

Zearn

Supplemental English Mathematics, 2

Zearn Math for Texas, Grade 2

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	9798888683897	Both Print and Digital	Adaptive

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	148	0	Flags Addressed	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	19 out of 21	90%
2. Progress Monitoring	15 out of 19	79%
3. Supports for All Learners	33 out of 37	89%
4. Depth and Coherence of Key Concepts	16 out of 16	100%
5. Balance of Conceptual and Procedural Understanding	38 out of 38	100%
6. Productive Struggle	19 out of 19	100%

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	4	0	0
2. Alignment with Public Education's Constitutional Goal	0	0	0
3. Parental Rights and Responsibilities	1	0	0
4. Prohibition on Forced Political Activity	3	0	0
5. Protecting Children's Innocence	3	0	0
6. Promoting Sexual Risk Avoidance	0	0	0
7. Compliance with the Children's Internet Protection Act (CIPA)	1	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	Materials do not include diagnostic assessments with an accompanying TEKS correlation guide, and recommended skill entry points.	0/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	TOTAL	12/14

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 grade 2 "Course Guide" includes three detailed alignment tables that map each lesson to the Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), and Mathematical Process Standards, enabling educators to easily identify where and when standards are addressed.

A visual "Progression of Mathematical Concepts" chart spans kindergarten through grade 5, using color coding to illustrate how concepts evolve across grades, supporting educators in understanding and planning for vertical alignment.

Each mission includes a rationale that explains the sequence of concepts and its connection to prior and future learning. For example, Mission 5 builds on strategies from Mission 4 and expands them to numbers up to 1,000, reinforcing both conceptual understanding and procedural fluency.

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 grade 2 "Course Guide" outlines a clear implementation framework that balances Independent Digital Lessons with targeted small-group instruction, emphasizing the use of real-time data and structured routines to support student growth.

Materials provide built-in scaffolds, feedback, and adaptive digital features such as "Tower and Sprint Alerts" to help teachers identify and respond to student needs in real time; additional guidance is included for reteaching, reinforcing, or extending instruction.

Each mission includes an "Implementation Guide" with strategies tailored to various classroom contexts, while the "Course Guide" and "Implementation Playbook" offer flexible usage recommendations, accessibility supports, and tools for monitoring and adjusting instruction.

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

While TEKS-aligned lesson mapping is provided in both the grade 2 "Course Guide" and "Mission Overviews," the materials do not include a diagnostic assessment, or a correlation guide that recommends instructional entry points based on student performance data.

Although the program offers adaptive digital lessons and real-time data to identify student learning needs, it lacks explicit guidance for using diagnostic results to determine initial placement or to tailor instructional starting points.

The materials provide a "TEKS Correlation Guide" that identifies where each standard is addressed within specific lessons and missions, supporting alignment with grade-level instruction.

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

Each grade 2 Mission includes a comprehensive overview that outlines the unit by topic, highlights key learning progressions, and connects new content to prior and future learning—supporting deep teacher understanding and unit internalization.

Lessons follow a consistent format—Warm-Up, Concept Exploration, Independent Practice, and Wrap-Up—supported by embedded teacher notes, vocabulary guidance, and synthesis prompts that help educators plan and anticipate student learning.

Lessons conclude with a structured "Lesson Synthesis" and "Exit Ticket," providing protocols for teachers to check for understanding, promote student reasoning, and make real-time instructional adjustments.

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

The materials include "Admin Reports" that provide instructional leaders with real-time data at the school, grade, and classroom levels, including metrics such as student login rates, lesson completion, usage minutes, and "Tower Alerts," enabling administrators to monitor implementation, celebrate successes, and target support.

Instructional leaders are supported with a "Classroom Walk-Through Guide" that includes clear "look-fors" to assess implementation fidelity and facilitate meaningful coaching conversations with educators based on observed instructional practices.

Both the "School Lead Playbook" and "District Lead Playbook" offer detailed guidance on program preparation, launch, and ongoing support, including checklists, training resources, pre-drafted communications, and strategies for integrating *Zearn* into daily schedules—empowering leaders to drive successful and sustainable implementation.

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.	5/5
1.2c	All criteria for guidance met.	2/2
—	TOTAL	7/7

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.

The materials include comprehensive "Mission Overviews" that outline key concepts and learning progressions aligned to the TEKS. Each mission clearly defines objectives that build foundational understanding and prepare students for future mathematical concepts.

Suggested time frames for each component of the teacher-led lesson materials are found in the "Course Guide." This is designed to help teachers plan and pace small-group instruction more efficiently and implement lessons with confidence.

Each mission includes assessment keys that identify the specific TEKS standards addressed and where they appear in the lesson sequence. The assessments also feature a table outlining the ELPS objectives, with each rubric row aligned to specific ELPS goals. This comprehensive approach enables educators to evaluate how student responses demonstrate progress in both content mastery and language development.

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 materials provide "Family Materials" for each Mission in both English and Spanish, offering overviews of the unit and its topics, along with explanations of key terms and models students will encounter.

"Family Materials" include sample problems and practical ideas—such as games, questions, and everyday activities—that families can use to support their child's math learning at home.

A *Zearn* "Parent Letter" is available in English, Spanish, and eight additional languages. It introduces families to the program, provides a QR code for access, and shares tips for supporting student learning outside the classroom.

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	Materials do not include printable versions of digital assessments, nor do they include the enabling or disabling of text-to-speech features, content and language supports, or calculators.	Not Scored
2.1d	Materials do not include diagnostic assessments prior to instruction that provide detailed information about a student's current knowledge.	0/4
2.1e	All criteria for guidance met.	4/4
—	TOTAL	8/12

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

The materials define and explain the intended purpose of various instructional assessments across lesson and mission levels. These include "Lesson Checkpoints"—low-stakes, formative assessments embedded in digital lessons that provide immediate, scaffolded support—and the "Tower of Power," a scaffolded, mastery-based assessment that ensures students have internalized key concepts before progressing in their digital sequence.

At the Mission level, materials offer two types of assessments: the "Mission-Level Assessment," which utilizes open-ended tasks to evaluate conceptual understanding, reasoning, and problem-solving skills; and "Selected Response Practice," which replicates STAAR item formats to help students become familiar with standardized assessment structures. Both assessments are supported by rubrics and answer keys to inform instruction.

The "Course Guide" and teacher-facing materials define each assessment type and describe how they support instructional decision-making. Together, these assessments offer a comprehensive view of student learning, helping teachers plan small-group instruction, support unfinished learning, and ensure students stay on track with grade-level proficiency.

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

Materials include detailed teacher guidance to support consistent and accurate administration of "mission-level assessments." Scripts are provided with specific language for teachers to use, along with

instructions for translating for emergent bilingual students, managing student unresponsiveness, and taking detailed observation notes to capture student understanding.

