

Essentials Skills Software Inc.

Supplemental English Mathematics, 2 Complete Math, Grade 2

Supplemental	9781989886335	Digital	Adaptive
MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC

Rating Overview

TEKS SCORE	TEKS BREAKOUTS	ERROR CORRECTIONS	SUITABILITY	SUITABILITY	PUBLIC FEEDBACK
	ATTEMPTED	(IMRA Reviewers)	NONCOMPLIANCE	EXCELLENCE	(COUNT)
46.99%	83	12	Flags Addressed	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	1 out of 21	5%
2. Progress Monitoring	1 out of 23	4%
3. Supports for All Learners	0 out of 37	0%
4. Depth and Coherence of Key Concepts	0 out of 16	0%
5. Balance of Conceptual and Procedural Understanding	4 out of 38	11%
6. <u>Productive Struggle</u>	0 out of 19	0%

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	1	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	1	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	The materials do not include an alignment guide outlining TEKS or ELPS and concepts covered, with a rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment).	0/5
1.1b	The materials contain a manual and videos to support implementation. The materials do not include usage recommendations and strategies for effective educator use in various contexts, such as just-in-time supports, advanced learning, or as a course.	1/3
1.1c	The materials do not include a TEKS correlation guide with recommended skill entry points based on diagnostic assessment results.	0/2
1.1d	The materials do not include protocols with corresponding guidance for unit and lesson internalization.	0/2
1.1e	The materials do not include resources, and guidance for instructional leaders to support educators with implementing the materials as designed.	0/2
_	TOTAL	1/14

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 have a scope and sequence with concepts/skills covered, but it is not aligned with the Texas Essential Knowledge and Skills (TEKS) or English Language Proficiency Standards (ELPS).

The materials do not provide a rationale for vertical or horizontal alignment.

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.

On the Teacher Dashboard in the Help Section under "Instructional Videos," the materials provide links to YouTube videos with embedded commercials. The videos are generic in focus and deal with logistical issues like administrator access, how to run reports, how to create an assignment, assign a pretest, etc.

There are no videos that are specifically about implementing *Complete Math* in grade 2. Instead, the videos are broad and cover all programs under the *Essential Skills* umbrella such as K–3 Reading, 4–6 Reading, K–3 Math, ELL (English Learning), Science/Geography, and more. Additionally, the videos reference and use examples that are not part of our product.

In the Help section of the Teacher Dashboard, educators can access the "Essential Skills Online Manual: Teaching & Practice Software," but it does not provide program usage or recommendations for adapting to meet student needs in various contexts.

The "Online Manual" includes sections "Using the Program" and "Using the Teacher Dashboard," but does not provide specific strategies for effective educator use, such as just-in-time supports, advanced learning, or as a course.

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

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

Due to the adaptive nature of the program, students are placed in learning pathways specific to their needs based on a pretest that is not aligned to the TEKS.

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

The materials do not include protocols with corresponding guidance for unit and lesson internalization. Instead, the program provides a report with pretest scores and a Hot Spot report that lists student scores in areas of difficulty.

Essential Skills, Complete Math Grade K–1 provides an instructional video tutorial page, but no videos cover unit and lesson internalization.

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

The materials do not include resources and guidance for instructional leaders to support educators with implementing the materials as designed. The materials provide links to a support page, which is provided outside of the materials and on the publisher's website, that describes the logistics of the program. The materials do not provide resources or guidance for instructional leaders to support their implementation of the materials.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	This guidance is not applicable to the program.	N/A
	These adaptive materials do not include responsive learning objectives,	
1.2b	lesson components with suggested time frames, and assessment	0/5
	resources aligned with the TEKS and ELPS.	
	The materials do not provide support for families in Spanish and English	
1.2c	for each unit. They only have suggestions on supporting the progress of	0/2
	their student.	
_	TOTAL	0/7

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 for grade 2 do not include responsive learning objectives that are TEKS-aligned or ELPS-aligned.

Lesson components do not have suggested time frames, and assessment resources do not align with TEKS or ELPS.

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 do not contain support for families with each unit. The materials do not provide suggestions for guardians to support the progress of their student.

The materials provide a printable letter in Spanish and English about getting started on the program at home, but the letter only provides logistical support for accessing and logging into the program.

