials include a "Re-engagement" topic in the "Course Navigator" containing a MATHstream interactive video that includes vertically connected TEKS. For example, the Module 1, Topic 4 "Re-engagement" includes MATHstream interactive videos for TEKS 4.2H and 5.3K.

4.2c – Materials demonstrate coherence across lessons or activities by connecting students' prior knowledge of concepts and procedures to the mathematical concepts to be learned in the current grade level and future grade levels.

Grade 6 materials demonstrate coherence by linking previously learned concepts and procedures to those introduced in future grade levels. For example, in Module 4, Topic 1 of MATHia Adaptive Problem-Solving, "Evaluating Algebraic Expressions," students connect previously learned concepts and procedures, TEKS 5.4B (solving multi-step problems involving the four operations using equations with a letter standing for the unknown quantity), with a current grade level concept and procedure TEKS 6.7A (generate equivalent numerical expressions using order of operations including whole number exponents, and prime factorization). In the grade 6 materials, provided MATHstream lessons teach mathematical concepts, and MATHia Adaptive Pathway questions are used to connect concepts being learned in the current grade level. For example, in Module 1, Lesson 3, the MATHstream video is TEKS 5.4A (greatest common factor and lowest common multiple), which supports MATHia adaptive practice for TEKS 6.7A and 6.7D.

In the grade 6 materials, lessons connect to future grade levels using MATHstream and MATHia videos and questions. For example, in Module 1, Topic 2, Lesson 4, the MATHstream video presents TEKS 7.3B (division of fractions), which is also embedded in the MATHia adaptive practice with TEKS 6.3A (multiplying the reciprocal of fractions is equivalent to dividing fractions). The grade 6 materials demonstrate coherence across lessons, such as adding integers with counters and rules for adding integers in MATHstream videos within the Course Navigation tab. These videos help students connect prior knowledge from using counters to then applying rules for adding integers. The videos include instruction that prepares them for grade-level concepts (6.2B and 6.2C) and future grade-level concepts (7.3A).

Grade 6 materials demonstrate coherence across lessons or activities by connecting previously learned concepts and procedures to future grade-level concepts and procedures. For example, Module 4, Topic 2 of MATHia Adaptive Problem-Solving, "Solving One-Step Inequalities," demonstrates coherence with activities that connect the TEKS 6.10A model and solve one-variable, one-step equations and inequalities, using future grade-level concepts and procedures, such as TEKS 7.10A, which involves writing one-variable, two-step equations and inequalities.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	2/2
4.3b	All criteria for guidance met.	2/2
—	**TOTAL**	4/4

4.3a – Materials provide spaced retrieval opportunities with previously learned skills and concepts across learning pathways.

Grade 6 materials provide spaced retrieval opportunities with previously learned skills and concepts across learning pathways. For example, Module 4, Topic 1 of MATHia Adaptive Problem-Solving, "Evaluating Numeric Expressions," provides seven spaced retrieval opportunities for TEKS 6.7A (generating equivalent expressions using order of operations, including whole number exponents and prime factorization). The learning pathway begins by introducing "Writing and Evaluating Exponent Expressions," followed by learning the order of operations. The learning pathway progresses as students first rewrite expressions using the order of operations, then practice evaluating multi-step numeric expressions, and eventually work on evaluating a wide range of numeric expressions.

The grade 6 materials provide the "Launching a MATHia Workspace in Review Mode" article in the Help Center, which describes a review workspace mode in which students can practice already completed skills, providing opportunities for spaced retrieval. Grade 6 materials provide multiple opportunities for spaced retrieval of previously learned skills and concepts. For example, in Module 3, Topic 2 Intervention Resources, "Re-engagement Resources," the grade 6 materials provide three different MATHstream videos that spiral integer operations with both concrete models and standard algorithms.

4.3b – Materials provide interleaved practice opportunities with previously learned skills and concepts across learning pathways.

Grade 6 materials provide interleaved practice opportunities with previously learned skills and concepts across learning pathways. The Course Navigation’s "Intervention Resources" includes examples under the topic "Readiness Resources."

Grade 6 materials offer interleaved practice opportunities that reinforce previously learned skills and concepts across various learning pathways. For example, students can find practice opportunities for TEKS 6.12C—summarizing numerical data, including mean, median, range, and interquartile range—in Module 5, Topic 1, Lesson 2, titled "Analyzing Numerical Data Displays," as well as in the MATHstream video on Dot Plots. TEKS 6.12C is later revisited in Lesson 3 "Using Histograms to Display Data," as well as in Module 5, Topic 2, Lesson 1 "Analyzing Data Using Measures of Center," Lesson 2 "Displaying the Five-Number Summary," and in the MATHstream interactive video "Analyzing Box-and-Whisker Plots."

The grade 6 materials provide interleaved practice opportunities with previously learned skills through MATHia Adaptive Practice. For example, the use of number lines is introduced in Module 1, Topic 4, Lesson 1, and revisited in Module 3, Topic 1, Lesson 1, and Lesson 3.

5. Balance of Conceptual and Procedural Understanding

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

5.1 Development of Conceptual Understanding

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.1a	All criteria for guidance met.	3/3
5.1b	All criteria for guidance met.	2/2
5.1c	All criteria for guidance met.	1/1
—	**TOTAL**	6/6

5.1a – Questions and tasks provide opportunities for students to interpret, analyze, and evaluate mathematical concepts and complex, real-world situations.