Clear procedures are outlined for scoring and interpreting student responses, including directions on how to adjust scoring based on the level of support provided during the assessment. For example, if a student requires significant prompting, the materials instruct teachers to lower the demonstrated level of understanding, ensuring results reflect independent performance.

Assessment materials, such as answer keys and teacher guides, support consistent administration practices by including preparation steps, timing suggestions, and examples of expected student behavior. These tools support consistent administration practices, enabling teachers to gather reliable data to inform instruction.

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 do not include printable versions of digital lesson assessments, which may limit accessibility options for some students. Only "Mid-Mission and End-of-Mission" assessments are available in printable format.

Digital assessments include on-screen read-aloud capability, where students can click an audio icon to hear text read aloud. However, there is no feature for educators to enable or disable this support for individual students, limiting the ability to personalize accommodations based on specific student needs.

The materials do not include a built-in calculator feature, nor do they offer options for educators to customize (enable/disable) content and language supports. This limits teachers' ability to tailor digital assessments to support students' specific needs.

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

Materials do not include formal diagnostic assessments prior to instruction that would provide detailed information about a student's current knowledge, skills, strengths, and learning needs. The "Tower of Power"—a scaffolded, mastery-based assessment—is found at the end of each digital lesson; it includes two to four stages that increase in complexity and decrease in scaffolding, ensuring students grasp key concepts before progressing.

Materials include TEKS-aligned tasks and questions, with teacher-facing assessment keys that specify which standards are addressed in each item. In addition to digital assessments, teachers can administer middle-of-unit and end-of-unit paper-based assessments to further monitor student progress and mastery of content.

Assessments feature interactive item types with varying complexity levels, including multiple choice, text entry, drag-and-drop, open numeric entry, and the use of digital manipulatives. These formats offer diverse ways for students to demonstrate understanding and help teachers gather detailed diagnostic information.

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

Assessments feature interactive item types with varying complexity levels, including multiple choice, text entry, drag-and-drop, open numeric entry, and the use of digital manipulatives. These formats offer diverse ways for students to demonstrate understanding and help teachers gather detailed diagnostic information.

The materials offer a range of formative assessments aligned to the TEKS, including digital lesson checkpoints, scaffolded "Towers of Power," exit tickets, "Mission-Level Assessments," and selected-response practice. A TEKS alignment chart is included to help teachers connect assessment items to standards within each mission.

Formative assessments vary in complexity and structure, such as the "Tower of Power," which features two to four progressively challenging stages with decreasing scaffolding. These assessments allow teachers to monitor understanding at multiple levels of cognitive demand and provide real-time feedback and support when students struggle.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	All criteria for guidance met.	3/3
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	7/7

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

The materials provide rationales for correct answers in all "Selected Response Practice." For example, in Mission 1, question 1 informs teachers of the problem type and details students' understanding by selecting the correct answer.

The materials provide rationales for each incorrect response as well. For example, in Mission 1, the key clarifies why an answer is incorrect and what misconceptions may be reflected in each incorrect response. This provides an opportunity for teachers to better understand where students are in their learning.

The instructional materials include scoring rubrics and answer keys for mid- and end-of-mission assessments, offering clear guidance to help teachers interpret student performance across multiple scoring levels. These rubrics outline expected behaviors at each level of mastery—from minimal understanding to fully accurate and independent responses.

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

The instructional materials include multiple reports and tools—such as the "Tower Alerts Report" and "Progress Reports"—that help teachers identify where students are repeatedly struggling. Teachers have the ability to assign lessons given the alerts regarding challenging topics. These tools provide specific follow-up recommendations, enabling teachers to assign targeted small-group lessons and foundational content based on individual student needs.

The "Course Guide" and educator dashboard support real-time instructional adjustments by offering visualizations of class- and student-level data. Teachers are guided to use this information to address unfinished learning, reinforce grade-level concepts, and support student progress through small-group instruction and differentiated tasks.

Foundational Guidance aligned to each topic further assists teachers in selecting appropriate lessons when students show signs of difficulty. Additionally, "Sprint Alerts" and "Tower Alerts" identify fluency- and content-based struggles, allowing educators to tailor interventions and monitor trends in student understanding over time.

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 a "Student Progress Tool" that allows students to reflect on their own learning and monitor their progress. It also provides teachers with the opportunity to guide conversations with students regarding their strengths, areas for development, and strategies for growth.

The instructional materials do offer various tools for tracking student progress, including "Pace Reports," "Progress Reports," "Tower and Sprint Alerts," and "Student Reports." These resources allow teachers to monitor lesson completion, identify areas of struggle or success, and assign targeted interventions based on individual student needs.

Students also have access to tracking tools such as the "Weekly Goal Tracker," "Challenge Tracker," and "digital badges," which promote accountability and motivation by visually representing lesson completion and goal achievement. The "Brainy Challenge" further supports goal-setting and family engagement.

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.

The digital lessons incorporate multiple checkpoints throughout each lesson to ensure continuous monitoring of student understanding. These frequent checks help identify misconceptions early and provide opportunities for immediate feedback and correction.

When students encounter challenges, the digital platform offers immediate, integrated support features, such as dividing problems into smaller steps, providing digital manipulatives, and delivering targeted guidance. This scaffolded support enables students to progress at their own pace and develop confidence as they work toward independent mastery.

Each lesson concludes with a "Tower of Power" assessment, a scaffolded, mastery-based task that gradually increases in difficulty while providing decreasing levels of support as students advance. This

structure, combined with resources such as "Math Chats" and interactive videos, enables students to learn at their own pace and receive targeted assistance when necessary.

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	Materials do not provide explicit educator guidance for enrichment and extension activities tailored to students who demonstrate proficiency in above grade-level content and skills.	1/2
3.1d	Materials do not provide an option for educators to enable or disable accommodations for individual students, such as text-to-speech features, content and language supports, or calculators.	0/3
3.1e	All criteria for guidance met.	2/2
—	TOTAL	8/12

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.

Materials include explicit educator guidance for scaffolding during small-group instruction, particularly in "Concept Exploration" and "Fluency Practice," where teachers address misconceptions, provide hands-on modeling, and give immediate feedback. These lessons are designed to strengthen conceptual understanding while allowing students to continue progressing through digital lessons, ensuring that instructional support is responsive to individual learning needs.

The digital components of the program adapt in real time based on student performance, offering step-by-step guidance, targeted hints, video tutorials, and scaffolded support. Features such as "Math Chats," "Learning Labs," and "Z-Squad" incorporate pauses in instruction to assess students' understanding of prerequisite or grade-level concepts. Based on student responses, the program adapts its instructional approach by reviewing, scaffolding, or progressing to the next skill, as appropriate.

Fluency activities involve providing support to students when they encounter challenges. As students engage with the program, assistance is offered as needed through opportunities to retry tasks, provide counting support, and ask guiding questions. These activities aim to strengthen foundational skills, build connections between concepts, reinforce prior learning, and address any unfinished areas of understanding.