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	Guidance meets the definition of assessment.	1/2
2.1b	The materials do not include guidance to ensure consistent and accurate	0/2
2.10	administration of instructional assessments.	0/2
	The materials do not have a print version of digital assessments.	
2.1c	The materials do not include or provide any accommodations (text-to-	0/4
2.10	speech, content and language supports, or calculators) that educators can	0/4
	enable or disable to support individual students.	
	The materials do not include diagnostic assessments with TEKS-aligned	
2.1d	tasks or questions, including interactive item types with varying complexity	0/4
	levels.	
	The materials do not include a variety of formative assessments with TEKS-	
2.1e	aligned tasks or questions, including interactive item types with varying	0/4
	complexity levels.	
_	TOTAL	1/16

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

The materials include one type of assessment in the form of a pre-/posttest. The materials define the pretests as a placement test and state that the posttest functions like the pretest.

The materials outline two types of pretests. One type assesses students until they score below 80 percent on a module, then generates an assignment that includes that module and all those that follow. The other type assesses all modules within the program and creates an assignment based only on the modules the student did not pass.

The materials do not define the pretest and posttest as diagnostic, summative, or formative assessments.

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

The materials provide a link in the Teacher Dashboard to videos under the heading "Help." The link directs users to the materials' public-facing website where there are links to YouTube videos, with commercials, that provide procedural support to teachers on how to assign pretests and posttests to students.

The materials do not offer specific guidance on how to consistently or accurately administer the assessments. The materials only instruct the teacher to assign the pretests and post-tests to students.

The materials lack guidance to support students and do not include clear directions for completing the pretests and posttests.

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 the digital pretests and posttests.

The materials do not provide accommodations of any type to support individual students.

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

The materials do not include diagnostic assessments with TEKS-aligned tasks or questions.

The materials do not include interactive item types with varying levels of complexity required by the TEKS.

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 do not include formative assessments with TEKS-aligned tasks or interactive questions.

The materials do not include interactive item types with varying levels of complexity required by the TEKS.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
	The materials do not include guidance for interpreting student	
2.2a	performance, nor do they have a rationale for each correct or incorrect	0/3
	response.	
2.2b	The materials do not provide guidance for using tasks and activities to	0/1
2.20	respond to student performance on assessments.	0/1
2.2c	The materials do not provide tools for teachers or students to monitor	0/2
2.20	progress and growth.	0/2
2.2d	This guidance is not applicable to the program.	N/A
2.2e	The materials do not provide checks for understanding.	0/1
_	TOTAL	0/7

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

The materials do not include guidance for interpreting student performance beyond looking at each student's correct and incorrect answers.

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

The materials provide reports that provide teachers with limited details, such as the topic assessed, time spent, number of questions attempted, number of questions correct, percentage correct, average score, highest scores, and the date of completion.

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

The materials do not provide guidance for using tasks and activities to respond to student performance on assessments.

The materials use a pretest and posttest that functions like a pretest to determine each student's learning path within the program.

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 do not provide tools for teachers to track student progress and growth. The materials provide limited reports that show the results of isolated skills or activities for individual students, but the

reports do not collect and report collated sets of data that allow teachers to track growth over time or across related concepts.

The materials do not include tools for students to self-monitor their progress and growth. In the student-facing materials, the only feedback provided for the student is passive and at the end of an assignment, where it shows a colored star, using gray for non-mastery, half gold for partial mastery, or gold for mastery, and an accuracy percentage. This color coding is not explained to the student, and the students cannot track their progress or growth throughout the learning path or the materials as a whole.

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 materials do not provide checks for understanding, nor do the materials offer differentiated practice to target specific skill gaps. A module is locked when a student achieves 80 percent or better, or stays open as long as the student's accuracy score is below 80 percent.

The materials present all students with the same sequence of activities or tasks and do not adapt in response to answer choices. Instructional adjustments occur only after a pretest or after a posttest that functions like a pretest.

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
	The materials do not include explicit educator guidance for lessons or	
3.1a	activities scaffolded for students who have not yet reached proficiency in	0/1
	prerequisite or grade-level concepts and skills.	
	The materials do not include explicit educator guidance for language	
3.1b	supports, including pre-teaching and embedded supports for developing	0/4
	academic vocabulary and unfamiliar references in text.	
	The materials do not include explicit educator guidance for enrichment and	
3.1c	extension activities for students who have demonstrated proficiency in	0/2
	grade-level and above-grade-level content and skills.	
	The digital materials do not include accommodations, including text-to-	
3.1d	speech, content and language supports, and calculators that educators can	0/3
	enable or disable to support individual students.	
	The materials do not include educator guidance on offering options and	
3.1e	supports for students to demonstrate understanding of mathematical	0/2
	concepts in various ways, such as perform, express, and represent.	
_	TOTAL	0/12

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.

