Great Minds PBC

Supplemental English Mathematics, 4
Math Catalyst Texas, Grade 4

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798894176451**	**Digital**	**Static**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	33	0	Flags Not in Report	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	21 out of 23	91%
2. Progress Monitoring	18 out of 20	90%
3. Supports for All Learners	36 out of 36	100%
4. Depth and Coherence of Key Concepts	9 out of 16	56%
5. Balance of Conceptual and Procedural Understanding	37 out of 38	97%
6. Productive Struggle	17 out of 19	89%

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	0
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	All criteria for guidance met.	5/5
1.1b	All criteria for guidance met.	3/3
1.1c	All criteria for guidance met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	14/14

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.

The materials include alignment guides organized by the following concept strands: "Early Numeracy," "Place Value," "Addition," "Subtraction," "Multiplication," "Division," and "Fractions as Numbers." Each strand presents a vertical alignment of concepts from kindergarten through grade 5, demonstrating increasing complexity. The *Strand by Grade Scope and Sequence* document reinforces this vertical progression by stating that the concepts within each strand build upon one another to create a ladder of mathematical understanding, unbound by the constraints of grade-level standards.

Each "Alignment Guide" includes a chart listing the relevant Texas Essential Knowledge and Skills (TEKS) (numbered and defined), "Corresponding Lessons," "Mathematical Process Standards," and English Language Proficiency Standards (ELPS) listening, speaking, reading, and writing competencies.

The "Progression of Mini Lessons" section before each unit provides a chart that portrays the rationale for learning paths across grade levels.

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

The materials include an *Implementation Guide* that outlines how to effectively use the program within a Multi-Tiered System of Supports (MTSS), addressing core instruction, supplemental intervention (Tier 2), and intensive intervention (Tier 3). A chart highlights how "Concept Mini Lessons" align with Tier 2 and

Tier 3 instruction, while "Practice and Application" support enrichment, extension, and skill reinforcement.

The *Implementation Guide* provides a sample schedule with time allotment, possible usage of each component, and teacher and student actions to support effective educator use.

The *Implementation Guide*'s section titled "Tiered Instruction Recommendations and Program Structure and Components" notes that this resource can be flexibly used across various instructional formats—whole-group, small-group, stations, spiral review, and games—making it adaptable to diverse classroom environments and learner needs.

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

The materials include a concept diagnostic for each assessment. The "Concept Diagnostic Assessment" can be used before or during instruction to collect data about a student's current understanding, skills, strengths, and areas for growth. The data collected from this assessment can be used to inform instruction and provide timely intervention. The "Progression Toward Proficiency Rubric" used for scoring each "Concept Diagnostic Assessment" includes the TEKS alignment for each item, along with the "Concept Mini Lesson" objective. The problems in the "Concept Diagnostic Assessment" are sequenced from simple to complex. Questions aligned to each objective are also included to facilitate making instructional decisions about skill entry points based on the data collected from the "Concept Diagnostic Assessment."

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

The *Implementation Guide* includes detailed information on "Concept Internalization." It provides protocols and guidance for unit and lesson internalization and a list of reflective questions for teachers to consider as they work through each such as, "Which objective is a good starting point for small-group instruction?" "What do my students already know?" "What can they already do?" "What do they need support with?"

The "Concept Guides" offer additional tools to support the internalization process. Each guide follows a consistent structure, beginning with a "Materials and Preparation" page that briefly overviews the concept and consolidates required supplies and student materials. Common student misconceptions are addressed, with strategies for prevention or remediation. A "Progress Check" outlines examples of student proficiency and includes guiding questions aligned to each objective. The "Concept Mini Lessons" page introduces four starting points within the unit and provides a visual sequence of the lessons with models.

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

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

The *Implementation Guide* contains a section titled "Guidance for Leaders" that contains questions that equip instructional leaders to proactively support educators in creating a classroom environment conducive to meaningful student engagement, learning, and practice, and effectively implementing the components of *Math Catalyst Texas*.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	Materials do not include detailed lesson plans with learning objectives, or assessment resources aligned with the ELPS.	5/7
1.2b	This guidance is not applicable to the program.	N/A
1.2c	All criteria for guidance met.	2/2
—	**TOTAL**	7/9

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.

Each lesson has a TEKS-aligned learning objective such as "Represent multi-digit whole numbers in unit form and show the value that each digit represents," located in Objective 2.

The "Teacher Guide" allocates approximately 10 minutes for each objective lesson in every mini-lesson. The "Progress Check" section before each unit contains progress checks aligned to TEKS, which can be used before, during, or after lessons, along with rubrics to evaluate proficiency.

The "Concept Guide" for each unit contains a list of teacher and student materials needed for lessons throughout the unit.

The materials do not include assessment resources or learning objectives aligned to the ELPS.

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.

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

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 "Teacher Guide" contains support for families in English and Spanish on the "Family Math/Matemáticas en familia" page. The page begins with a letter to families introducing the concept students will learn and the visuals or models students will encounter. The "Family Math" page for composing, decomposing, and representing numbers includes three guiding questions for families to ask their child such as, "How can you represent each place value unit by using multiplication?" Each question includes a sample response that parents can use to guide discussion or listen for during conversation.