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 pre-teaching vocabulary before lessons, and there is strong guidance for reinforcing vocabulary during instruction.

Materials provide embedded language supports in both digital lessons and small-group instruction to help students develop academic vocabulary. These supports are designed to address both new and repeated terminology throughout instruction.

Additionally, supports include explicit vocabulary instruction, where key math terms are introduced and reinforced to build academic language. In Mission 8, Lesson 2 (0:19–0:37), students are introduced to the new academic vocabulary *polygon* as a closed shape made up of straight sides. The definition appears on the screen as the on-screen teacher reads it aloud, and several polygons appear. Then, at a checkpoint, students fill in the definition in their student notes. Pre-teaching this academic vocabulary at the beginning of the lesson helps students engage in activities about polygons throughout the lesson.

The materials provide guidance on incorporating academic vocabulary, using multiple means of action and expression, and engaging in discussions using new terminology. In the grade 1 *Teacher Lesson Materials* PDF, the materials note, "Display the new vocabulary terms with images in the classroom alongside other terms from this mission."

"Multiple Means of Representation" note provides explicit guidance on pre-teaching the names of the measurement tools using pictures to develop academic vocabulary. The note also advises teachers to narrate the measurement language with an emphasis on the precise measurement terms.

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 supporting students who demonstrate proficiency in above grade-level content and skills. While the instructional materials reference enrichment opportunities such as "Digital Bonuses," optional practice problems, and discussion prompts, these enrichment activities closely mirror core lesson content (grade-level) and do not extend into more advanced mathematical concepts that require deeper reasoning or critical thinking.

The materials offer suggestions for students who demonstrate proficiency in grade-level content and skills. The "Course Guide" indicates that optional practice problems may be used to extend and flexibly reinforce grade-level learning. These resources support problem solving, conceptual understanding, and connecting mathematical ideas beyond the core digital lesson.

Optional practice problems are a printable set of exercises available for each lesson, designed to support reinforcement or extension of the grade-level lesson content. Educators may choose to incorporate these problems for additional practice or to facilitate discussion and reflection during small-group instruction. Additionally, small-group lesson materials include margin notes and discussion prompts to encourage deeper thinking and foster mathematical discourse.

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 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. In G2 lessons, prompts are automatically presented with audio support, and text-to-speech functionality is accessible to all students. Additionally, instructional prompts and directions can be replayed using embedded audio buttons.

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 grade 2 "Course Guide" includes educator guidance on offering options and supports for students to demonstrate their understanding of mathematical concepts in various ways. For example, "Flexible Response Options" are emphasized, allowing students to demonstrate their understanding through verbal explanations, written work, or visual models. Throughout the lessons, teacher guidance supports multiple solution methods, such as partner discussions, drawing, using manipulatives, and showing with fingers, allowing teachers to tailor tasks to accommodate individual student strengths.

In Mission 5, Topic A, Lesson 2, the materials provide educator guidance to support varied ways for students to demonstrate understanding. The guidance encourages student choice and ownership by allowing students to lead activities using tools like the place value chart or "Hide Zero" cards. It also emphasizes the importance of connecting different solution strategies, reinforcing that students should select approaches that align with their thinking.

Lessons encourage student discourse and reflection, allowing learners to analyze similarities and differences in problem-solving methods. Guidance in the "Multiple Means of Representation" section highlights the use of sentence stems and visuals to support all learners, including emergent bilingual students. Teacher prompts and structured discussions are provided to support students in articulating their thinking.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	5/5
3.2b	This guidance is not applicable to the program.	N/A
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	12/12

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.

Materials provide explicit guidance to help educators build mathematical knowledge by emphasizing the purpose and structure of each word problem. In Mission 1, Lesson 3, teachers are prompted to use multiple representations—drawings, number sentences, and statements—to deepen student understanding. The lesson also encourages sharing and discussion of student strategies to highlight key mathematical features and relationships.

In Mission 3, Lesson 1, the fluency activity, "Skip-Count Up and Down by Fives on the Clock," provides explicit guidance to help educators build mathematical knowledge and deepen students' understanding through multiple means of representation and structured discourse. Teachers are guided to make connections between a number line and a clock, helping students link prior knowledge (skip counting and measurement) to new concepts (telling time). Through visual demonstrations, partner discussions, and teacher questioning, the lesson highlights key patterns and relationships—such as equal intervals and unit differences—while also scaffolding instruction for diverse learners, including emergent bilingual students.

The "Ten-Frame Flash" task found in Mission 1, Lesson 1, connects to anchoring big ideas by reinforcing the foundational concept of part-whole relationships within 10, a critical building block for later work in addition, subtraction, and place value. A note for the teacher emphasizes the big idea that numbers can be decomposed and recomposed in different ways, and that understanding these relationships supports fluency and flexibility with numbers. By consistently prompting students to see numbers like 6–10 as "5 and some more," the task helps solidify the concept of benchmark numbers (especially 5 and 10) as reference points, anchoring students' understanding.

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.

The materials provide a range of intervention tools, including foundational lessons to address unfinished learning, small-group lessons for reteaching or extending grade-level concepts, and fluency materials including "Sprint Alerts" to build automaticity with foundational skills. Instruction is delivered through diverse structures such as whole-group, small-group, and individualized digital work, allowing for flexible, responsive intervention.

Teachers are guided to use real-time digital lesson data, such as "Tower Alert Reports," to identify student needs and determine when to intervene. These data-driven insights support just-in-time instructional decisions, including forming small groups and delivering scaffolded instruction based on student progress and performance.

The materials provide clear, embedded guidance for implementing intervention across instructional settings. Each small-group lesson includes structured components like "Fluency Practice," "Concept Exploration," "Lesson Synthesis," and "Exit Tickets," along with prompts and routines (e.g., Turn and Talk, Think-Pair-Share) to support effective delivery and promote student engagement and understanding.

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

The materials include enrichment methods that support various forms of student engagement, along with explicit teacher guidance for effective implementation. For example, in Mission 7, Lesson 19, "Concept Exploration," teachers are prompted to encourage students to explore measuring objects around the room as an enrichment activity. After all students have completed the task, teachers are guided to distribute additional materials, such as paper, paper clips, and index cards, to extend learning and engagement.

In Mission 5, Lesson 9, the materials include enrichment and extension methods that support various forms of engagement, along with guidance to support teachers in effective implementation. The guidance recommends incorporating error analysis for students who are ready for a challenge by featuring an incorrect problem (e.g., $679 + 284 = 863$). Teachers are prompted to ask students two questions ("What makes this problem incorrect?" and "What steps can we take to correctly solve the problem?") to deepen their understanding and encourage critical thinking.