The materials do not 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.

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

The materials do not include explicit educator guidance for language supports, including pre-teaching and embedded supports for developing academic vocabulary and unfamiliar references in text.

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 provide explicit educator guidance for enrichment or extension activities.

The materials do provide access to several hundred worksheets, but provide no educator guidance for using them to support learning.

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 digital materials do not provide 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 of any type to support individual students.

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

The materials do not include educator guidance on offering options and supports for students to demonstrate understanding of mathematical concepts in various ways.

The materials require students to perform the activity as presented. Students cannot demonstrate understanding in any other way, such as perform, express, and represent.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	The materials do not include any explicit prompts or guidance for	0/5
J.2a	educators.	0/3
3.2b	This guidance is not applicable to the program.	N/A
	The materials do not include multi-tiered intervention methods for various	
3.2c	types of practice and structures, or educator guidance to support	0/3
	intervention methods.	
	The materials do not include multi-tiered intervention methods for various	
3.2d	types of practice and structures, or provide educator guidance to support	0/2
	intervention methods.	
3.2e	The materials do not include prompts and guidance to support educators	0/2
5.26	in providing timely feedback during lesson delivery.	0/2
_	TOTAL	0/12

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

The materials do not include any explicit prompts or guidance for educators to build knowledge by activating prior knowledge, anchoring big ideas, or highlighting and connecting key patterns, features, or relationships through multiple means of representation.

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

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

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

The materials do not include multi-tiered intervention methods for various types of practice.

The materials do not include multi-tiered intervention methods for various types of structures.

The materials do not include educator guidance to support effective implementation of intervention methods.

The materials include extra worksheets for additional practice and reports to show teachers if the students mastered them. However, no multi-tiered system of supports are mentioned in this material, nor is there any educator guidance on how to use the worksheets.

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

The materials do not include enrichment and extension methods that support various forms of engagement.

The materials do not include guidance to support teachers in the effective implementation of enrichment and extension activities.

An "Instructional Videos" tutorial page is provided, but the videos do not include guidance to support educators in effectively implementing enrichment and extension methods.

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

The materials do not include prompts or guidance to support educators in providing timely feedback during lesson delivery.

In the student activities, right and wrong answers are reported with a sound, a colored square, a revealed puzzle piece, or a caricature. The student knows immediately if the answer was correct or incorrect. However, there is no educator guidance to provide timely feedback.

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	The materials do not include any embedded, linguistic accommodations.	0/4
3.3c	The materials do not include implementation guidance for use in bilingual/ESL programs.	0/1
3.3d	The materials do not include guidance to support emergent bilingual students.	0/8
3.3e	This guidance is not applicable to the program.	N/A
_	TOTAL	0/13

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 do not include any embedded linguistic accommodations. The materials do not include accommodations for all levels of language proficiency (as defined by the ELPS), nor do they engage students in using increasingly academic language.

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

The materials do not include implementation guidance for use in bilingual/ESL programs.

Essential Skills, Complete Math Grade K–1 provides an "Online Manual Teaching & Practice Software," but it does not address state-approved bilingual/ESL program models, such as dual language immersion or ESL pull-out programs.

An "Instructional Videos" tutorial page is provided, but the videos do not guide teachers on the principles and essentials of language acquisition programs.

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

The materials do not include guidance to support emergent bilingual students.

Essential Skills, Complete Math Grade 2 provides an "Online Manual Teaching & Practice Software," but it does not include embedded guidance to support students in developing academic vocabulary, increasing comprehension, building background knowledge, or making cross-linguistic connections through oral discourse.

An "Instructional Videos" tutorial page is provided, but the videos do not include embedded guidance to support students in developing academic vocabulary, increasing comprehension, building background knowledge, or making cross-linguistic connections through written discourse.

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	The practice opportunities throughout learning pathways (including	
	instructional assessments) do not require students to demonstrate depth	0/2
	of understanding aligned to the TEKS. The materials are not TEKS-aligned.	
4.1b	The questions and tasks, including enrichment and extension materials, do	
	not increase in rigor and complexity, leading to grade-level and above-	0.74
	grade-level proficiency in the mathematics TEKS. The materials are not	0/4
	TEKS-aligned.	
_	TOTAL	0/6

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

The materials provide practice opportunities that do not require students to demonstrate depth of understanding. For example, in "Grade 2 Subtraction," students are only asked to type in their answer for two-digit by two-digit subtraction. There is no way for them to show the depth of understanding of a particular strategy, or multiple strategies, just the procedural knowledge of solving the problem.