Grade 6 materials include questions and tasks that provide students opportunities to interpret, analyze, and evaluate mathematical concepts and complex, real-world situations, such as in Module 3, Topic 2 of MATHia Adaptive Problem-Solving, "Using Models to Understand Integers: Combining Opposite Quantities." In this activity, students view an animation to learn about opposite car distances on a city street. Students interpret the information they were shown and apply their understanding to answer questions regarding sums of numbers and their opposites being equal to zero. Next, students analyze car distances and evaluate the location (opposite values and absolute values) of two cars (white car and yellow car) if a third car (red car) was stopped at the intersection.

The grade 6 materials include questions and tasks that require students to interpret mathematical concepts and complex, real-world situations. For example, in the MATHstream video "Analyze Graphs and Other Representations," students interpret the meaning of two graphs by comparing their characteristics. Then, students analyze the two graphs to answer a real-world problem. Finally, students evaluate graphs, diagrams, and written expressions to determine the types of ratio relationships in a real-world situation. Questions and tasks in the grade 6 materials provide real-world situations and opportunities for students to interpret, analyze, and evaluate mathematical concepts. For example, in Module 4, Topic 4 of MATHia Adaptive Problem Solving, "Understanding Financial, College, and Career, Comparing Credit and Debit Cards," there is an adaptive lesson on comparing credit and debit cards. First, students must read about each type of card and interpret their understanding of different scenarios given into categories (debit card, credit card, and both). In the next level of questioning, students analyze and evaluate the advantages and disadvantages of using each card type.

5.1b – Questions and tasks provide opportunities for students to create concrete models and representations of mathematical situations.

Grade 6 materials provide opportunities for students to create concrete models and representations of mathematical situations, such as in Module 5, Topic 1, Lesson 2: "Analyzing Numerical Data Displays,"

MATHstream Interactive Video "Dot Plots and Distributions." Students interpret how data is represented using a dot plot. Next, students examine the number of gold medals won in the 2018 Winter Olympics. Students create a dot plot to represent this data. Grade 6 materials include an article in the Help Center, "Features and Functionality," that explains how the Explore Tools in MATHia are used in "modeling proportional relationships with graphs and tables, or simulating real-world measurement situations, thereby enabling [students] to create concrete models that serve as a foundation for later abstract reasoning."

5.1c – Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Grade 6 materials provide opportunities for students to apply conceptual understanding to new problem situations and contexts. In Module 5, Topic 2, Lesson 1, "Analyzing Data Using Measures of Center," of the MATHstream lesson "Using Measures of Center," students analyze and interpret data of three real-world scenarios: pencils in backpacks, ages of U.S. first ladies, and hours students spent playing video games on weekends. Students apply their conceptual understanding of the three measures of central tendency to a new problem situation: determining the "Balance Point" or "Mean" of the number of points a student (Shelly) scored from the Olive Street Middle School basketball team.

The grade 6 materials provide opportunities for students to apply conceptual understanding introduced through the MATHstream videos to new problem situations through the MATHia workspace. All five modules in the materials follow the same format. For example, in Module 4, Topic 1, the materials offer three lessons that all build on the concept of numerical expressions (TEKS 6.7A, 6.7B, 6.7C, and 6.7D). Each of the three lessons available allows students to build conceptual understanding. Students can then apply this knowledge to the new contexts and tasks provided through the four MATHia workspaces provided for the module. The grade 6 Carnegie materials provide opportunities for students to apply conceptual understanding to new problem situations and contexts. For example, in Module 2, Topic 1, Lesson 4, "A Trip to the Moon," of the LessonStream lesson "Parts and Wholes in Ratio Tables," students can apply their conceptual understanding of ratios by using ratio tables to identify how to blend paint colors, which is a new problem situation and context.

5.2 Development of Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.2a	All criteria for guidance met.	2/2
5.2b	All criteria for guidance met.	3/3
5.2c	All criteria for guidance met.	3/3
5.2d	All criteria for guidance met.	1/1
—	**TOTAL**	9/9

5.2a – Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level mathematical tasks.

Grade 6 materials provide repeated tasks that are designed to build students' automaticity for quick and accurate results. For example, Module 1, Topic 3 of MATHia Adaptive Problem-Solving "Area of Triangles and Quadrilaterals" workspaces provide students with various tasks aimed at increasing automaticity with regard to area, such as modeling area formulas, writing equations relating to area problems, watching animations to solve area formulas, and determining solutions for problems involving area.

The grade 6 materials provide opportunities for students to evaluate and solve mathematical representations for accuracy using MATHia. For example, in Module 2, the MATHia program starts with "Introduction to Ratios," then "Determining Equivalent Ratios," and finally "Using Tables and Graphs of Ratios." These practice opportunities allow for automaticity and fluency necessary to complete grade-level mathematical tasks.

The grade 6 materials provide tasks designed to build student automaticity and fluency necessary to complete grade-level mathematical tasks. For example, in Module 2, Topic 2 "Percents," students will work through 6 MATHstream lessons and guided practice workspaces before completing the MATHia Adaptive Problem-Solving workspace.

The grade 6 materials provide tasks that are designed to build student automaticity necessary to complete grade-level mathematical tasks. In Module 3, Topic 2, Lesson 4, students are guided with multiple examples of subtracting integers on a number line during the 13-minute MATHstream video lesson. Then, the materials provide tasks designed to build the fluency necessary to complete grade-level mathematical tasks. In the MATHia workspace titled "Developing Algorithms for Adding and Subtracting Integers" in Module 3, Topic 2, students build fluency by practicing the concept previously taught in the MATHstream videos on adding and subtracting integers on a number line.