The materials include enrichment and extension methods designed to support various forms of student engagement. For example, in Mission 5, Lesson 7, the "Multiple Means of Engagement" section guides educators to invite students who finish early to extend their learning by adding a second step to their word problem. Teachers are then encouraged to have students swap problems with partners to solve and share problem-solving strategies, fostering collaboration and deeper mathematical thinking.

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

"Teacher Lesson Materials" include prompts to support educators in providing timely feedback during lesson delivery. Throughout "Warm-Ups (Fluency Practices)," "Concept Explorations," and "Exit Tickets," multiple prompts are embedded to help teachers gauge student understanding of the content in real time. This guidance enables educators to adjust instruction promptly and support student learning effectively.

Digital lessons include features that provide students with timely, real-time feedback and adaptive support as they work independently through grade-level content. These lessons are designed to maintain rigor while allowing students to progress at their own pace. When students struggle, the system generates a "Tower Alert Report" that alerts teachers and recommends specific Foundational Lessons to address gaps in understanding, enabling targeted, just-in-time intervention aligned with core instruction.

The materials include prompts to support educators in providing timely feedback during lesson delivery through questioning that checks for student understanding. For example, Mission 5, Lesson 8, "Concept Exploration," teachers are guided to encourage students to articulate and reflect on their problem-solving strategies by asking, "Explain your strategy for solving to your partner for 15 seconds," "Why was this problem more difficult to solve mentally?" and "What would be a better way to solve this problem to make sure we get the right answer?" These embedded prompts help teachers deliver just-in-time feedback tailored to students' responses and strategy use.

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	All criteria for guidance met.	4/4
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.

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.

The materials provide embedded linguistic accommodations that address the needs of students at all levels of language proficiency, as outlined by the ELPS. These supports are consistently included in the "Multiple Means" notes and offer strategies, such as sentence frames to guide student responses, explicit modeling of academic vocabulary to build language understanding, and structured oral language routines that promote opportunities for practice and application in meaningful contexts.

In the grade 2 "Course Guide," the materials include embedded linguistic accommodations for varying levels of language proficiency, aligned with the ELPS. Supports for emergent bilingual students include explicit vocabulary instruction, contextual vocabulary development with visual aids and English-Spanish cognates, and Spanish-language resources for lesson previewing. The guide also highlights structured small-group routines like "Turn and Talk" and sentence frames to promote mathematical discourse and support academic language development.

The materials include notations for teachers to support language development. In Mission 7, Lesson 15, teachers are encouraged to display new vocabulary terms with images alongside other terms from the mission. The guidance notes that beginning and intermediate emergent bilingual students may benefit from discussing and noting translations of these English vocabulary terms to enhance understanding.

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

The materials include implementation guidance to support educators in effectively using the materials in state approved bilingual/ESL programs. Guidance found in the "Course Guide" outlines how the resource can be flexibly implemented across a variety of models, including dual language, transitional bilingual, ESL pull-out, and ESL content-based. Suggestions for adapting instruction, using digital lessons effectively, and incorporating scaffolds are provided.

While there are resources designed to help teachers preview digital lessons to experience embedded language supports, learn instructional strategies for English Learners—including Spanish translations for K–2—and identify academic language requiring linguistic support, these supports are not linked to state approved bilingual/ESL programs.

Additionally, though there is implementation guidance to support educators in bilingual and ESL settings by including a table that aligns lessons with the ELPS, the ELPS are not included in the "Teacher Lesson Materials," and teachers must consult a separate guide to access the ELPS.

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 structured oral routines such as "Turn and Talk," "Think-Pair-Share," and sentence frames to support emergent bilingual students in verbalizing math thinking, in alignment with the ELPS. For instance, Mission 1, Lesson 7 offers sentence stems for explaining strategies, Mission 6, Lesson 6 uses visuals and partner discussion to explore "columns" and "rows," and Mission 2, Lesson 4 highlights cognates like "meter" and "metro" to support cross-linguistic understanding.

To build comprehension through writing, the materials incorporate scaffolds such as sentence frames, word banks, and structured writing tasks. In Mission 2, Lesson 10, students redraw models, label them, and write number sentences with explanations, while in Mission 4, Lesson 5, students compose and exchange word problems using guided language supports.

The materials explicitly reinforce cross-linguistic links by connecting key vocabulary to students' home languages and using visuals. For example, in Mission 3, Lesson 5, manipulatives are labeled in English and students' native languages, and in Mission 6, Lesson 1, terms like "equal groups" and "equivalent sets" are introduced as interchangeable, supported by visual reference sheets and oral review.

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	All criteria for guidance met.	4/4
—	TOTAL	6/6

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

The materials include practice opportunities throughout learning pathways that require students to demonstrate depth of understanding aligned to the TEKS. Each lesson integrates conceptual understanding and procedural fluency while promoting mathematical coherence and embedding all process standards through reasoning, modeling, communication, and problem-solving.

Instructional and assessment tasks are aligned to the TEKS and vary in complexity to meet diverse learner needs. Examples include "Mid-Mission and End-of-Mission" assessments that require students to explain their reasoning, model with manipulatives, and solve real-world problems using multiple representations, such as drawings, equations, and number sentences.

Throughout the learning pathways, students demonstrate their understanding through guided practice, open-ended discussions, and math chats. Teacher guidance encourages probing for reasoning and explanation, supported by rubrics that track progress from minimal to solid reasoning, ensuring that assessments measure conceptual understanding aligned with the TEKS.

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 materials include practice opportunities and scaffolded assessments that build conceptual understanding and align with the TEKS, with tasks that increase in rigor and complexity. Above-grade-level content is integrated into both digital core lessons and optional supports, such as "Digital Bonuses" and teacher-guided extensions. For example, in the Mission 7, Lesson 15 "Concept Exploration," students describe reasons to save money and explain decisions around saving versus spending, as well as solve problems involving money using addition and subtraction.

The materials include practice opportunities and scaffolded assessments that build conceptual understanding and align with the TEKS, with tasks that increase in rigor and complexity. For example, Mission 5 supports understanding of teen numbers through decomposition, while the "Tower of Power" gradually reduces support to help students demonstrate proficiency.

Optional resources, like "Digital Bonuses" and extra practice problems that align with the TEKS, provide additional opportunities for students meeting grade-level expectations to deepen engagement. These resources reinforce current TEKS and support future learning by strengthening conceptual understanding and procedural fluency within the kindergarten mission sequence.

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 instructional materials demonstrate coherence within each grade level by connecting concepts across missions and lessons. "Mission Overviews" consistently explain how each mission builds on prior knowledge and prepares students for future learning. Mission 4 builds on place value understanding to support addition and subtraction within 200, while Mission 6 extends repeated addition to arrays and area, laying the groundwork for multiplication and division.

The "Mission Overview" emphasizes key mathematical focus areas and promotes the use of efficient and adaptable strategies for solving multi-digit problems. Lesson overviews support coherence by explicitly illustrating how skills acquired in one unit are applied and further developed in subsequent modules.

