Great Minds PBC

Supplemental English Mathematics, K
Math Catalyst Texas, Grade K

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

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	20	0	Flags Not in Report	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	21 out of 23	91%
2. Progress Monitoring	18 out of 20	90%
3. Supports for All Learners	29 out of 36	81%
4. Depth and Coherence of Key Concepts	5 out of 16	31%
5. Balance of Conceptual and Procedural Understanding	37 out of 38	97%
6. Productive Struggle	17 out of 19	89%

Breakdown by Suitability Noncompliance and Excellence Categories

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

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

IMRA Quality Report

1. Intentional Instructional Design

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

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	All criteria for guidance met.	5/5
1.1b	All criteria for guidance met.	3/3
1.1c	All criteria for guidance met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	14/14

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

The "Alignment Guide" aligns the Texas Essential Knowledge and Skills (TEKS), the learning path for each concept, connects to the TEKS "Mathematical Process Standards," and organizes the English Language Proficiency Standards (ELPS) into a K–3 grouping.

The *Implementation Guide* identifies "Embedded Supports for Language Proficiency" and specifies the locations of these supports for each proficiency level. For example, in "Early Numeracy: Perceptual Subitizing Within 5," the guide describes how students at the Pre-Production level, in "Concept Mini Lesson Objective 3," circle groups that show a given number of dots. For students at the Beginning level, in "Concept Mini Lesson, Objective 1," the "Language Support" note offers guidance on using language as a resource by encouraging students to say numbers in their home languages and then pair them with numbers in English.

The *Strand by Grade Scope and Sequence* states, "Math Catalyst Texas provides a mathematical progression of concepts unbound by the constraints of grade-level standards . . . the Concepts and Objectives within each strand build upon each other to form a ladder of mathematical understanding . . . Equipped with student data that can help inform decisions, teachers can move among the Objectives in a strand independent of grade level to find the most useful support for meeting individual students' needs so that they can continue to climb."

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

The materials provide an *Implementation Guide* with usage recommendations and strategies to support effective educator use, including just-in-time supports, advanced learning opportunities, and full-course implementation. The guide defines the program as "a supplemental instructional resource designed to be used with a Multi-Tiered System of Supports (MTSS) . . ." and clarifies its focus on Tier 2 and Tier 3 instruction delivered outside of Tier 1 core instruction. The guide includes visual representations of this definition, the covered concepts, and their vertical and horizontal alignment.

In the "Program Implementation" section, teachers receive practical tools such as "Possible Ways to Use Components" and "Sample Schedules" in 15- and 30-minute formats. To support emergent English bilingual learners, the guide offers strategies for setting up center rotations, accompanied by a sample lesson schedule.

In the "Concept Internalization" section, educators reflect on guiding questions to determine entry points into "Concept Mini Lessons," advance instruction using "Practice and Application," and assess student progress through the "Progress Check."

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

The materials include a "Concept Diagnostic Assessment" available at the start of each "Concept," designed to measure student mastery of the skills in the "Concept." The assessment includes a rubric, and each assessment item is labeled with the correlating TEKS for the objectives assessed. The *Implementation Guide* states the provided rubric is "to help teachers analyze student responses, determine a student's proficiency level, and identify skill entry points."

The materials include a *Strand by Grade Scope and Sequence* and an *Implementation Guide* used as a TEKS correlation guide. The *Implementation Guide* directs educators, under "Determining Intervention Needs for Students," to administer a district- or school-selected screening tool and analyze the resulting data to determine next steps. These assessments, combined with the "Concept Diagnostic Assessment," provide data that can be used to inform instruction and provide timely intervention.

The "Concept Diagnostic Assessment" guides educators to specific objectives within the "Concept" of the materials. For example, in the kindergarten "Concept Diagnostic Assessment: Perceptual Subitizing Within 5," the materials direct educators to consider several statements when making "instructional decisions about skill entry points based on the data collected from the Concept Diagnostic Assessment" such as "Can the student instantly recognize up to 5 objects in a linear arrangement? (Objective 1), Can the student instantly recognize up to 5 objects in an organized arrangement? (Objective 2), Can the student instantly recognize up to 5 objects in various arrangements? (Objective 3)."

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

The materials include protocols to help teachers internalize units, supported by the *Implementation Guide*'s "Concept Internalization" section. Guiding questions help teachers use the three components effectively, such as, "Which objective is a good starting point for small-group instruction?" In kindergarten, the "Concept Mini Lessons: Conceptual Subitizing Within 10" progresses from recognizing up to 5 objects to up to 10 by composing smaller quantities.