Grade 6 materials provide repeated tasks that are designed to build student fluency necessary for accurate and efficient results. For example, Module 5, Topic 1, Intervention Resources: Topic Re-Engagement Resources contains nine MATHstream activities are designed to increase fluency with data topics such as "Data Distribution," "Graphical Features of Data Distribution," "Summarizing Numerical

Data by Measures of Center," "Spread and Distribution," and "Representing Data Using Various Data Graphs and Charts."

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout learning pathways.

In the grade 6 materials, students have the opportunity to practice the application of efficient and flexible mathematical procedures throughout the learning pathway. For example, in Module 2, Topic 1, Lesson 3, students learn and practice equivalent ratios with modeling, then they practice scaling up and down to determine equivalent fractions, and finally, they learn and practice modeling equivalent fractions with double number lines. These multiple opportunities show students efficient and flexible methods to practice this mathematical procedure. Additionally, the grade 6 materials provide students with the opportunity to practice accurate mathematical procedures throughout learning pathways. For example, Topic 1 of MATHia Adaptive Problem-Solving allows students to practice skills learned in a variety of ways, such as comparing ratios with graphs, tables, and various representations. This allows students to practice accurate mathematical procedures.

The grade 6 materials provide opportunities for students to practice the application of efficient and accurate mathematical procedures. For example, in Module 4, Topic 2 in a MATHia lesson titled "Solving One-Step Multiplication and Division Equations," students select each step in solving an equation. Once they select the correct step, they then type the number that is multiplied or divided as a text entry. This promotes both efficiency and accuracy for students and eliminates unnecessary steps in solving an equation. The grade 6 materials also provide opportunities for students to practice the application of flexible mathematical procedures. In Module 3, Topic 2, three lessons help develop the concept of adding integers. Lesson 1 uses a football game to model the sum of positive and negative integers. Lesson 2 uses number lines, and Lesson 3 uses two-color counters to address the same concept, therefore providing flexibility.

Grade 6 materials provide opportunities for students to practice the application of accurate and efficient mathematical procedures throughout learning pathways. For example, in Module 5, Topic 2, lessons on data concepts offer students various opportunities to analyze data efficiently and accurately by examining measures of center, data set variations, followed by interpreting the data in different quartiles. Grade 6 materials also provide opportunities for students to practice the application of flexible mathematical procedures throughout learning pathways. For example, in Module 5, Topic 2 of MATHia Adaptive Problem-Solving, "Displaying the Five-Number Summary," students use the Explore Tool to manipulate data point values and explore how the changes affect the five-number summary. This practice develops flexible mathematical thinking processes as students apply strategies of analyzing vertical and horizontal box-and-whisker plot display shapes to understand how the shape of the display determines the spread of the data.

5.2c – Materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy throughout learning pathways.

Grade 6 materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for flexibility. For example, in Module 1, Lesson 3 of MATHstream, "Investigating Areas of Triangles and Quadrilaterals," students use prior knowledge of calculating the area of a rectangle to calculate the area of a parallelogram and triangles. In calculating the area of triangles, students practice flexibility by rotating the triangle model, selecting any side of a triangle as the base, and selecting the height measurement as the side perpendicular to the base. Grade 6 materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency and accuracy. For example, in Module 1, Lesson 3 of MATHia Adaptive Problem-Solving, "Area of Triangles and Quadrilaterals Mastery Workspace: Calculating Area of Various Figures," students use their prior knowledge of calculating the area of rectangles and understanding area formulas to determine which formula to utilize to determine the area of various shapes. Students utilize these opportunities to evaluate various mathematical model representations and determine the accurate formula to efficiently calculate the area. The grade 6 materials provide opportunities for students to evaluate mathematical representations for efficiency and flexibility. For example, in the Module 2, Topic 2, Lesson 6 MATHstream video "Comparing Ratios with Different Representations," students use different representations for ratios and compare which best represents a specific situation.

The grade 6 materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for flexibility. In Module 3, Topic 2, the MATHia workspace titled "Adding and Subtracting Integers," students can practice flexibility in selecting between using counters, number lines, or the algorithms for adding and subtracting integers.

The grade 6 materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency and accuracy. In Module 5, Topic 1, the MATHstream video titled "Dot Plots and Distribution," the materials ask students to watch an explanation video about a mathematical representation using a dot plot. Then, students are asked to evaluate the dot plot data and answer questions based on their observations. They can request hints, and when they are ready to submit, the materials take them back to the video where the instructor reviews the strategies that she used to find the solutions and provide efficiency and accuracy by eliminating unnecessary steps and errors.

5.2d – Materials contain guidance to support students in selecting the most efficient approaches when solving mathematics problems.

The article "MATHia + MATHstream Guidance for Educators" highlights that embedded in the MATHia adaptive questions and tasks that contain guidance to support students in selecting increasingly efficient approaches to solve mathematics problems.

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	All criteria for guidance met.	2/2
5.3b	All criteria for guidance met.	3/3
5.3c	The materials do not include supports for students in creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS.	2/6
—	**TOTAL**	7/11

5.3a – Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.