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 met.	2/2
2.1b	All criteria for guidance met.	2/2
2.1c	This is a static program and does not include digital assessments. Materials do not include digital assessments that 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.	Not Scored
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

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

Math Catalyst includes an "Assessment and Data Collection" section in the *Implementation Guide* that defines formative assessments and their purpose of informing instruction, identifying misconceptions, gauging progress, guiding instructional decisions, and helping educators adjust.

The materials include examples of how to utilize different formative assessments such as "Application Activities," "Project Check Tool" (pre- or post-assessment), "Think-Pair-Share (under the application "Activities and Considerations"), "Read-Draw-Write tool" (under the application "Activities, Structures, and Considerations"), and "Pause and Monitor Tool."

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

The materials use "Progress Checks" as their main instructional assessment. The "Progression Towards Proficiency Rubric" supports educators in determining proficiency for each task on the assessment. Students score either "Proficient," "Partially Proficient," or "Not Yet Proficient." The materials provide detailed guidance on how to look for and correct answers for each task.

Each "Progress Check" includes "About the Progress Check Tool," "Using the Progress Check Tool to Inform Instruction," and a "Teacher Tip" section. The "Progress Check" includes clear instructions for the teacher and students to follow. For example, on the "Multiplication of Two-Digit Numbers by Two-Digit

Numbers" progress check, question 3 states, "Multiply. Show your work. Circle the letter of the correct answer."

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.

The materials neither include digital assessments, nor offer printable versions or accommodations such as text-to-speech, content and language supports, or calculators that educators can enable or disable to support individual students.

Although the *Implementation Guide* describes assessment and data collection through tools like "Analyze Student Progress," the "Observational Data Recording Sheet," and the "Progress Check Tool," there are no digital assessments included in the program. The *Navigation Guide* states, "There are no digital components to this curriculum." Therefore, digital assessments with printable versions or accommodations are not available to educators.

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

Materials contain a "Concept Diagnostic Assessment" for each concept.

The problems in the "Concept Diagnostic Assessment" are sequenced from simple to complex. Item types on the assessments include multiple choice, number lines, place value charts, cards, counters to arrange, fill in the blank, and open response. Students are encouraged to show their work to provide additional insight about their thinking to the teacher.

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

The materials include a variety of TEKS-aligned formative assessments such as quick checks, quizzes, exit tickets, or embedded tasks within the lesson.

Quick checks at the end of each objective assess student mastery and include varying levels of complexity. For example, in grade 4, formative assessments include drawing a strip diagram to find equivalent fractions, completing an equation using multiplication to find an equivalent fraction, and application questions where students answer word problems and apply their knowledge in a game setting. They can also apply and analyze a real-world situation with "Solve a Task."

The materials include interactive item types within the "Progress Check" tool, which include plot the point, order numbers, fill in the blank, and multiple choice.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	Materials do not include instructional assessments that include a rationale for each correct and incorrect response.	1/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	All criteria for guidance met.	2/2
2.2e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	6/8

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

Materials include informal and formative instructional assessments, including "Progress Checks." These assessments contain numerical scoring information and guidance for interpreting student performance, including rating students as "Not Yet Proficient," "Partially Proficient," and "Proficient" for each item included in the assessments.

Materials do not include a rationale for each correct or incorrect response.

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

The materials provide guidance, including tasks and activities related to student performance on the "Progress Check." For example, in grade 4, in "Compose, Decompose, and Represent Decimals to the Hundredths," the "Progress Check" provides teachers with questions to guide students on a path. The materials ask questions such as, "Can the student represent decimals in unit form and show the value that each digit represents?" If so, the teacher would guide students to Objective 2.

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

The materials include an "Observational Data Recording Sheet" that allows teachers to record individual students' anecdotal notes about each objective. The materials recommend that teachers use it often to inform their understanding of student performance.

The materials include a "Pause and Monitor Tool," where students monitor their progress and growth by shading in progress such as "Getting started," "On my way," or "I got it!" Students use this tracker throughout the concept or on a specific objective.

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.

The materials provide prompts to support educators in checking for understanding throughout the lesson. For example, "Subtract fractions with like denominators by using unit fraction tiles and unit form," Objective 1, there are prompts for teachers to conduct frequent checks for understanding throughout the lesson such as "Can the student identify the fractional unit of the total and the known part?" "Can the student represent the expression by using unit fraction tiles?" "Can the student find the difference?"

During the lessons, the materials provide guidance to support educators in conducting frequent checks for understanding through "Teacher Tips." For example, after students represent the number in unit form, guidance states, "Students can use unit form to represent a number in multiple ways. Consider having students decompose using place value in other ways."

2.2e – If designed to be adaptive, materials provide 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 adaptive.

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	All criteria for guidance met.	4/4
3.1c	All criteria for guidance met.	2/2
3.1d	Materials do not have a digital component therefore, they do not include digital materials include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.	Not Scored
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	9/9

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.

The materials include explicit guidance for educators when students need support in each "Concept Mini Lesson." For example, in "Adding within 1,000," students start in one of four lessons based on whether they need support using concrete models and relating concrete models to a written recording (Objective 1), using place value drawings to represent addition within 1,000,000 with up to one composition and relating the drawing to a written recording (Objective 2), using place value drawings to represent addition within 1,000,000 with up to two compositions and relating the drawings to a written recording (Objective 3), or adding within 1,000,000 by using the standard algorithm (Objective 4)."