Teachers are supported with scripted lesson notes that highlight these connections and provide instructional insights. These notes guide teachers in reinforcing prior knowledge and preparing students for upcoming content, ensuring lessons build meaningfully on one another to support a coherent learning experience.

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

The materials demonstrate clear connections from kindergarten through grade 6 by intentionally building patterns, big ideas, and relationships across grade levels. The "Scope and Sequence" outlines how core concepts are introduced, extended, and deepened through a coherent K–8 learning progression. Examples of coherence include place value, multiplication/division, and fractions, each developed systematically across multiple grades.

Specific examples, such as the use of number bonds in kindergarten through grade 2 and the development of place value understanding through the "Say Ten" method, illustrate how key concepts evolve across grade levels. Overviews within missions explicitly identify how current lessons prepare students for more advanced work in future grades.

This progression is outlined in overarching documents and reinforced within individual lessons, where prior knowledge is routinely activated and new concepts are presented as part of a continuous mathematical journey. The instructional materials extend patterns of thinking, strengthen connections among concepts, and equip students for success in future grade-level learning.

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.

The materials demonstrate coherence across lessons and activities by explicitly connecting students' prior knowledge to the mathematical concepts they will encounter in the current and future grade levels. In Mission 5, students build on foundational strategies for addition and subtraction from Mission 4, expanding their fluency to numbers within 1,000. Through hands-on tools, such as manipulatives and number bonds, students apply place value strategies to add and subtract larger numbers, deepening conceptual understanding and preparing for multi-digit operations in later grades.

In Mission 2, coherence is demonstrated where students extend their place value understanding to measurement. They learn to relate physical units to tools like rulers and meter sticks and apply addition and subtraction strategies—such as number lines and strip diagrams—to solve length-related word problems. This integration supports both conceptual understanding and procedural fluency and aligns with the TEKS.

Teachers are supported through scripted lesson notes and visual progressions that show how grade 1 content connects to grade 2 and beyond. These resources clarify how early mathematical experiences prepare students for more advanced concepts, ensuring coherence within and across grade levels.

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.

The materials provide consistent opportunities for spaced retrieval by incorporating fluency practice that revisits previously learned skills at the start of each lesson. These warm-ups reinforce foundational concepts such as number sense, counting, and part-whole relationships, helping students retain and strengthen prior knowledge.

Adaptive activities like those found in the "Number Gym"—such as "Make and Break," "Number Bond Dash," and "Tell the Hidden Number"—are designed to reinforce learning from earlier missions while preparing students for upcoming content. These activities connect new and prior concepts through concrete, pictorial, and symbolic representations.

Teacher guidance and lesson overviews emphasize how fluency practice builds coherence over time. By repeatedly engaging with earlier skills such as decompositions, number bonds, and counting strategies, students deepen their understanding and are better equipped for more advanced mathematical learning.

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

The grade 2 instructional materials provide frequent and intentional interleaved practice by revisiting and integrating previously learned skills and concepts across missions and learning pathways. In Mission 1, students re-engage with foundational number sense skills from kindergarten and grade 1—such as decompositions within 10 and teen numbers as $10 + n$ —to build fluency with addition and subtraction within 100, reinforcing continuity in learning. Interleaving continues in Mission 8, where students extend their grade 1 understanding of geometry to analyze and classify shapes based on properties, demonstrating the application of earlier knowledge in more advanced contexts. Similarly, Mission 7 connects data analysis and measurement to financial literacy, encouraging students to use rulers, number lines, and prior strategies to solve real-world problems. These concepts are revisited in various contexts, reinforcing understanding across content areas.

Fluency practices at the start of lessons further promote integration, even when not directly tied to the day's objectives. For instance, Lesson 18 incorporates subtraction fact practice to reinforce differences

within 20, and other activities use coins to practice skip counting by 5s and 10s. Materials like "Hide Zero cards," base-ten blocks, and bundled straws also support conceptual connections between counting, place value, and operations.

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.

Questions and tasks provide opportunities for students to interpret, analyze, and evaluate models and representations for mathematical concepts and situations. In grade 2, students build understanding of fractions by combining and decomposing fourths and eighths, interpreting models with fraction pieces, and evaluating ways to express improper fractions as mixed numbers (e.g., "6 fourths" as "1 and 2 fourths").

Students use tools such as strip diagrams, counters, and repeated addition equations to represent equal and non-equal groups, and then analyze and evaluate how these models represent quantities and relationships. For example, in Mission 6, students shift from using concrete counters to drawing and labeling groups, ultimately interpreting arrays and relating them to repeated addition and even/odd number concepts.

The materials guide teachers in supporting student evaluation of multiple strategies and solution methods. Students are asked to explain their thinking, compare models (e.g., number bonds, arrow notation, strip diagrams), and determine the most efficient method based on the structure of a problem—helping to solidify their understanding and flexibility with representations.

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

Questions and tasks provide opportunities for students to create concrete models to represent mathematical situations. In grade 2, students use counters, place value disks, and linking cubes to form and compare equal and unequal groups, support subtraction with regrouping, and explore compensation strategies. These hands-on activities help students build foundational number sense through physical modeling.

Students create pictorial representations to represent mathematical thinking and problem-solving. For example, students draw number bonds to break apart numbers for mental math and represent word

problems using tens groupings or bar diagrams. These drawings help students visualize relationships between quantities and operations.

Instruction supports the transition from concrete to pictorial models. Lessons guide students from manipulating objects (e.g., creating equal groups with counters) to drawing those groupings to represent the same mathematical concepts. This progression strengthens conceptual understanding and prepares students for more abstract reasoning.

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

Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts. In grade 2, students engage with concrete materials, such as counters and linking cubes, to develop foundational understanding of place value concepts. Similarly, students work with linking cubes to model addition and subtraction problems, such as finding differences between numbers like 34 and 28, and then translate these concrete experiences into pictorial strip diagrams.

In grade 2, Mission 5, Topic B, students deepen their conceptual understanding by connecting manipulatives to the standard algorithm. They record number compositions in vertical form, using place value language to describe exchanging 10 ones for one ten and 10 tens for one hundred. Students document each step of these exchanges methodically as they work through problems.

The materials also incorporate real-world contexts to apply math concepts, such as sharing almonds or sorting objects by attributes, supporting students' ability to transfer skills beyond routine tasks. Throughout, students build toward abstract mathematical ideas by connecting hands-on experiences with visual models and symbolic notation, while continuing to develop fluency with place value, grouping, and the relationships between addition and subtraction.

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 designed to build student automaticity and fluency through daily, embedded fluency practice. For example, every grade 1–5 independent digital lesson features "Number Gym," an adaptive fluency activity that strengthens foundational number sense. "Number Gym" activities support students by bridging K–5 math foundations, reinforcing prior skills, and addressing unfinished learning, with students progressing to larger numbers and more challenging tasks as they demonstrate proficiency—promoting automaticity in foundational number sense.