Grade 6 materials include the article "Texas Supplemental Course Overview," which explains how MATHia and MATHstream balance conceptual understanding with procedural fluency. According to the article, "Conceptual learning is fostered through interactive tools, multiple representations, and activities like Worked Examples and Explore Tools that encourage students to investigate patterns, structures, and relationships before formalizing methods." The article also suggests that "Procedural skills are built through adaptive, targeted practice in Concept Builder and Mastery workspaces, gradually increasing in complexity until mastery is reached, with teacher-facing reports providing precise feedback for targeted support or enrichment." The article explains that the live explanations in MATHstream videos provide procedural focus, "including visual and verbal modeling, and real-time connections between different representations. At the same time, interactive practice reinforces procedural skills within each video segment and end-of-stream assessments." The article continues to explicitly state that "both programs align procedural practice with the contexts in which concepts appear, students experience a continuous feedback loop in which conceptual understanding supports procedural accuracy, and procedural fluency reinforces conceptual insight."

5.3b – Questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS.

The grade 6 Carnegie questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS. For example, in Module 2, Topic 2, Lesson 1, the MATHstream video "Estimating Percents" prompts students to use pictorial representations of cell phone battery icons to estimate the phone's battery life percentage. This lesson provides students with opportunities to learn and practice TEKS 6.5C and 6.4F.

The questions and tasks in the grade 6 materials provide opportunities for students to use concrete models and pictorial representations as required by the TEKS. In Module 3, Topic 2, Lesson 3, the MATHstream lesson "Additive Inverses and Adding Integers with Two Color Counters" (TEKS 6.2B) presents students with a 13-minute video lesson about an atom model. It uses protons and electrons to

represent the concrete model of yellow and red counters, respectively. The lesson then moves to use a number line pictorial representation of an equation that uses protons for positive numbers and electrons to represent negative numbers.

The questions and tasks in the grade 6 materials provide opportunities for students to use abstract models as required by the TEKS. In Module 3, Topic 2, Lesson 3, the MATHstream lesson "Rules for Adding Integers" (TEKS 6.2B, 6.3C), students are presented with the lesson explanation and connection between using two-color counters (concrete model) and the rules for adding integers (abstract model). Multiple math questions and tasks are provided through this nine-minute MATHstream video.

The grade 6 questions and tasks provide opportunities for students to use concrete models and abstract models. For example, the MATHstream video Using Algebra Tiles to Model Equivalent Expressions from Module 4, Topic 1, Lesson 3 guides students in using algebra tiles to represent information in word problems. At the eight-minute mark, students solve math problems without the use of physical objects for abstract model practice.

Questions and tasks in grade 6 materials provide opportunities for students to use pictorial representations and abstract models as required by the TEKS. For example, in Module 5, Topic 1, Lesson 3 MATHstream, LessonStream: "Creating and Analyzing Histograms," students use a data table as an abstract model of the number of state parks in a list of specific states to create a grouped frequency table and then construct a histogram from the grouped frequency table as a pictorial representation.

Questions and tasks in grade 6 materials provide opportunities for students to use abstract models as required by the TEKS. For example, in Module 5, Topic 1, Lesson 3 MATHstream, toward the latter section of the LessonStream: "Creating a Histogram with Continuous Data," the video asks students to analyze two histograms and explain why the intervals of the two histograms containing data for the amount of time to complete the Empire State Building Run-Up (race) are incorrect. The analysis of the histograms provides students with the opportunity to use abstract models to interpret data.

5.3c – Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS.

Grade 6 materials include supports for students in connecting concrete and representational models to abstract as required by the TEKS. For example, in Module 1, Topic 2, Lesson 1, MATHstream, LessonStream: "Using the Distributive Property," the presenter uses the representational model of a rectangular walkway to make connections with the abstract concept of the area formula *area* = *length* × *width*. Later in the video, the presenter shows students a rectangular representational model of the Distributive Property (abstract model) formula, "a(b + c)," which is the same as the formula, "(a × b) + (a × c)." In another problem, the presenter asks students to create three concrete models to represent 29 in the equation 3 × 29 = 87 to apply the Distributive Property (abstract concept) and solve for area. Lastly, in

the video, students use the Distributive Property to calculate the area of a rectangular walkway to determine the number of materials needed to create the walkway. The presenter defines the Distributive Property when he explains that it is a process to solve large multiplication problems in creative ways that are more convenient and understandable to determine the area. The presenter shows students a concrete model of a rectangular walkway with a width of five feet and a length of 27 feet. The presenter asks students if there is more than one way to represent the division of the rectangle to calculate the area (abstract model). Students then select representational formula models from a set of four examples, with the width and length of the rectangular walkway in the problem.

The grade 6 materials include supports for students in connecting concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS. For example, in Module 1, Topic 3, Lesson 4, MATHstream video "Volume of Rectangular Prisms," students use concrete models, such as math unit manipulatives and rulers, to connect to the abstract concept of the volume of prisms. Students then use representational models, such as drawings, to connect to the abstract formula to find volume. This lesson supports TEKS 6.8C and 6.8D.

Grade 6 materials include supports for connecting concrete models to abstract concepts. For example, the MATHstream video "Using Algebra Tiles to Model Equivalent Expressions" from Module 4, Topic 1, Lesson 3 guides students in using algebra tiles to represent information presented in word problems. Students model expressions with algebra tiles, construct visual representations, and respond to prompts such as "What is the coefficient of x in the expression?" and "How does this relate to the algebra tile model?" These activities help students bridge the gap between concrete representations and abstract mathematical concepts.