In the "Concept Guide" in the "Division Unit," students start in one of four lessons based on whether they need support using place value disks to divide two-digit numbers by one-digit numbers (Objective 1), representing division with place value drawings and writing equations to represent division (Objective 2), representing division with an area model and writing equations to represent division (Objective 3), or dividing multi-digit numbers by one-digit numbers by using the standard algorithm (objective 4)."

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 materials include explicit educator guidance for language support in each unit's "Language Support" section of the "Concept Guide." For example, in grade 4, "Mini Lesson: Represent Multi-Digit Whole

Numbers in Standard Form and Expanded Notation, Objective 3," the materials provide educator guidance on the term *period*. They explain that the term has multiple meanings, but the mini lesson would refer to a group of three place value units. It also suggests highlighting different meanings and uses of the word *period*.

In the "Alignment Guide" for "Divide Multi-Digit Numbers by One-Digit Numbers," additional "Embedded Supports for Language Proficiency" are described, such as "Beginning: The Language Support margin note in Concept Mini Lesson Objective 1 suggests making an anchor chart to support students in recalling what the terms divisor and quotient represent." These descriptions mirror the "Language Support" tips embedded throughout the mini lessons to support academic vocabulary and unfamiliar references in math lessons.

The "Concept Guide" includes "Key Terminology" cards, which include student-friendly definitions and visual representations that provide a flexible opportunity for pre-teaching and reinforcing academic mathematical language.

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 include explicit guidance for enrichment and extension activities for students with proficiency in grade-level skills. For example, in the "Concept Guide" in "Round to the Nearest Ten and Hundred," under the heading and chart "Activities, Structures, and Considerations," explicit teacher guidance is given on utilizing the enrichment and extension activities in this component. Students work on these activities independently or through partner work. Material and teacher tips help provide more teacher guidance to assist students who have demonstrated grade-level proficiency.

Each unit has an "Application" section that includes explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level content and skills. Each unit has "Solve a Task" and "Partner Games" designed to extend and enrich the content.

The *Strand by Grade Scope and Sequence* document provides teachers with a clear view of how concepts are built across grades, enabling them to identify opportunities for extending learning beyond the current grade level. Additionally, the "Start here if students can . . ." statements in the "Progression of Mini Lesson Objectives" chart for the above-grade-level skill can point the teacher to the appropriate enrichment or extension activity for the student.

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.

Digital materials are not interactive for students; accommodations are not evident in the materials available. These materials are static and do not include accommodations like text-to-speech, content and language supports, or calculators that educators can enable or disable to support 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.

The materials include educator guidance on how to allow students to demonstrate understanding through various formats. For example, in the "Concept Guide" of "Subtract Fractions with Like Denominators," students use tiles to subtract six-tenths from eight-tenths, draw and solve using a number bond, and demonstrate the subtraction on a number line.

The materials offer supports for students to demonstrate understanding of mathematical concepts in various ways—for example, read-and-draw tools, sharing work with a partner, using a "Solve a Problem" recording page, playing a game with teacher-generated subtraction match cards, and using highlighters to annotate information in printed material.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	5/5
3.2b	All criteria for guidance met.	2/2
3.2c	All criteria for guidance met.	3/3
3.2d	All criteria for guidance met.	2/2
3.2e	All criteria for guidance met.	2/2
—	**TOTAL**	14/14

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.

Materials include explicit prompts and guidance for educators to build knowledge by activating prior knowledge and anchoring big ideas. In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students are directed to use area models, partial products, and the standard algorithm to represent multiplication. Teachers activate prior knowledge of decomposing numbers and finding area when the materials state, "Let's decompose and label the area model," and, "To find the area of the whole rectangle, we can find the area of the smaller rectangles and add them together." By decomposing numbers and multiplying by 10s and 100s to find the smaller areas, students are using partial products, a big idea from a previous lesson on multiplication. This also enables students to see key patterns and relationships within multiplication.

In "Divide Multi-Digit Numbers by One-Digit Numbers," students use place value disks, place value charts, area models with compatible numbers, and the standard algorithm to represent division. All these representations have been used in previous lessons in multiplication and when students were introduced to division in grade 3.

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

Materials include educator guidance for effective lesson delivery and facilitation using various instructional approaches. In "Representations of Multiplication," students use tiles, arrays, and number lines to represent multiplication, an opportunity for hands-on exploration. At the end of Objective 1, "Plan Future Practice" instructs educators to use the provided practice page for students needing additional support. The guidance states to "Structure the additional practice strategically to allow for teacher support or peer support."

In the "Application" part of "Representations of Multiplication," students have the opportunity to practice real-world problem-solving with questions about Miss Wong's class. In the "Solve a Task" activity, students also justify their thinking with "Show how you know" and "How do you know."

In the "Whole Numbers Within 1,000,000" unit, students use manipulatives to add numbers to 1,000,000. The disks and place value charts allow hands-on exploration before using the standard algorithm. Additionally, this concept connects to real-world scenarios in the "Application" section of the "Concept Mini-Lesson."