Materials provide tasks that build student automaticity and fluency, which are essential for completing grade-level mathematical tasks. In Mission 3, Lesson 13, the fluency activity "Happy Counting Up and Down by Ones Crossing 10" helps students develop number sequence fluency through rhythmic, responsive counting. The teacher uses hand signals to prompt students to count forward or backward by ones, including transitions across decade numbers, reinforcing number patterns and mental agility in a playful, engaging format.

In Mission 4, Lesson 1, the fluency activity targets place value skills to support students in adding and subtracting one and 10 during the "Concept Exploration." The guidance notes that "practicing place value skills prepares students for adding and subtracting 1 and 10 in today's lesson," helping build the automaticity needed to access and succeed with grade-level tasks.

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

The materials provide opportunities for students to practice efficient, flexible, and accurate mathematical procedures through sequenced tasks that build conceptual understanding. For example, during the "Concept Exploration" of Mission 7, Lesson 19, students measure objects using inch rulers, with teacher prompts guiding them to focus on proper placement and accurate reading of tick marks. The discussion explicitly compares ruler use to inch tiles, supporting students in identifying why rulers offer a more efficient and practical approach to measurement.

In Mission 5, Lesson 10, the materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures. Students use the chip model to visually represent and solve two- and three-digit addition problems, grouping tens and hundreds to support procedural accuracy. This hands-on method promotes efficient organization of units and encourages students to explain their reasoning, building conceptual understanding and fluency in multi-digit addition.

In the "Course Guide," the materials give students opportunities to practice the application of mathematical procedures during lesson checkpoints. Checkpoints appear at critical moments in digital lessons to ensure students understand essential concepts before progressing. If students struggle, they receive immediate scaffolded support to address misconceptions and continue learning, maintaining momentum through low-stakes, formative assessment.

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

In Mission 4, students engage in evaluating different addition and subtraction strategies through guided discussions and "Lesson Synthesis." Questions prompt students to compare methods such as the number bond strategy and the arrow way, explore the use of strip diagrams, and assess the efficiency of mental math strategies. In Topic E, students deepen their understanding by modeling numbers up to 1,200 with place value disks, bundles, and money, learning to trade and rename units flexibly while reflecting on their solution strategies during group sharing.

In Mission 7, Lesson 19, students use various tools to measure objects and discuss which tool is most efficient, with teachers facilitating reflection on why a ruler may be preferable to inch tiles. This conversation fosters students' evaluation of tool selection based on efficiency. In Lesson 20, students further reflect on how to choose measurement units, supporting ongoing consideration of flexibility and accuracy in measurement strategies.

Throughout grade 2, materials prompt students to evaluate subtraction strategies using place value disks, standard algorithms, and simplifying methods. For example, in Mission 5, Lessons 13 and 17, students compare strategies for subtracting multi-digit numbers and justify their answers by exploring the inverse relationship between addition and subtraction. Teachers guide students to reflect on which strategies are most efficient and accurate, encouraging flexible thinking aligned with their fluency and the numerical context.

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

In Mission 3, Topics E and F, students develop increasingly efficient strategies for comparing numbers by transitioning from concrete models like bundles and money to more abstract representations using place

value disks. This prepares students for working with larger numbers and comparing using symbols such as $<$, $>$, and $=$, while building understanding of trading and renaming units to support efficient problem solving.

In Mission 7, Lessons 7 and 19, teacher guidance supports students in selecting efficient strategies during measurement and money-counting activities. For example, students are prompted to choose the most appropriate measuring tool for different objects and to count coins starting with the largest denomination, encouraging efficiency by counting dimes before pennies and reflecting on why this approach is more effective.

In Mission 5, Lessons 9 and 14, students move from concrete representations with place value disks to abstract procedures like the standard subtraction algorithm. Teacher guidance encourages students to evaluate when the algorithm is a more efficient method compared to physical models, prompting reflection on regrouping and abstract procedural fluency to support strategic selection of efficient problem-solving methods.

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 "Course Guide" explicitly addresses the conceptual emphasis of the TEKS through the "Progression of Mathematical Concepts" and "Rationale for Mission Sequence." These sections describe how mathematical concepts are intentionally introduced, developed, and extended across lessons and grade levels, supporting students in building understanding of relationships among quantities. For example, the "Rationale for Mission Sequence" explains that students first develop place value understanding before progressing to operations with numbers within 1,000, ensuring conceptual knowledge precedes procedural fluency.

Additionally, in Mission 1, "Topic A overview," the guidance notes that students develop conceptual understanding by decomposing numbers, recognizing partners to 10, and interpreting teen numbers as $10 + n$ using strategies like ten-frame flashes and "Say Ten" counting. Procedural fluency is supported through repeated practice in varied contexts, including the use of the Rekenrek, dice games for number bonds, and applying addition strategies within 100.

In Mission 2, the materials explicitly address the conceptual emphasis of the TEKS by focusing on the development of measurement understanding through hands-on exploration. The "Mission Overview" explains that students compare, estimate, and measure using both metric and customary tools, helping them connect measurement to foundational number concepts. Tasks such as exploring benchmark lengths and iterating units support deep conceptual understanding, aligning with the TEKS' focus on reasoning over rote procedure.

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

The Mission 6 Overview demonstrates that the questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models. In "Topic A," students begin with concrete objects to create equal groups or equivalent sets. In "Topic B," they transition to pictorial representations and math drawings to model equal groups, eventually connecting these experiences to abstract concepts such as area and multiplication by partitioning rectangles and creating arrays.

In Mission 3, Lesson 5, questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models, as required by the TEKS. The lesson begins with students using bundles of straws to model three-digit numbers and then transitions to pictorial representations using "Hide Zero" cards. Finally, students write the expanded form of numbers, such as representing 345 as $100 + 100 + 100 + 10 + 10 + 10 + 10 + 1 + 1 + 1 + 1 + 1$ and then as $300 + 40 + 5$, supporting a clear progression from concrete to abstract understanding.

Additionally, in Mission 4, Topic B, students begin by using manipulatives in Lessons 6 and 7 to compose ten ones into one ten with two-digit addends. They then progress to using drawings in Lesson 8 to represent this composition, connecting these visuals to written methods, and in Lesson 9, students use math drawings to model addition of two-digit and three-digit addends, while writing corresponding abstract equations.

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.

The materials include supports for students in defining and explaining concrete and representational models to abstract concepts, as required by the TEKS. For example, in Mission 4, Topic E, students apply place value knowledge to refine subtraction strategies with numbers up to 200, using place value disks and drawings to represent decomposition and exchanges of tens and hundreds. As students transition from concrete models to pictorial and abstract representations, they deepen their understanding of subtraction, practice multi-step problem-solving, and engage in rich mathematical discussions to articulate their thinking.