Grade 6 materials include supports for connecting representational models to abstract concepts. For example, in Module 4, Topic 2, Lesson 5, the MATHstream video "Multiplying and Dividing by Negative Numbers with Inequalities" guides students in using number lines and graphs to understand and write inequalities. These representational models support the transition to the abstract concept of inequalities. Open-ended questions such as "Why are there open circles at 5 on the number lines?" prompt students to define and explain the relationship between concrete or visual models and abstract mathematical reasoning, as required by the TEKS.

The materials do not include supports for students in creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	1/1
5.4b	The materials do not include embedded educator guidance to scaffold, support, and extend students' use of academic mathematical vocabulary in context when communicating with peers and educators.	0/2
5.4c	All criteria for guidance met.	1/1
5.4d	The materials do not include embedded guidance to facilitate mathematical conversation, allowing students to hear, refine, and use math language with peers.	0/2
5.4e	The materials do not include embedded guidance to anticipate a variety of student answers, including exemplar responses to questions and tasks.	1/2
—	**TOTAL**	3/8

5.4a – Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies.

Grade 6 online materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies as found in Module 1, Topic 2, Lesson 2, LessonStream: "Using Prime Factors to Identify Common Factors." The materials provide students with visuals and manipulatives to develop mathematical language such as *prime factor*, *factor tree*, *power*, *base*, *exponent*, and *greatest common factor*. Students connect mathematical terms, such as *factors* and *prime numbers*, to factor tree visuals and online manipulatives. Students complete tables to compare the prime factors of numbers and find the common prime factors of two numbers to determine the greatest common factor.

The grade 6 materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies. For example, in the MATHstream video "Modeling and Writing Unit Rates," the pictures and graphs are visual representations of unit rates. The educator in the video defines unit rates verbally and then uses those visuals to connect the representation with the vocabulary. The grade 6 materials provide opportunities for students to develop academic mathematical language using visuals. At the nine-minute mark in the Module 5, Topic 2, Lesson 2, MATHstream "The Five Number Summary," the teacher introduces students to academic vocabulary words, such as *minimum*, *maximum*, *quartiles*, *median*, *range*, and *spread*. After defining the words, the teacher provides students with examples of box-and-whisker plots as a visual for the vocabulary words introduced at the beginning of the lesson. The teacher labels each vocabulary word in the box-and-whisker plots that represent the meaning and numerical representation of the word.

The grade 6 materials provide opportunities for students to develop academic mathematical language using manipulatives. In Module 4, Topic 2, MATHia lesson, "Solving one-step equations with a balance,"

students use a virtual balance to solve one-step equations. Academic vocabulary words used in this lesson include *variable*, *balance*, *equation*, and *term*. Using the virtual balance allows students to develop mathematical language and make connections between the meaning of the vocabulary words and the virtual balance.

The grade 6 materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies. For example, in Module 1, Topic 3, MATHstream lesson "Volume of Rectangular Prisms," students learn many academic vocabulary words, such as *prism*, *polygon*, *polyhedron*, and the concept of cubic measurement. Students are given visual representations of these objects and follow the guided notes portion of the lesson to complete real-world problems involving the area of a rectangular prism.

5.4b – Materials include embedded educator guidance to scaffold, support, and extend students' use of academic mathematical vocabulary in context when communicating with peers and educators.

Grade 6 materials do not include embedded educator guidance to scaffold, support, and extend students' use of academic mathematical vocabulary in context when communicating with peers and educators.

5.4c – Materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse.

The grade 6 materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse. In Module 5, Topic 2, Lesson 1, MATHstream lesson, "Using Measures of Center," at the six-minute mark, the teacher supports students in writing and using the vocabulary words *mode* and *median* in written discourse as the teacher verbally guides them to answer the math question correctly.

The grade 6 materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse. In Module 5, Topic 2, Lesson 1, MATHstream lesson, "Analyzing Box-and-Whisker Plots" at the seven-minute mark, the teacher supports students in applying the meaning of words such as interquartile range (*IQR)*, *mean*, *median*, *skewed right*, *skewed left*, and *distribution of data* through verbal and written discourse of a real-world problem situation being represented in a double box-and-whisker plot.

The grade 6 materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse. Besides multiple examples found in the materials through the Mathstream lessons referenced in our evidence guide, the materials also provide a four page article, "Making Sense of Mathematics in Texas Supplemental Math," which details the ways that the materials support students' development of academic and mathematical language, including ideas and examples on how to use MATHia and MATHstream in peer interactions and whole group discussion.

The article also guides the educator to model precise vocabulary to support students in applying mathematical language themselves. MATHstream includes interactive video lessons that allow for student collaboration. This encourages students to articulate their reasoning for problem-solving strategies. The article also explains that MATHia provides interactive tools to support the internalization of key terms and problem-solving skills.

5.4d – Materials include embedded guidance to facilitate mathematical conversations allowing students to hear, refine, and use math language with peers.

The grade 6 materials do not include embedded guidance to facilitate mathematical conversations, allowing students to hear, refine, and use math language with peers. Although the Help Article, "The Collaborative Classroom: Preparing the Learner," suggests using structured collaborative supports, such as think-pair-share, peer discussions, and group work, it does not share specific guidance for facilitating the mathematical conversations.

5.4e – Materials include embedded guidance to anticipate a variety of student answers including exemplar responses to questions and tasks, including guidance to support and/or redirect inaccurate student responses.

The grade 6 materials do not provide anticipated answers to questions and tasks or exemplar student responses.