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

Educators use the "Progress Tool" and rubric to determine the objective lesson students would benefit from starting on, based on the student's level of proficiency on the specified TEKS. In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students would begin on Objective 3 if they "need support multiplying three- and four-digit numbers by one-digit numbers by using the standard algorithm." In Objective 3, guided practice involves creating partial products that lead to the standard algorithm. Students then complete an independent practice page. After students reach proficiency, they work independently or collaboratively on "Application" activities.

The *Implementation Guide* includes guidance that "Progress Checks" can be used as a pre- and post-assessment or as a small-group assignment. Teachers use "Concept Mini-Lessons" for small groups with direct instruction. Students can complete "Practice and Application" independently, with a partner, or during small-group time.

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

Materials include enrichment and extension methods that support various forms of engagement and guidance to support educators' effective implementation. In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students solve tasks such as "Solve a Problem," "Play a Game," and "Solve a Task." In "Solve a Problem," students work independently or with a partner. Teacher guidance includes "consider inviting students to share their work with a partner; students compare solution paths and make connections between different representations." In "Solve a Task," teacher guidance includes scaffolding such as "consider providing grid paper for students to draw area models on or to align place value units when solving using the standard algorithm."

In the "Application" section of the "Add whole numbers within 1,000,000" unit, a combination of three activities is provided that can be utilized independently or with a partner. The purpose of each task is to "engage students in applying their understanding of adding whole numbers within 1,000,000."

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

Materials include prompts and guidance to support educators in providing timely feedback during lesson delivery. In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students make connections between area and multiplication. In Objective 1, students are led to break down a factor into expanded form and multiply each portion by the other factor. The teacher asks, "What is the area of the whole rectangle? How do you know?" This gives the teacher opportunities to check for understanding, and students to explain their thinking.

In "Divide Multi-Digit Numbers by One-Digit Numbers," the teacher is leading the group in dividing 8,416 and 4. Students have moved from using place value disks to a pictorial model on a place value chart. In Objective 2, the materials provide prompts such as, "How many thousands will be in each group? How do you know?" This gives the teacher opportunities to check for understanding, and students to explain their thinking.

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	All criteria for guidance met.	4/4
3.3b	This guidance is not applicable to the program.	N/A
3.3c	All criteria for guidance met.	1/1
3.3d	All criteria for guidance met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	13/13

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.

The materials include educator guidance on providing and incorporating linguistic accommodations for all levels of language proficiency. The "Alignment Guide" for each concept includes alignment to the ELPS and highlights embedded supports for different levels of language proficiency. For example, in grade 4, "Multiplication of Multi-Digit Numbers by One-Digit Numbers," the "Alignment Guide" contains descriptors that account for accommodations for all levels of language proficiency—including pre-production, beginning, intermediate, high-intermediate, and advanced—such as creating anchor charts and turn-and-talk opportunities for speaking practice.

The grade 4 "Alignment Guide" for "Multiplication of Multi-Digit Numbers by One-Digit Numbers" addresses listening, speaking, reading, and writing skills at all ELPS levels. It also includes strategies such as using concrete manipulatives and pictorial representations to students in playing games, using sentence stems to describe mathematical procedures, and offering turn-and-talk opportunities to discuss the mathematical plan.

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 to the program because it is not designed to be adaptive.

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

The materials include a section in the *Implementation Guide* dedicated to specifically supporting emergent bilingual students and guidance for implementation to build vocabulary, comprehension, and knowledge. As stated in the *Implementation Guide*, "To support language output, teachers are encouraged to leverage the elements referenced above through strategically grouping students based on varied levels of mathematical proficiency or varied levels of English language proficiency. Teachers are also encouraged to complement any of these groupings by pairing students who speak the same language and encouraging them to use their home language alongside English to make sense of the directions and the mathematics." Further guidance states, "To support emergent bilingual students in making cross-linguistic connections through written discourse, teachers are encouraged to create cross-linguistic connections anchor charts. The chart should include terminology that is related to the current concept in the student's home language, the same terminology in English, and images to support understanding."

The *Implementation Guide* includes a section called "Using Math Catalyst in State-Approved Bilingual/ESL Programs." This guidance outlines how the program aligns with various instructional models, including dual-language one-way and two-way approaches, and it offers strategies to support emergent bilingual students in building both language skills and math understanding.

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 include embedded guidance to support emergent bilinguals. "Language Supports" embedded in the "Concept Mini Lessons" provide 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. In "Compose, Decompose, and Represent Multi-Digit Numbers," Objective 1 provides "Language Support" that states, "Consider providing a word bank to support student discussions. Include words and phrases such as *compose*, *decompose*, *place value units*, *value*, and *represent*." This supports students when they are encouraged to turn and talk with their peers. In Objective 3, the "Language Support" reminds educators that the term *period* has multiple meanings and to consider highlighting the word *period* in different uses and meanings to support understanding how the term is used in place value units. In Objective 4, the "Language Support" suggests creating an anchor chart to support students in writing and spelling numbers in word form.

In "Represent and Generate Equivalent Fractions Greater Than 1," Objective 1 contains a "Language Support" that suggests providing a word bank with words to support student discussion to include "*partition*, *locate*, *fractional unit*, *equivalent*, and *same location*." In Objective 3, the "Language Support" states, "Support understanding of decomposing a mixed number with additional explanation and a

visual. Provide *break apart* as an alternative to *decompose*. Create a visual by labeling the parts of a mixed number as a whole number and a fraction."