In Mission 6, Topic B on "Arrays and Equal Groups," students begin by decomposing arrays physically—such as pulling apart a 4 by 3 array of teddy bears into rows or columns—and learn to write repeated addition sentences to represent the total (e.g., $3 + 3 + 3 + 3 = 12$). As the lesson progresses, students transition to pictorial representations by drawing arrays and using repeated addition and skip-counting strategies, with teacher prompts encouraging students to describe their thinking, such as discussing the effect of removing columns and updating equations accordingly.

Students use place value disks, an unlabeled place value chart, and a whiteboard to explore addition and subtraction strategies such as one more, one less, ten more, and ten less in Mission 4, Lesson 1. The lesson begins with students creating the number 36 using place value disks, then adding one more to make 37, discussing where to add the one. They also practice writing the corresponding equation, $36 + 1 = 37$, reinforcing both conceptual understanding and symbolic representation.

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.

The materials use manipulatives to support the development of academic mathematical language. In Mission 6, Lessons 1 and 2, students use counters to explore "equal groups" and "repeated addition," while in Mission 8, students build shapes using geoboards and spaghetti to name and describe polygons and angles.

The materials offer guidance for previewing and reinforcing key vocabulary with visual supports. For example, in Mission 2, Lesson 6, and Mission 3, Lesson 6, visuals, gestures, and labels help students understand comparative terms such as *taller* and *shorter*, and in Mission 2, Lesson 9, students use strip diagrams to describe and compare lengths.

Instructional routines like "Turn and Talk," sentence stems, and teacher questioning are embedded to promote language-rich discussions. In Mission 4, Lesson 23, students use place value vocabulary to explain subtraction strategies, and in Mission 5, Lesson 3, scaffolded questions and sentence stems support students in articulating multi-step strategies clearly.

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 materials include embedded educator guidance that scaffolds student language development through structured partner discussions and sentence stems. For example, in Mission 3, Lesson 1, students compare a meter strip and a clock using academic language like *units* and *measurement*, with teachers encouraged to circulate, prompt deeper thinking, and guide peer interactions. Similarly, in Mission 2, Lesson 1, "Turn and Talk" strategies are paired with vocabulary prompts like *endpoint* and *estimate*, with conversation starters provided to support emergent bilingual students.

Educators are supported with prompts that encourage deeper reasoning and explanation using precise mathematical language. In Mission 3, Lesson 7, students explain their own and others' problem-solving strategies using terms like *unit form* and *expanded form*, while in Mission 7, Lesson 9, guidance

encourages students to process misunderstandings and explain concepts like organizing bills using targeted vocabulary such as *more* and *less*.

The materials include educator guidance to reinforce academic language through graphic organizers, visual models, and structured dialogue. In Mission 3, Lesson 6, students explore economic terms like *consumer* and *producer* with illustrations and concept maps, while in Mission 8, Lessons 3 and 4, students use geometric terms such as *polygon*, *angle*, and *vertices* during partner tasks and sorting activities, promoting precision and peer communication using formal academic vocabulary.

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

The materials include explicit guidance for teachers to provide sentence frames that support students in using academic mathematical vocabulary. For example, in Mission 3, Lesson 2, students compare lengths using frames such as "The length of ___ is (more than/less than) the length of ___," while in Mission 3, Lesson 15, students retell a peer's place value strategy using the frame "Anthony's strategy is ___." These supports are modeled and practiced to promote complete sentence use, particularly for emerging bilingual students.

Throughout lessons, structured routines such as "Turn and Talk," "Think-Pair-Share," and guided partner dialogue are embedded to encourage mathematical reasoning and academic talk. For example, in Mission 7, Lesson 23, students use sentence frames to compare measurement lengths, while in Mission 8, Lesson 2, they describe shape attributes during tangram activities. These interactions reinforce precise vocabulary like *vertices*, *angles*, *polygon*, and *equal parts*.

The materials guide teachers to model and elicit academic language through strategic questioning and hands-on activities. In Mission 9, Lesson 9, students describe transformations using terms like *flip*, *slide*, and *turn*, and in Mission 5, Lesson 6, they apply and explain strategies like compensation using reflective discussion prompts. Across multiple lessons, visuals, manipulatives, and sentence stems help make mathematical discourse accessible and rigorous for all students, including emergent bilinguals.

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

The materials include embedded guidance to facilitate mathematical conversations that allow students to hear, refine, and use math language with peers. For example, in Mission 7, Lesson 24, students participate in structured routines such as "Turn and Talk" and "Think-Pair-Share" to explain their problem-solving strategies and clarify their reasoning. Sentence stems and teacher prompts support students in expressing multi-step thinking, promoting both mathematical discourse and language development aligned with ELPS.

In Mission 1, Lesson 6, and Lesson 3, the materials provide teacher guidance for structured partner and class discussions using visual models and equations. Students use drawings and strip diagrams to explain subtraction strategies and repeated addition, developing precision with terms like *groups of*, *boxes*, and number relationships. These discussions help students connect visual models to equations while refining academic math language with peers.

In Mission 8, the materials include reflective discussion prompts to surface misconceptions and develop vocabulary through peer interaction. Teachers guide students to analyze attributes of shapes, compare geometric solids to real-world objects, and justify measurement strategies. Prompts like "Do you agree with Sonia?" or "What food is shaped like a cylinder?" promote meaningful use of academic math language during peer dialogue.

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 include support for redirecting inaccurate student responses. For example, in Mission 2, Lesson 1, a teacher note describes the common misconception that students interpret "more" to always mean "add," and provides guiding questions to support students' understanding of the problem and redirect them when inaccurately interpreting the problem.

The materials include embedded guidance with exemplar responses but do not anticipate a variety of student answers or provide strategies to redirect inaccurate responses. For example, in Mission 4, Lesson 7, the teacher script models how to connect place value disks to vertical addition and includes expected student responses such as, "We rename 11 ones as 1 ten 1 one" and "Tens belong in the tens place," but the materials do not include teacher guidance for addressing 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	All criteria for guidance met.	1/1
—	TOTAL	4/4

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

The materials integrate the TEKS process standards appropriately into instruction. According to the Course Guide, each lesson is intentionally designed to embed the TEKS Mathematical Process Standards (MPS), providing opportunities for reasoning, modeling, communication, and problem-solving (process). These process standards are incorporated throughout lessons to ensure students engage meaningfully with grade-level mathematics.

The Mission 7 Overview demonstrates how TEKS process standards are meaningfully embedded through real-world problem-solving. Students analyze information, develop and explain strategies, and justify solutions (process) while working on tasks involving money, data, and measurement (content)—aligning with standards such as 2.1A and 2.1B. Representing information with graphs, drawings, and number sentences supports communication and critical thinking.

Mission 7, Lessons 8 and 15, show clear alignment with the TEKS process standards. In Lesson 8, students use drawings and oral explanations (process) to solve a multistep coin problem (content), meeting 2.1B by modeling and explaining solutions. In Lesson 15, students apply 2.1A by identifying patterns in repeated addition (content) and explaining (process) how the total changes over time, reinforcing reasoning and representation skills.