The grade 6 materials do not provide annotated solutions for a task. The materials do not include the correct responses or include sample student responses to questions—the materials do not provide educator guidance on addressing the mistake with prompts.

Grade 6 online materials include embedded guidance to anticipate a variety of student answers, including guidance to support and/or redirect inaccurate student responses as exemplified in Module 1, Topic 1 of MATHia Adaptive Problem-Solving, "Identifying Common Factors and Common Multiples," within the "Prime Factorization" Mastery Workspace. When a student inaccurately answers a question in the interactive step-by-step example, the online platform responds with the redirection prompt, "Try again. You are not done...ask for a hint."

Grade 6 materials include embedded guidance to anticipate a variety of student answers, including support to redirect inaccurate responses. In Module 5, Topic 2, Lesson 2, the MATHstream video “The Five-Number Summary” pauses at the 11-minute mark. Students are given a box-and-whisker plot representing math test scores and asked to answer questions about the quartiles, median, maximum, minimum, and range. If students respond inaccurately, the materials provide a short two-minute video that reviews how to calculate the five-number summary and offers redirection. The program then gives students another opportunity to answer the questions before returning to the instructional video, where the teacher reinforces correct responses and explains how to calculate the five-number summary.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	All criteria for guidance met.	2/2
5.5c	The materials do not include an overview of the TEKS process standards incorporated into each lesson.	0/1
—	**TOTAL**	3/4

5.5a – TEKS process standards are integrated appropriately into the materials.

The grade 6 materials integrate the TEKS process standards appropriately. For example, in the Module 2, Topic 3 lesson "Converting Within Systems," students are tasked with converting a variety of real-world measurements from the U.S. Imperial system of measurement to the metric system of measurement, and accurately estimating based on known formula shortcuts, such as one liter being slightly more than one quart. This directly applies the TEKS process standard 6.1A, as students are learning to use and convert measurements in the real world. Grade 6 online platform integrates TEKS process standards into the materials appropriately, as exemplified in Module 3, Topic 1, Lesson 1 of MATHstream and LessonStream, "Comparing and Ordering Rational Numbers." The online materials integrate TEKS process standard 6.2: students apply mathematical process standards to represent and use rational numbers in a variety of forms throughout the lesson. The materials ask students to compare and order a set of rational numbers arising from real-world contexts. Students plot hot and cold temperature readings taken from a variety of places on a thermometer, a vertical number line. Some readings included the record high of 134 degrees Fahrenheit reading in Death Valley, California, and the record low of -80 degrees Fahrenheit reading in Prospect Creek Camp, Alaska.

The materials further incorporate the process standard in Lessons 1, 2, and 3 of the same module and topic. In Lesson 1, "Human Number Line," students are tasked with plotting and reflecting rational numbers to order the numbers on a number line. In Lesson 2, "Magnificent Magnitude," materials highlight that the distance rational numbers are from zero is called an absolute value. In Lesson 3, "What's in a Name?" the materials sort and order rational numbers and locate rational numbers between other rational numbers. In grade 6, the materials integrate the TEKS process standards appropriately into instructional materials to ensure students are developing critical thinking and problem-solving skills along with content knowledge.

The grade 6 materials use multiple representations to describe, represent, and solve problems through multiple opportunities for students to model equivalent expressions using algebra tiles, tables, and graphs, while solving real-world problems. For example, in the Module 4, Topic 1, Lesson 3 MATHstream video "Using Algebra Tiles to Model Equivalent Expressions," students represent real-world situations with algebra, enabling students to think flexibly and justify solutions. The TEKS process standards are integrated appropriately into the grade 6 materials. For example, in Module 4, Topic 3, the materials

provide a MATHia lesson "Problem-Solving Using Multiple Representations in the First Quadrant" has students create tables of values, use and write algebraic expressions, and create graphs to represent real-world problem scenarios. This lesson integrates the TEKS process standard 6.1E, which states that students are expected to create and use representations to organize, record, and communicate mathematical ideas.

The TEKS process standards are integrated appropriately into the grade 6 materials. For example, in Module 4, Topic 4, students learn about financial literacy to include checking accounts, debit cards, credit cards, and what a credit report is through their MATHia lesson "Understanding Financial, College, and Career Options." They also learn about career choices and the potential to earn more income depending on the levels of education and training they obtain after high school. These lessons directly integrate TEKS process standard 6.1A, which states that students are expected to apply mathematics to problems arising in everyday life, society, and the workplace.

5.5b – Materials include a description of how process standards are incorporated and connected throughout the learning pathways.

Grade 6 materials include descriptions of how process standards are incorporated throughout the learning pathways. In Module 3, Topic 2, "Operating with Integers," the Lesson Overview explains, "In this topic, students use number lines and two-color counters to model addition, subtraction, and multiplication of integers before developing rules for determining the sum, difference, and product of signed numbers. Students use patterns and multiplication fact families to develop the rules for the quotients of signed numbers, namely that the same rules apply to quotients as products. Students are expected to make connections between the representations used." Students use representations, such as two-color counters and number lines, to organize mathematical ideas, as prescribed in TEKS 6.1E.

Grade 6 materials include a description of how process standards are integrated at the module level. For example, the Module Overview for Module 5, "Describing Variability of Quantities," states: "Describing Variability in Quantities contains two topics: The Statistical Process and Numerical Summaries of Data. This module introduces students to the study of the field of statistics. The process of doing statistics is different from the process of doing mathematics. Statistics is the study of data and makes sense only in reference to context and to the data collected in that context. Unlike mathematical reasoning, which employs deduction, proof, or mathematical induction, statistical reasoning utilizes inductive reasoning and uncertainty. Mathematical reasoning is used to analyze data, but the interpretation of that analysis is the heart of statistics. Statistics and statistical thinking focus on variability in the values of quantities observed in context."