The "Concept Guide" includes "Key Terminology" cards, which include student-friendly definitions and visual representations that provide a flexible opportunity for pre-teaching and reinforcing academic mathematical language.

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	Materials do not include questions and tasks, including enrichment and extension materials, that increase in rigor and complexity, leading to above-grade-level proficiency in the mathematics TEKS.	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.

Student practice includes multiplying two-digit numbers by two-digit numbers, progressing from area models to partial products, and finally using the standard algorithm in the "Concept Mini Lesson:" "Multiplying two-digit numbers by two-digit numbers."

The materials use the "Read-Draw-Write Tool" in the application portion of "Multiplying two-digit numbers by two-digit numbers" to allow students to make sense of problems, choose and apply mathematical strategies, and solve problems.

Students are required to demonstrate depth of understanding aligned to the TEKS in the "Application" components and "Progress Check" tool for "Multiplying two-digit numbers by two-digit numbers."

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.

Each "Concept Mini Lesson" breaks up learning into learning objectives that increase in rigor and complexity. For example, in the "Multiplication of two-digit numbers by two-digit numbers" lessons, Objective 1 begins with students multiplying two-digit by two-digit multiples of 10 using area model. In Objective 2, students multiply two-digit by two-digit numbers using area model and vertical form. Objective 3 sees students progress to using vertical form and four partial products. Objective 4 students solve two-digit by one-digit multiplication using standard algorithms.

Enrichment and extension tasks are embedded rather than offered separately. For example, students engage in enrichment through application activities.

The materials do not include questions and tasks that increase in rigor and complexity, leading 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	Materials do not demonstrate coherence vertically across concepts and grade bands, including connections from grade K–6, by connecting patterns, big ideas, and relationships.	0/1
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	5/6

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

The materials demonstrate coherence across concepts horizontally.

For example, in grade 4, students will connect ideas of subtracting with regrouping using place value understanding, then apply that to subtraction of decimals to the hundredths, and finally apply it to subtraction of fractions.

4.2b – Materials demonstrate coherence vertically across concepts and grade bands, including connections from grade K–6, by connecting patterns, big ideas, and relationships.

Materials do not demonstrate coherence vertically, including connections up to grade 6, by connecting patterns, big ideas, and relationships.

The materials do provide an overview of progression in the *Strand by Grade Scope* and Sequence.

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.

Materials demonstrate coherence of concepts and procedures within conceptual units. In "Compose, Decompose, and Represent Decimals to Hundredths," students are consistently referred to a place value chart and build on the concept of place value units.

In grade 4, lessons connect mathematical concepts to be learned at the same grade level when students multiply multi-digit numbers by one-digit numbers. Coherence begins with arrays that connect to area models, that further connect to vertical form, then the standard algorithm.

In "Multiplication of Two-Digit Numbers by Two-Digit Numbers," students progress from using area models to partial products and the standard algorithm.

In the "Teacher Tip" of "Representations of Non-Unit Fractions," Objective 2, the teacher is guided to activate students' prior knowledge of unit fractions to understand non-unit fractions. This encourages students to draw on their previous understanding of fractions as a foundation for engaging with new fraction concepts in the lesson.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	Materials do not include spaced retrieval opportunities with previously learned skills and concepts across learning pathways.	0/2
4.3b	Materials do not provide interleaved practice opportunities with previously learned skills and concepts across learning pathways.	0/2
—	**TOTAL**	0/4

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

Materials do not provide spaced retrieval opportunities with previously learned skills and concepts across learning pathways. The materials do not review previously learned skills or concepts across learning pathways and focus only on current learning.

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

The materials do not provide interleaved practice opportunities, as the activities and interventions provided focus on solo objectives without addressing interleaved topics and skills.

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 models and representations for mathematical concepts and situations.

The materials include questions and tasks that prompt students to interpret, analyze, and evaluate models and representations. For example, in "Add Whole Numbers within 1,000,000," students use place value disks to find the total of 161,413 and 50,232 while interpreting the reasonableness of the total within each place value as they compare the total to the representation of vertical form. In another lesson, students draw dots in a place value chart, analyzing the idea of regrouping when more than nine are in a column. Students evaluate whether they have a larger unit available or need to stay in the same column as they regroup across the place value chart. Students are asked, "How can you show both addends with your drawing?"

In "Divide Multi-Digit Numbers by One-Digit Numbers," students use place value disks, interpret how to make two groups from eight tens, and analyze, "Are there any tens remaining?" Students then draw their models and evaluate what to do when the remaining parts are left and how to move to the next place value such as, "Can you equally distribute the place value units to each group?"

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

The materials provide opportunities for students to create concrete and pictorial models to represent mathematical situations. For example, in "Add Whole Numbers within 1,000,000," students use place value disks to add two numbers. In another lesson, students move to pictorial representations of the place value chart and disks when adding.

In "Divide Multi-Digit Numbers by One-Digit Numbers," students start by modeling division with place value disks. In another lesson, students draw models on place value charts to divide.

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

The materials provide opportunities for students to apply conceptual understanding to new problem-solving situations and contexts. For example, in the "Concept Guide" for "Place Value Adding," students extend their understanding of adding whole numbers within 1,000,000 by solving problems in real-life contexts. For example, students solve the following problem using a visual aid/table of the number of people attending a sporting event: "How many people in total attend games 1 and 3?"