The materials provide assessments that are not aligned with the TEKS and, as such, do not require students to demonstrate a depth of 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 are not aligned to the TEKS and do not include questions and tasks that increase in rigor and complexity, leading to grade-level or above-level proficiency in mathematics.

Questions and tasks only require students to recall information or select single responses.

The materials do not contain extension and enrichment activities that build in rigor and complexity, leading to grade-level or above-level proficiency in mathematics TEKS.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	The materials do not demonstrate coherence across concepts horizontally within the grade level by connecting patterns, big ideas, and relationships.	0/1
4.2b	The materials do not demonstrate coherence across concepts vertically within the grade level by connecting patterns, big ideas, and relationships.	0/1
4.2c	The materials do not 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.	0/4
_	TOTAL	0/6

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

The materials present key concepts in isolated practice activities and do not connect big ideas horizontally across the learning pathway. For example, activities are bundled by a domain, such as "Numeration" or "Measurement," and no connection exists between domains to connect patterns, big ideas, and relationships.

The materials' practice problems are presented in isolation, without connecting them to overarching concepts or practicing them as specified in the TEKS. Additionally, activities focus solely on procedural practice without helping students recognize patterns or relationships between different mathematical concepts.

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 do not demonstrate vertical coherence. Instead, the materials present topics in isolation without revisiting prior concepts or connecting them to future learning.

The practice activities are bundled by domain, but each domain is a collection of isolated skills that do not cross topics or connect patterns, big ideas, or relationships.

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 do not connect students' prior knowledge of concepts to the concepts to be learned in the current grade level or future grade levels.

The materials do not connect students' prior knowledge of procedures to the concepts to be learned in the current grade level or future grade levels.

The materials group activities by domain, and each domain contains isolated activities. There are no teacher- or computer-guided lessons in these materials; instead, students are placed in learning paths that provide only isolated skill practice.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	The materials do not contain spaced retrieval opportunities with previously learned skills across learning pathways.	0/2
4.3b	The materials do not provide interleaved practice opportunities with previously learned skills and concepts.	0/2
_	TOTAL	0/4

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

The materials do not contain spaced retrieval opportunities with previously learned skills across learning pathways. For example, the activities are grouped by a single domain, such as "Geometry, "and provide isolated skill work on concepts within that domain. Once mastery is achieved in an activity, students lose access to it and cannot revisit it to review.

The materials assign learning pathways based on student performance on a pretest or posttest. Then, the materials move the student through each assignment created on the pathway, beginning with the first activity on the list and then moving sequentially to the last.

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

The materials do not provide interleaved practice opportunities with previously learned skills and concepts. The materials adopt a non-spiraling method, concentrating on individual concepts rather than revisiting and intertwining them across learning pathways.

The materials only include practice sets that focus on one concept or skill at a time. All concepts are presented in isolation and do not support flexible thinking as students learn to switch between different types of problems and strategies.

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	The materials do not provide opportunities for students to analyze or evaluate models and representations for mathematical concepts and situations.	1/3
5.1b	The materials do not provide opportunities for students to create concrete models to represent mathematical situations.	1/2
5.1c	The materials do not contain questions and tasks that provide opportunities for students to apply conceptual understanding to new problem situations and contexts.	0/1
_	TOTAL	2/6

5.1a – Questions and tasks provide opportunities for students to interpret, analyze, and evaluate models and representations for mathematical concepts and situations.

The program provides activities that require students to interpret models and representations. However, the questions do not require students to analyze and evaluate on a deeper level.

In the data problem-solving learning path, students must interpret graphs and representations to answer questions. For example, in the "Halloween Costumes" graphing activity, students are shown a bar graph of different costumes worn. Students interpret the data provided by answering questions, such as, "Is this a bar graph or a pictograph?"

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

The materials include questions and tasks that provide opportunities for students to create pictorial representations of mathematical situations. For example, one activity on data management provides the student with a blank graph, and the student must complete it according to the prompt. The program tells the student how many people liked a particular type of fruit, and the student represents that amount on the graph.

The materials do not provide opportunities for students to create concrete models to represent mathematical situations. The materials are fully digital and do not direct or suggest that students use concrete models concurrently with the digital activities presented.