The "Progress Check" section asks, "What does proficiency look like with the content of this concept?" In kindergarten, the "Progress Check: Conceptual Subitizing Within 10" helps teachers use data from the "Progress Check Tool" to guide instruction. Questions focus on whether students can compose totals from groups of up to 5, 7, or 10 objects.

The "Concept Guide" outlines materials, preparation strategies, and how to address misconceptions with step-by-step teacher and student actions. In the kindergarten guide for "Perceptual Subitizing Within 5," teachers use familiar objects and questions like, "How many eyes do you have?" to reinforce the goal: "Sometimes we do not have to count to tell how many—we just know it."

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

The materials include an *Implementation Guide* that instructional leaders can use to support effective program implementation. This guide outlines the program's structure, offers suggestions for using each component, and provides a sample schedule. Additionally, the "Concept Guide" lists the teacher and student materials, recommended preparations, and key considerations for instruction.

The materials include a "Concept Internalization" of the *Implementation Guide* to support teachers and instructional leaders in the use of the materials. Each major component of the materials includes questions for educators that can be used by instructional leaders. For example, the "Concept Mini Lessons" section lists questions such as "Which objective is a good starting point for small-group instruction? What do my students already know? What can they already do? What do they need support with?"

The *Implementation Guide* also includes a "Guidance for Leaders" section that mirrors the guidance in the "Concept Internalization" section. For example, the "Concept Mini Lessons" section lists questions such as "How are data analysis and the Progression of Mini Lesson Objectives used to determine the appropriate amount of support that will meet students' needs?"

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	Materials do not include ELPS in either objectives, or assessments.	5/7
1.2b	This guidance is not applicable to the program.	N/A
1.2c	All criteria for guidance met.	2/2
—	**TOTAL**	7/9

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

The materials do not include ELPS in either the assessment resources or the learning objectives, though lessons incorporate ELPS-aligned tasks involving listening, speaking, reading, and writing. Teachers track progress using tools like the "Observational Data Recording Sheet" and informal notes.

The materials include 10-minute lesson plans with clear objectives, time frames, summaries, differentiation strategies, and progress monitoring tools. Each "Concept Guide" lists required materials, preparation tips, supports for addressing misconceptions, language scaffolds, and "Family Math" pages. For example, grade 1's "Concept Guide: Compare and Order Numbers to 120" includes progress checks, mini lessons, manipulatives, templates, and student pages for Objectives 1–4.

Assessments are directly aligned with the TEKS and increase in complexity across objectives. In the kindergarten "Progress Check: Composition and Decomposition Within 10," students move from using objects, to drawing pictures, to representing number bonds. These assessments build in complexity across Objectives 1–3.

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

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

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

The materials contain support for families in both English and Spanish for each unit for families to use at home to support learning. For example, each concept has a "Family Math" letter for families in both languages.

This letter states the objective, explains the objective, and then provides simple practice for home. The letter presents illustrations, sample questions, and correct student answers.

The "Family Math" letter presents direct support for students at home using academic vocabulary in both languages. For example, in the kindergarten "Concept Guide" for "Early Numeracy: Perceptual Subitizing within 5," the "Family Math" letter reads, "Your student is working on perceptual subitizing within 5. Perceptual subitizing involves instantly recognizing the total of a small group of objects without counting them." The letter ends with sample questions, correct answers, and illustrations of the objective.

2. Progress Monitoring

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

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	All criteria for guidance met.	2/2
2.1b	All criteria for guidance met.	2/2
2.1c	This is a static program and does not include digital assessments. Materials do not include digital assessments that include printable versions and accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.	Not Scored
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

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

The materials define various instructional assessments and their purposes. The *Implementation Guide* describes "Core Math Assessments" as formative and summative tools for measuring student proficiency in specific skills and concepts, useful for identifying intervention needs. It also presents the "Pause and Monitor Tool" as a way for students to reflect on and track their progress.

According to the *Implementation Guide*, the "Analyze Student Progress" section in "Concept Mini Lessons" includes questions for informally assessing student proficiency on current objectives. It also offers guidance on using the "Observation Data Recording Sheet" to document performance and make instructional notes during any lesson component.

The "Progress Check Tool" serves as both a pre- and post-assessment, with a rubric to evaluate student responses and determine proficiency. Each section explains how to apply the tool to specific objectives. For instance, in grade K's "Subtraction: Take Away to Subtract Within 10," the tool is used to collect proficiency data and is not graded.