Students extend their understanding of equivalent fractions by solving problems in real-life contexts. For example, students solve the following problem: "James and Carla pour water into a beaker. James says the liquid volume is exactly 3/5 liters. Carla measures the liquid volume by using tenths of a liter. What does Carla say the liquid volume is?"

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.

The materials provide tasks, including fluency-building games designed to build automaticity and fluency with composing, decomposing, and place value representations of numbers. In the "Application" section, "Play a Game: Three in a Row" (a component of the "Place Value Compose, Decompose Represent" unit), students work with a partner to play a game involving writing multi-digit numbers. Players take turns choosing a space on the game board and writing the number in word form or expanded form. They check each other's work and agree or disagree, and if there's a mistake, they fix it together. This frequent, quick practice helps build student fluency and automaticity with representing numbers.

In the "Application" section of the "Divide Multi-Digit Numbers by One-Digit Numbers with Remainders" unit, the "Play a Game" materials provide a task designed to build automaticity and fluency as they use number cards to create division problems and race to divide and find remainders.

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

In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students use the area model to solve a multi-digit by one-digit multiplication problem. They use the same problem in Objective 1 to practice the distributive property, being able to check the accuracy with the area model product. In the next objective lesson, students connect the area model and vertical form. Students use what strategy works best for them while comparing partial products between the area model and vertical form.

In "Divide Multi-Digit Numbers by One-Digit Numbers," students use place value disks to distribute and regroup as needed. In later lessons, students find compatible numbers and divide using an area model. Students use drawings of place value disks and a place value chart; however, it is to compare the partial quotients to the standard algorithm. This allows students to practice a more efficient strategy while checking for accuracy using a less efficient—but familiar—method.

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

Materials provide opportunities for students to evaluate models and strategies for efficiency, flexibility, and accuracy. In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students use the area model to solve a multi-digit by one-digit multiplication problem. They use the same problem in Objective 1 to practice the distributive property, being able to check the accuracy with the area model product. In the next objective lesson, students connect the area model and vertical form, using the same partial products between strategies to gauge accuracy and efficiency.

In the "Represent Equivalent Fractions" unit, students are asked to use strip diagrams and number lines to represent equivalent fractions. Students then analyze the visual representation. There is a number line and a strip diagram, providing flexibility and efficiency in accurately analyzing and solving the problem.

5.2d – Materials contain guidance to support students in selecting increasingly efficient approaches to solve mathematics problems.

The materials provide guidance to support students in more efficient approaches to solving mathematical problems. In "Multiplication of Multi-Digit Numbers by One-Digit Numbers," students are led through a series of strategies that break down the concept of multiplication to standard algorithm. Students start with the area model and the distributive property and move to vertical form with partial products. Within each objective lesson, the materials guide students to use more efficient strategies to solve mathematical problems.

In "Divide Multi-Digit Numbers by One-Digit Numbers," students are guided to more efficient approaches through the objective lessons. In Objective 1, students use place value disks to distribute and divide. In Objective 2, students use place value charts and their drawings to distribute the dividend. In Objectives 3 and 4, students find compatible numbers to divide using the area model, and then proceed to the most efficient approach to division using the standard algorithm.

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	All criteria for guidance met.	6/6
—	**TOTAL**	11/11

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

The *Implementation Guide* provides information on the "Balance of Conceptual Understanding and Procedural Fluency." This informative guidance explains that, "The objectives in Concept Mini Lessons progress in complexity and provide opportunities for students to develop conceptual understanding and procedural fluency. The Practice component helps students solidify their conceptual understanding and procedural skills."

In grade 4, while learning about adding fractions with like denominators, the materials include explicit guidance on the link between using fraction tiles to represent unit form, then number lines, and finally, properties of operations. A specific guidance example in the "Teacher Tip" in "Add fractions with like denominators using fraction tiles," Objective 1, states: "This mini lesson is intentionally sequenced to help students avoid the common error of adding the denominators. Writing equations using unit form first, followed by using fraction form and modeling with unit fraction tiles, enables students to see that the units do not change when adding fractions with like units."

In the "Progression of Mini Lesson Objectives" for the "Multiplication" unit, the materials state how students move from multiplying using an area model, vertical form, partial products, and, finally, standard algorithm.

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

The materials provide opportunities for students to engage with concrete models, pictorial representations, and abstract models throughout the "Concept Mini Lessons." In "Compose, Decompose, and Represent Multi-Digit Numbers," students use place value disks to compose and decompose numbers into a place value chart in Objective 1. In Objective 2, students use the pictorial representation of the place value to write numbers in unit form.

In "Divide Multi-Digit Numbers by One-Digit Numbers with Remainders," students start Objective 1 with cubes to divide numbers into equal groups. By Objective 3, students use a place value chart and divide with a pictorial representation. In Objective 4, students use a standard algorithm.

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.

In "Compose, Decompose, and Represent Multi-Digit Numbers," students use place value disks to review the idea of base ten numbers. In Objective 1, students transition to pictorial representations with a place value chart. In Objective 3, students can use a place value chart but transition to representing numbers in expanded notation.