This overview reflects TEKS 6.1D, which requires students to "...communicate mathematical ideas, reasoning, and their implications using multiple representations, including...diagrams, graphs... as appropriate."

The materials include a TEKS process Standards Integration Table within the *Texas Supplemental Math Overview*. This table provides a summary of how the process standards are embedded across the course and highlights their connections to the content standards.

5.5c – Materials include an overview of the TEKS process standards incorporated into each lesson.

Although the grade 6 materials provide a MATHia table of contents listing content TEKS, they do not include an overview of the TEKS process standard 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

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.1a	All criteria for guidance met.	3/3
6.1b	All criteria for guidance met.	3/3
6.1c	The materials are not designed to require students to make sense of mathematics through multiple opportunities for students to write about math with peers, and/or educators.	2/3
—	**TOTAL**	8/9

6.1a – Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.

Grade 6 online materials provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. In Module 1, Topic 2 of MATHia Adaptive Problem-Solving, "Multiplying Fractions," within the Concept Builder Workspace, "Multiplying by Fractions to Increase or Decrease Quantities," students first watch an animation lesson and learn about increasing, decreasing, or keeping a quantity the same when multiplying by a fraction. Students think mathematically and apply their understanding of the lesson to select the type of fraction necessary to make mathematical statements true, such as the product of four and a positive fraction less than one equals one. The materials aid students in persevering through solving problems with a statement beneath the video, encouraging students to rewatch the video as many times as they need as they work through problem-solving.

The materials also support student perseverance with just-in-time prompts with information for students to consider before a second attempt at answering a question. In the third set of problems, materials allow students to persevere through problem solving by having students click and drag multiplication expressions into different classifications: "less than 7," "equal to 7," or "greater than 7." The materials help students make sense of mathematics during the fourth set of problems by providing visual models for products with fractions, providing a deeper understanding of how multiplying by various fractions, including improper fractions, will result in a product that is less than, equal to, or greater than the original amount.

The grade 6 materials provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. For example, in Module 2, Topic 3, Lesson 1 of MATHstream, "Modeling and Writing Unit Rates," the student learns about unit rates and how they can be used to compare purchases in real-world situations, such as different amounts of laundry detergent

for various prices. Students are given pictures of laundry detergent bottles that vary in size and pricing to compare the cost per fluid ounce of each product. If students need support in thinking mathematically, the product offers hints that help chunk the problem into more digestible steps. These hints and their step-by-step nature allow students to persevere through problem-solving without getting overwhelmed. Comparing a variety of similar products by cost per unit helps students make sense of mathematics in the real world and provides them with a lifelong skill.

The grade 6 materials provide opportunities for students to think mathematically. For example, in the Module 3, Topic 2, Lesson 5 MATHstream video "Signed Fact Families," students find patterns in products of integers, then use the patterns to determine the sign of the product of negative integers. Students use their knowledge of patterns and think mathematically to identify the rules for product signs and complete a drag-and-drop activity to match various integer expressions to the rules.

The grade 6 materials provide opportunities for students to persevere through problem-solving and make sense of mathematics. For example, in the Module 3, Topic 2, Lesson 5 MATHstream video "Multiplying Integers," students have several opportunities to practice representing products of integers using counters and number lines. At the start of the lesson, the educator explains that repeated addition can be used to understand multiplication. Before solving the product for integers, the student is asked to rewrite some repeated addition as a multiplication problem and determine if the product is positive or negative. Because these questions are posed before the explicit lesson, students can make sense of mathematics through productive struggle. Next, the educator uses a graphic organizer with counters, followed by a number line to show multiple ways to represent repeated addition. Using various strategies provides students with methods to persevere through solving problems.

The grade 6 materials provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. For example, in the Module 4, Topic 3, Lesson 1 MATHstream lesson "Independent and Dependent Variables," students think mathematically as the teacher presents a real-world scenario of the number of cookies for a certain number of people attending a party. After explaining what independent and dependent variables are and how they are represented in this scenario, students are given a new real-world problem to make sense of mathematics independently. This time, the scenario describes draining a 200-gallon fish tank at 10 gallons per minute, allowing students to think mathematically and make sense of mathematics. Students then work with multiple problems to identify independent and dependent variables in real-world situations. If students struggle with the questions, they can select the hint button to help guide them through their struggle. If students answer questions incorrectly, the MATHstream video explains the correct answers to help students persevere. Then the MATHstream video continues with new problem-solving opportunities where students can continue to practice and persevere in solving problems.

6.1b – Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.

The grade 6 materials support students in understanding that there are multiple ways to solve problems and complete tasks. For example, in the Module 2, Topic 3, Lesson 1 MATHstream video "Reasoning About Unit Conversions," students learn how to use equations, ratios, and double number lines to convert measurements. The teacher models each strategy before the program allows students to practice each strategy in problem-solving.

The grade 6 materials support students in understanding that there can be multiple ways to solve problems and complete tasks. In Module 3, Topic 2, three different MATHstream lessons are available to develop the concept of adding integers. Lesson 1 uses a football game to model the sum of positive and negative integers. Lesson 2 uses number lines, and Lesson 3 uses two-color counters to address the same concept. By providing three distinct problem-solving approaches to the same mathematical concept, the materials support students in understanding that tasks can be completed in multiple ways.