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

The materials do not contain questions and tasks that provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

5.2 Development of Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.2a	The materials do not include tasks designed to build the fluency necessary	1/2
	to complete grade-level mathematical tasks.	172
5.2b	The materials do not provide opportunities for students to practice the	0/3
5.20	application of efficient, flexible, and accurate mathematical procedures.	0/3
	The materials do not provide opportunities for students to evaluate	
5.2c	mathematical representations, models, strategies, and solutions for	0/3
	efficiency, flexibility, and accuracy.	
5.2d	The materials do not contain guidance to support students in selecting the	0/1
	most efficient approaches when solving mathematics problems.	0/ 1
_	TOTAL	1/9

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

The materials do not support the development of fluency, such as understanding when and how to apply strategies, selecting from multiple approaches, and solving problems with confidence and comprehension. Instead, the materials focus on memorization and recall of facts and do not allow students to formulate strategies to improve their accuracy and speed.

The materials do not adjust lesson presentation based on student accuracy. Instead, the materials present module activities in the same order to all students. If the student scores lower than 80 percent, the module remains open for the student to repeat the activities until a passing score is achieved.

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

The materials present the student with a single strategy for solving problems and tell the student to select an answer or type a number, depending on the activity, and do not allow for flexibility or exploration of alternative strategies.

The materials do not ask the student to defend or explain answer choices. When the student selects an incorrect answer, the materials play an auditory sound, but do not prompt the student with a review or any feedback to help determine the correct answer. The materials allow the student to select multiple wrong answers in a row before the materials move to the next item.

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

The materials do not provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy.

The materials do not support critical thinking and problem-solving skills. Students are not asked to evaluate anything in the learning paths. Instead, the materials present students with a single strategy for solving a given problem.

The materials focus only on accuracy and do not provide opportunities for student reflection, explanation, or discussion.

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

The materials do not contain guidance to support students in selecting the most efficient approaches when solving mathematics problems.

The materials do not contain any educator, student, or instructional guidance or explanations of efficient approaches to problem solving.

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	The materials do not explicitly state how the conceptual and procedural emphasis of the TEKS is addressed.	0/2
5.3b	The materials do not include questions and tasks that provide opportunities for students to use concrete models, pictorial representations, and abstract concepts, as required by the TEKS.	0/3
5.3c	The materials do not include supports for students in connecting, creating, defining, or explaining concrete and representational models to abstract concepts as required by the TEKS.	0/6
_	TOTAL	0/11

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

The materials do not explicitly state how the conceptual emphasis of the TEKS is addressed, as the materials are not TEKS-aligned.

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 present all tasks in a lesson using one representation without a concrete-pictorial-abstract progression. For example, a task focused on adding 2 digits with 1 digit displays a traditional, double-row addition problem, and the student must type the correct answer. This activity is followed by nine more activities in the exact same format, where the only change is in the number sentence.

The materials do not consistently integrate practice opportunities using representations or manipulatives throughout lessons and units. For example, in the activity on comparing numbers, the student is only given 4 out of 12 tasks to use pictorial representations, such as base-10 blocks, and all of the representations and manipulatives are static.

The materials provide tasks requiring students to engage with representations or tools that are not aligned to grade-level content. For example, in a grade 2 measurement activity, the student is asked to compute area and perimeter, which are not part of the grade 2 TEKS. For example, in a grade 3 fraction activity, the student is asked to compare fractions smaller than eighths, which are not part of the grade 3 TEKS.

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 do not include supports for students in connecting, creating, defining, or explaining concrete and representational models to abstract concepts, as required by the TEKS. The materials only provide sporadic, limited support with a purple rule button. The purple rule button is not available in every lesson, but it is a simple visual reference. The materials do not read aloud or explain the content, and there is not any guidance for, or practice with, connecting, creating, defining, or explaining models in any.

5.4 Development of Academic Mathematical Language

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

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

In the online platform, after navigating to Geometry > Translation, Rotation, or Reflection, students are asked "Is it a reflection, rotation, or translation?" The student must choose between a translation, a rotation, or a reflection by clicking on one of the three options. By incorporating visuals (objects), students can connect mathematical vocabulary and concepts to concrete representations.

After navigating to Numeration > Working with Numbers > Working with an Abacus, students are prompted to "Click on two beads until you reach the blue side, and then click when you have moved the total number of beads to the number it represents." By engaging in this activity, students explore the concepts of quantity and number representation by using an abacus as a visual and a manipulative.