In "Divide Multi-Digit Numbers by One-Digit Numbers with Remainders," students use counters to divide 11 into two equal groups. In Objective 2, students transition to strip diagrams, partitioning the strip diagram, and leaving space for a remainder. In Objective 3, students transition to pictorial representations, using a place value chart to divide and regroup when needed. In Objective 4, students transition to an abstract concept with a standard algorithm.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	1/1
5.4b	All criteria for guidance met.	2/2
5.4c	All criteria for guidance met.	1/1
5.4d	All criteria for guidance met.	2/2
5.4e	All criteria for guidance met.	2/2
—	**TOTAL**	8/8

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

Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, or other language strategies. In the "Representations of Multiplication" in the "Teacher Guide," students use manipulatives and eventually pictures to create equal groups to represent multiplication as repeated addition. Students use vocabulary related to multiplication such as *equal*, *expression*, *repeated addition*, *array*, *rows*, *columns*, *total*, and *factors*.

In the "Teacher Guide" under "Multiplication: Multiplication of Multi-Digit Numbers by One-Digit Number," Objective 1, students multiply multi-digit numbers by one-digit numbers using area models (a visual) and partial products. Materials prompt teachers to provide students with sentence frames to support student discussion: "Consider providing sentence frames to support students as they discuss how to use an area model to multiply, such as, 'We can decompose into_____,' 'We can use_____ to find the partial products,' 'We can add_____ to find the product.'"

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.

The "Teacher Guide" for a lesson on "Multiplying Multi-Digit Numbers by One-Digit Numbers by Using Area Models and Partial Product" includes embedded educator guidance to scaffold and support students' use of academic mathematical vocabulary in context when communicating with peers and educators. Objective 1 states, "Consider providing sentence frames to support students as they discuss how to use an area model to multiply, such as, 'We can decompose _____ into_____.' 'We can use _____ to find the partial products.' 'We can use _____ to find the product.'"

In the "Teacher Guide" under "Multiplication of Two-Digit Numbers by Two-Digit Numbers," scaffolding is suggested in a "Language Support" to provide sentence frames to support students as they explain their calculations in Objective 3. The sentence frames state, "First, we multiplied __ ones by __ ones. Next, we

multiplied __ by __. Then, we multiplied __ by __. Finally, we multiplied __ by __. We added the partial products and got __."

The "Concept Guide" includes "Key Terminology" cards, which include student-friendly definitions and visual representations that provide a flexible opportunity for pre-teaching and reinforcing academic mathematical language, as well as extending students' use of academic 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.

Materials include embedded guidance to support student mathematical language and vocabulary application. In the "Teacher Guide" under "Subtract Decimals to the Hundredths," a turn-and-talk is suggested in Objective 2. Students discuss subtracting decimals using mathematical language by drawing on the place value chart and recording in vertical form. During discussions, students use vocabulary words such as *tenths*, *hundredths*, *vertical form*, *minus*, *equal to*, *compose*, *decompose*, *difference*, and *rename*.

In the "Teacher Guide" under "Multiplication; Multiplication of Two-Digit Numbers by Two-Digit Numbers," the Objective 3-minute lesson invites students to turn and talk about how they used place value and partial products to multiply.

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

Materials provide guidance that allows students to hear and refine the use of math language with peers. In "Subtract Decimals to the Hundredths," turn-and-talk is suggested in Objective 2. Students discuss subtracting decimals using mathematical language by drawing on the place value chart and recording in vertical form. The materials also include guidance for students to advance and refine their thinking in discourse with questions such as, "Do you need to decompose a unit to subtract?" and "How can you record your work and the unknown part in the vertical form?"

In the "Teacher Guide" under "Fractions as Numbers: Represent and Generate Equivalent Fractions Greater Than 1," Objective 4, the materials guide the teacher to, "Invite students to turn and talk about how they can find equivalent mixed numbers by using multiplication."

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 materials provide one exemplary response to the question and tasks. For example, in the "Teacher Guide" under "Add Fractions with Like Denominators," Objective 1, questions with exemplar responses

include, "How are the equations with fractional units similar to the whole number equations?" (The parts are added to make the total; they both show 2 units + 4 units = 6 units.)

In the "Teacher Guide" under "Subtract Decimals to the Hundredths," Objective 3, the materials include questions such as, "10 hundredths is more than 0 hundredths, so we are ready to subtract the hundredths. Are we ready to subtract the tenths? How do you know?" Exemplar student responses include, "Yes, we are ready to subtract the tenths. There are 3 tenths, and we do not need to take away any tenths." The "Concept Mini Lesson" component features visual examples of sample student work, providing teachers with clear expectations for what proficient solutions may look like. The "Analyze Student Progress" section of every "Concept Mini Lesson" offers "Questions to Advance Student Thinking." These prompts help teachers interpret a variety of student strategies, identify misconceptions, and provide scaffolded guidance to support students in correcting inaccuracies. Beyond the "Concept Mini Lessons," the "Addressing Student Misconceptions" section of each "Concept Guide" provides explicit guidance for responding to common misunderstandings, ensuring that teachers have actionable strategies to redirect inaccurate responses.

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	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.

TEKS process standards are integrated into the materials. In "Subtract Decimals to the Hundredths," students solve a task in "Application" (process) where they subtract decimals (content) concerning inches of rainfall (process) while using a place value chart (process) to organize numbers within like units.