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

The materials include a description of how process standards are incorporated and connected throughout the learning pathways. For example, in Mission 4, the "Mission Overview" explains that students analyze mathematical relationships (1F) and justify their reasoning (1G) by comparing two-digit numbers using symbols like $>$, $<$, and $=$. This explicit description shows how students are supported in analyzing number structures and communicating their thinking precisely throughout the mission.

In Mission 7, materials describe how Process Standard 1G is embedded across the mission as students articulate their reasoning while working with coins, measurement, and data. The overview notes that students use appropriate mathematical vocabulary—such as "total value" and "unit"—to clearly explain and justify their problem-solving strategies. These repeated opportunities to communicate ideas demonstrate how the process standard is intentionally incorporated across tasks.

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

The materials include an overview of the TEKS process standards incorporated into each lesson, as shown in the "Mathematical Process Standards By Lesson" per Mission table in the "Course Guide." This table details which process standards are addressed in each lesson across all missions. For example, Mission 3 addresses 2.1B in Lesson 10, where students apply problem-solving strategies in counting contexts.

The "Mission Overviews" provide detailed teacher background on how the process standards are addressed throughout instruction. For instance, in Mission 1, the overview explains how 2.1C is integrated by guiding students to select appropriate tools—such as ten-frames, Rekenrek, and number bonds—before transitioning to mental math strategies like making ten and using place value to support efficient problem solving.

In Mission 3, materials incorporate 2.1B by engaging students in problem-solving tasks that involve skip-counting by ones, tens, and hundreds. Students are guided to analyze the problem, choose appropriate strategies, and justify their reasoning, supporting both comprehension and metacognitive reflection. These experiences help students build fluency and confidence in applying multiple methods to solve problems.

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.

Materials provide students with opportunities to analyze relationships, compare strategies, and use reasoning to solve problems. In Mission 4, Lesson 3, students solve a multi-step problem involving adding and subtracting within 100, encouraging mental math, arrow notation, or number bonds. Similarly, in Mission 4, Lesson 9, students are prompted to compare mathematical models: "How is the chip model different from other math drawings we have made?"

Students are supported in sustaining effort through complex or multi-step tasks that require ongoing problem solving. For example, in Mission 6, Lesson 6, students solve a two-part word problem involving repeated addition, drawing a model and writing an equation. The digital platform (e.g., Mission 7, Lesson 4) further encourages perseverance by offering adaptive prompts like "How many X? How many Y?" when incorrect responses are given.

The materials consistently guide students to interpret and represent mathematical situations in meaningful ways. In Mission 5, Lesson 12, students generate word problems to match number sentences, while in Mission 7, Lesson 26, students use rulers as number lines to write and compare equivalent subtraction equations. Teachers prompt students to discuss whether the changing of equations maintains their truth, supporting conceptual understanding.

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

Materials help students understand that problems can be solved using different strategies. In Mission 2, Lesson 2, students compare two different strategies for solving $5 + 3 + 5$ and determine both are valid. In Mission 4, Lesson 14, students use coins to represent place value and explore alternate ways to model the same quantity, reinforcing conceptual flexibility.

The materials prompt students to explain how and why different strategies work. For example, in Mission 2, Lesson 6, students solve $5 + 9$ using two different approaches to making ten, then explain and compare their thinking with a partner. In Mission 4, Lesson 13, students use 24 and 21 to write both greater than and less than statements, then explain the reasoning behind each.

Lessons guide students to justify why different strategies work through discussion and reflection. In Mission 4, Lesson 11, students compare number lines, quick tens, and linking cubes to decide which strategy is most useful and explain their reasoning. In Mission 4, Lesson 17, students use strip diagrams to model part-whole relationships and justify their representations as accurate, emphasizing the value of multiple valid approaches.

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.

The materials frequently prompt students to solve problems collaboratively, promoting active engagement in mathematical reasoning. For example, in Mission 7, Lesson 6, students construct arrays using 12 tiles, generate repeated addition equations, and compare results with their partners. In Mission 4, Lesson 16, students work in pairs to model and solve multi-digit addition problems using place value representations.

Students are consistently asked to express their mathematical thinking through writing. For instance, in Mission 4, Lesson 26, students explain different addition strategies in writing using place value language. In Mission 3, Lesson 9, students respond to a real-world problem involving place value, using words, drawings, and numbers to justify their answers.

Classroom dialogue is a routine expectation, with frequent teacher prompts guiding discussion. In Mission 4, Lesson 15, students read and compare number sentences using tens and hundreds, followed by a partner discussion on similarities and differences. Additionally, in Mission 3, Lesson 11, students solve and discuss a multi-step place value problem using visual models, justifying their strategies through peer conversation and teacher-facilitated sharing.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	6/6
6.2b	All criteria for guidance met.	4/4
—	TOTAL	10/10

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 their problem-solving approaches through explanations, arguments, and justifications. In Mission 4, Lesson 16, students decide whether $56 + 85$ equals 131 or 141 and explain whose answer is correct using numbers, pictures, or words. Similarly, in Mission 4, Lesson 27, students justify their strategy by explaining how they interpreted the word "more" in a strip diagram.

Educators are supported in facilitating student reflection on their own strategies using explanation, argumentation, and justification prompts. In Mission 5, Lesson 12, students respond to questions like "Why did you not choose a simplifying strategy?" to evaluate the efficiency of their chosen method. This reflection deepens students' understanding of mathematical structure and strategy selection.

The materials embed consistent opportunities for students to explain, argue, and justify their solutions during collaborative problem solving. For example, in Mission 3, Lesson 11, students draw place value models and explain their strategy step by step, while in Mission 8, Lesson 15, students engage in a discussion about whether two halves can equal four fourths. These discussions foster mathematical reasoning and support conceptual understanding.

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

Materials offer guidance and prompts for teachers to provide explanatory feedback based on anticipated misconceptions. Notes are embedded directly within the "Concept Exploration" portion of a lesson and labeled "Anticipated Misconceptions." The structure includes: a likely misconception based on student responses, guidance that includes an explanation, and one or more suggested prompts or teacher moves to address the misconception and guide students toward proficiency.

Materials offer specific teacher prompts to guide students in identifying, clarifying, and comparing their strategies. For example, in Mission 1, Lesson 5, teachers are prompted to draw a strip diagram if students do not independently use one, and to ask questions like, "Which drawing do you think is more efficient?" to deepen conceptual understanding.

Evidence from Mission 5, Lesson 20 shows that the materials provide guidance to support educators in offering explanatory feedback based on student responses. The note states that it is important to guide students to evaluate their thinking, as well as their partners' while generating and solving the word problem. This provides students an opportunity to evaluate their process and analyze errors.