Grade 6 online materials support students in understanding that there can be multiple ways to solve problems and complete tasks, as exemplified in Module 5, Topic 1, Lesson 2 MATHstream Interactive Videos "Dot Plots & Distributions" and "Stem-and-Leaf Plots." Students learn to create different data displays in the two videos. In "Dot Plots & Distributions," students learn how to make a dot plot with data about the amounts and types of medals won during the 2018 Winter Olympics. In "Stem-and-Leaf Plots," students learn that the stem-and-leaf plot is needed with a larger range of data.

The materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks. The article, “Making Sense of Mathematics,” states that “MATHia and MATHstream help students recognize that there are often multiple valid ways to solve problems, while requiring them to make sense of mathematics through active engagement. Streams and workspaces present tasks in multiple representations, verbal, algebraic, graphical, and numerical, and prompt learners to solve problems using different strategies, compare approaches, and justify their reasoning.”

6.1c – Materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss math with peers and/or educators.

Grade 6 materials provide an article in the Help Center, "Making Sense of Mathematics," that addresses how materials are designed to require students to make sense of mathematics through multiple opportunities to do and discuss math with peers, and/or educators. It details that "[Students] in the same workspace receive similar, but not identical, problems, encouraging student-to-student discussions about strategies rather than just sharing answers."

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	The materials do not support educators in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, justifications, and multiple points of entry.	0/8
6.2b	The materials do not include prompts to support educators in providing explanatory feedback based on anticipated misconceptions.	3/4
—	**TOTAL**	3/12

6.2a – Materials support educators in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, justifications, and multiple points of entry.

While the "Instructional Tools in the Student MATHia Software" Help Center article describes embedded MATHia features that support student learning, these features do not support students nor provide support for educators in guiding students to share and reflect on their problem-solving approaches. The publisher's provided rationale states, "Explore Tools invite students to investigate concepts, discern patterns, and articulate their thinking: ideal for sharing approaches. Animations let students observe and discuss various solution methods visually, encouraging reflection on alternative strategies. Classification Tools require students to justify categorizations, promoting discussion of reasoning pathways. Problem-Solving Tools provide adaptive, individualized support while prompting students to explain their method as they progress. Worked Examples encourage students to compare and critique different solution steps, helping them justify why certain approaches work and identify misconceptions. Together, these instructional tools give educators structured, embedded ways to facilitate student explanation, justification, and reflection, reinforcing the idea that multiple valid approaches exist." However, no support is provided for educators in grade 6 on how to use these features to guide students to share and reflect on their problem-solving approaches, including explanations, arguments, justifications, and multiple points of entry.

The grade 6 materials do not include questions or prompts that educators can use to guide students in reflecting on their problem-solving approaches.

The grade 6 materials do not include a *Teacher's Guide* or *Lesson Implementation Guide* with explanations, arguments, justifications, or multiple points of entry for students to share problem-solving approaches.

6.2b – Materials include prompts and guidance to support educators in providing explanatory feedback based on student responses and anticipated misconceptions.

Grade 6 materials include prompts to support educators in providing explanatory feedback based on student responses. In the Module 5, Topic 2, Lesson 2 MATHstream video "The Five-Number Summary,"

students answer questions about data measurements in a five-number summary from a box-and-whisker plot for points on a math test. If students answer the questions incorrectly, a two-minute video with prompts is provided for support, including, "Remember, the minimum is the lowest grade. The median is the middle grade. The maximum is the highest grade." The teacher labels the vocabulary words on the box-and-whisker visual and gives reminders about calculating the IQR and the range to support students with explanatory feedback without providing answers.

Grade 6 materials include prompts to support educators in providing explanatory feedback based on student responses. In the Module 4, Topic 3, Lesson 3 MATHstream video "Analyzing Relationships in Tables," students learn about continuous vs. discrete quantities and analyzing a table to write an equation. At the 2:30-minute mark in the video, the teacher asks students to answer questions about a given table and a real-world situation. If students answer the questions incorrectly, a 28-second video supports students, guiding their attention to different parts of the table to start writing an equation. The teacher says, "Remember that each row of the table represents the same relationship," providing explanatory feedback, without giving answers.

The materials in grade 6 include prompts and guidance to support educators in providing explanatory feedback based on student responses. In the Module 2, Topic 3, Lesson 1 LessonStream "Using Ratio Reasoning and Unit Analysis to Convert Units," when a student consistently answers unit conversion problems incorrectly, the program immediately provides a video tutorial on unit conversion between meters and feet to help determine which student is taller, a student whose height is given in meters, and another whose height is given in feet. The teacher guides students and explains that it is simpler to "scale up" meters into feet than to "scale down" feet to meters, for students to understand the easiest way to convert between units. Later in the same video, when a student consistently answers questions incorrectly, a 0:51-minute video tutorial is provided with guidance on the unit analysis process, prompting students that the best way to convert between square feet and square yards may be to square each side of the unit conversion for feet to yards first.

The Help Center provides the article "Making Sense of Mathematics," which supports educators in providing explanatory feedback based on anticipated misconceptions. It states that the graphing tools in MATHia can be used to give visual feedback for misconceptions involving graphs.

Grade 6 materials do not include prompts to support educators in providing explanatory feedback based on anticipated misconceptions.