In "Add Decimals to the Hundredths," students solve a problem in "Application" (process) where they add decimals or money (content) while using a "Read-Draw-Write Tool" or grid paper (process) to organize the problem or align numbers.

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

The materials describe how process standards are incorporated and connected throughout the learning pathways. The *Implementation Guide* includes a paragraph detailing how the process standards are woven into different components of the program. In "Subtract Decimals to the Hundredths," the *Implementation Guide* explains that students will use place value charts and drawings to solve equations.

The *Implementation Guide* explains in "Add Decimals to the Hundredths" that students will use place value charts and drawings to solve equations.

The "Alignment Guide" for each math strand lists the process standards incorporated in that unit. For example, the "Alignment Guide" lists the following process standards in the multiplication pathway: "1A, 1C, 1D, 1E, 1F, 1G." The "Alignment Guide" lists the process standards for each math strand and how they connect throughout the pathway.

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

Materials do not include an overview of the TEKS process standards incorporated into each lesson. The materials include an "Alignment Guide" for each unit, which includes a section listing the process standards but does not highlight which process standards fit 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	All criteria for guidance met.	3/3
—	**TOTAL**	9/9

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

In the "Teacher Guide" under "Add Whole Numbers within 1,000,000," each "Concept Mini Lesson" objective increases in difficulty, allowing students to build confidence before tackling more complex problems.

Questions provide opportunities for students to think mathematically and make sense of mathematics such as "How can you show both addends with your disks?," "Can you make a larger unit?" "How?" "How can you show making a new unit with your disks?," "How can you record your work and the total in vertical form?"

In the "Teacher Guide" under "Fractions as Numbers: Represent and Generate Equivalent Fractions Greater Than 1," students solve a task involving representing and generating equivalent fractions greater than one. Students use the provided information and image to solve three problems. The materials instruct teachers that students must think critically to determine the solution.

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

In the "Teacher Guide" under "Addition of Whole Numbers Within 1,000,000," the "Solve a Problem" activity in the "Application" section supports students in understanding, explaining, and justifying the ways to solve a problem by asking, "Consider inviting students to share their work with a partner. Students can compare solution paths and make connections between different representations."

In "Add Fractions with Unlike Denominators," Objective 3, the materials support students in understanding, explaining, and justifying that there can be multiple ways to add fractions. The materials guide the teacher to state, "Let us use the associative property to find the sum of 1/8, 4/8, and 4/8 another way." Students explore different ways and then share them with the class. After students share,

they are presented with the question, "Both ways resulted in the same sum. Which way do you prefer? Why?" and students justify their thinking.

In "Subtract Fractions from Whole Numbers," Objective 3, students "choose a strategy and work with a partner to find 8/8–2/8." Students are encouraged to choose from different strategies, such as drawing a number line or thinking about the problem as addition with an unknown.

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.

In the "Teacher Guide" under "Addition of Whole Numbers Within 1,000,000," application activities provide opportunities for students to do, write about, and discuss math with peers on problem-solving tasks. In "Solve a Problem," students share their work with peers to discuss the different solution paths and make connections between different representations. Students use the "Read-Draw-Write Tool" to organize and reflect on their problem-solving.

In "Multiplication—Multiplication of Multi-Digit Numbers by One-Digit Numbers," the materials require students to do math when the students use an area model to decompose the length of 532 and label the parts 500, 30, and 2. Students then find the area of the larger rectangle by adding the areas of the smaller rectangles within. Students write about math in the "Read-Draw-Write" section. They write number sentences or equations to represent their thinking to find how many pencils Mr. Lopez has in seven boxes of pencils, and write a complete sentence to answer the question.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	6/6
6.2b	Materials do not include prompts, and guidance to support educators in providing explanatory feedback based on student responses.	2/4
—	**TOTAL**	8/10

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

Materials support educators in guiding students to share and reflect on their problem-solving approaches with explanations, arguments, and justifications. In the "Teacher Guide" under "Add Whole Numbers Within 1,000,000," students work with partners to compare solution paths and make connections, explaining their thinking and justifying their response in the application "Solve a Problem."

In "Add Whole Numbers Within 1,000,000" for "Solve a Task," students answer the question, "Robin says that the total number of people who attend games 3 and 4 is greater than the total number of people who attend games 1 and 2. Do you agree? Why?" Students determine the solution and justify their thinking in writing.

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

Materials include prompts to support educators in providing feedback for anticipated misconceptions. In the "Teacher Guide" under "Add decimals to the hundredths," in the "Addressing Student Misconceptions" section, prompts support educators for possible misconceptions such as, "What is the largest unit in the first addend? Write the first addend in vertical form. What is the largest unit in the second addend?"

Materials include guidance on how to support educators in anticipated misconceptions. In the "Teacher Guide" under "Division: Divide Multi-Digit Numbers by One-Digit Numbers with Remainders," prompts are given to support educators for possible misconceptions to clear up misconceptions such as, "Relate the quotient to the number of equal groups or the size of each equal group and the remainder to the number remaining that did not fit into an equal group. Then have students locate the quotient and remainder in their equations and standard algorithm."

The materials do not include prompts or guidance for explanatory feedback based on student responses. The materials include "Teacher Tips," which include various types of support. However, the tips do not include prompts or guidance that support the educator in providing explanatory feedback based on student responses.