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 do not provide embedded educator guidance to support student use of academic mathematical vocabulary. The only guidance provided to the teacher is on the Teacher Dashboard in the form of YouTube videos that explain the procedural use of the materials in areas like creating a class or assigning a pretest.

The materials do not contain a platform or method for using academic mathematical vocabulary in context or communicating with peers and educators. All activities are individual student tasks.

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

The materials do not include embedded guidance of any kind. The materials only provide educators with logistical information about using the program through the manual and help videos on the Teacher Dashboard.

The materials do not include opportunities for discourse. All activities are individual student tasks.

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

The materials do not provide embedded educator guidance for facilitating mathematical conversations. Discourse is not a part of, or a pathway to, learning in these materials.

The materials do not include any collaborative learning activities. All activities in the materials are completed independently and do not prompt, nor provide opportunities for students to engage in mathematical conversations.

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

The materials do not provide embedded educator guidance for anticipating a variety of student responses. The materials do not include any embedded guidance, and the educator does not have a role in the independent practice activities that comprise the materials.

The materials do not provide correction, redirection, or alternative strategies when the student answers incorrectly. When the student answers a question incorrectly, the materials give the student an auditory or visual response only, such as a beep or the selected response turning red. Additionally, the materials are inconsistent in whether the student is given a second attempt to solve the problem or not, shown the correct answer, or moved to the next question without any warning.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	The materials do not have TEKS process standards integrated appropriately into the materials.	0/1
5.5b	The materials do not include a description of how process standards are incorporated, and connected throughout the learning pathways.	0/2
5.5c	The materials do not include an overview of the TEKS process standards incorporated into each lesson.	0/1
_	TOTAL	0/4

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

The materials do not have TEKS process standards integrated appropriately into the materials. The materials are not TEKS-aligned, nor do they integrate process standards.

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

The materials do not include a description of how process standards are incorporated, or connected.

The materials do not include descriptions of any learning process standards, nor do they provide a learning map showing integration of process standards.

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

The materials do not include an overview of any of the activities, nor do they include an overview of process standards incorporated into each lesson. The student simply clicks a task, and then an activity is presented.

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
	The materials do not provide opportunities for students to think	
6.1a	mathematically, persevere through solving problems, or make sense of	0/3
	mathematics.	
	The materials do not support students in understanding, explaining, and	
6.1b	justifying that there can be multiple ways to solve problems and complete	0/3
	tasks.	
	The materials are not designed to require students to make sense of	
6.1c	mathematics through multiple opportunities for students to do, write	0/3
	about, and discuss math with peers and/or educators.	
	TOTAL	0/9

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

The materials do not require students to think mathematically beyond rote problem solving. The materials do not offer follow-up questions that encourage the student to think deeply about the concepts. For example, when learning about money, in one task, the student chooses the value of the money presented. The student is not challenged to think deeply about mathematical concepts related to money.

The materials do not give the student the opportunity to persevere through problem-solving and making sense of mathematics. When the student answers a question incorrectly, the student receives an auditory or visual response, such as a beep or the selected response turning red. Additionally, inconsistency exists in whether or not the student is given a second attempt to solve the problem, shown the correct answer, or moved to the next question without any warning. The materials also contain multiple-choice items where the student can potentially guess the correct answer or never obtain a correct answer. The materials do not guide the student toward solving a problem; they simply move the student through the sequence of isolated activities.

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

The materials do not help students understand that there are multiple ways to solve problems. In the activities, students are required to provide answers in a fill-in-the-blank or multiple-choice format.

The materials do not allow the student to explain or justify answers. There is no opportunity for discourse of any kind in these materials. All problems are mathematical calculations.

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 do not include opportunities for the student to do, write about, or discuss math with peers or educators. All activities in the materials are rote practice and completed independently, regardless of where a student begins based on their pretest results.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	The materials do not support educators in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.	0/6
6.2b	The materials do not include prompts, and guidance to support educators in providing explanatory feedback based on student responses and anticipated misconceptions.	0/4
_	TOTAL	0/10

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

The materials do not provide instructional support for educators, nor do they provide questions, or prompts that educators can use to guide students in sharing and reflecting on their problem-solving approaches. The materials only provide logistical and procedural support for using the program, such as how to create a class and import students.

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

The materials do not provide prompts, or guidance for providing explanatory feedback. Educators are only provided logistical support for using the program and are not provided with any instructional or learning guidance for use with the program.