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

Each lesson's "Concept Guide" outlines materials and preparation steps for administering the "Progress Check" and "Pause and Monitor Tool." For example, the kindergarten "Verbal and Object Counting to 10"

guide lists required teacher and student materials and preparation instructions such as printing tools and gathering ten counters.

Instructional assessments are supported by tools like the "Observational Data Recording Sheet," which helps teachers document student performance and adjust instruction. In the kindergarten "Perceptual Subitizing Within 5" assessment, teachers are guided to use scripted language, provide support in students' home language, and pause the assessment if early questions are missed.

Each "Progress Check" includes detailed steps for administration such as a teacher script, specific actions, and expected student responses to ensure consistency. For instance, the kindergarten "Take Away to Subtract Within 10" check includes an overview, guiding questions, and a proficiency rubric.

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

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

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

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

The materials include a "Concept Diagnostic Assessment" at the beginning of each "Concept" with TEKS-aligned tasks or questions and interactive item types with varying complexity levels. The *Implementation Guide* states, "The Concept Diagnostic Assessment can be used before or during instruction to collect data about a student's current understanding, skills, strengths, and areas for growth. It enables educators to monitor students' progress, identify learning gaps, and adapt instruction to meet students' needs."

Each "Concept Diagnostic Assessment" includes a rubric that ranks student proficiency from "Not Yet Proficient," "Partially Proficient," and "Proficient" and lists the TEKS for each objective assessed in the "Concept." Tasks and questions within each assessment are sequenced from simple to complex and include various tasks and responses for students to show progression towards mastery. Teachers are directed to end the assessment if the student is unable to answer the first questions and try again after the student receives more instruction.

In the kindergarten "Concept Diagnostic Assessment: Perceptual Subitizing Within 5," students begin by verbally responding to a subitizing task before using counters to model a number in an arrangement, then finally recording their own answer using a writing tool and the included student assessment page.

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

The "Assessment and Data Collection" section on page 7 of the *Implementation Guide* outlines how the program supports ongoing formative assessment. This section details the use of two key tools, the "Observational Recording Sheet" and the "Progress Check Tool." The "Observational Data Recording Sheet" is designed to help educators capture formative assessment data during daily instruction. The *Implementation Guide* provides guidance on using this sheet to collect evidence of student understanding across various components of the program. Additionally, each concept includes a "Progress Check Tool" that presents problems aligned to the TEKS, sequenced from simple to complex. This design allows educators to evaluate students' grasp of the concept's objectives at increasing levels of depth. The "Using the Progress Check Tool to Inform Instruction" section provides targeted guidance on interpreting student responses and using the data to inform next steps in instruction—an essential feature of high-quality formative assessment.

The materials include an "Analyze Student Progress" section in each "Concept Mini Lesson" with questions for teachers to use to informally monitor students' progress. Questions include "Monitor," which assess students in the moment, and "Questions to Advance Student Thinking," which extends the objectives in the lesson for teachers to informally assess depth of learning.

The *Implementation Guide* identifies the "Observational Data Recording Sheet" as a "versatile tool that can be used to record student performance on each objective within a concept . . . Teachers can use the recording sheet to make notes about students' performance during any component, including written work on Practice pages."

The materials include "Progress Checks" with tasks of increasing complexity. In the kindergarten "Progress Check: Early Numeracy Number Symbols to 20," students move from counting and matching numerals to writing numerals independently. In the "Place Value Progress Check," students use counters and ten-frames to represent teen numbers as ten and some more ones.

2.2 Data Analysis and Progress Monitoring

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

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

The materials do not provide a rationale for correct and incorrect responses.

The materials contain instructional assessments, scoring information, and guidance for interpreting student performance. The materials provide a "Progress Toward Proficiency Rubric," which outlines how to assess students' proficiency levels at the end of each unit's "Progress Check." The rubric guides teachers in rating students as "Not Yet Proficient," "Partially Proficient," or "Proficient," based on descriptors that progress from simple to complex problems. If a student cannot answer the initial, simpler questions, the materials instruct the teacher to "end the assessment and retry after more instruction."

In the "Concept Guide" for each strand, the materials include an "Addressing Student Misconceptions" section listing frequent misconceptions and explicit guidance for teachers on how to address them. The "Analyze Student Progress" section within each "Concept Mini Lesson" gathers data on student performance to determine mastery, including questions to "Monitor Progress," "Advance Student Thinking," and "Plan Future Practice."

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

The materials provide guidance on using included tasks and activities to respond to student trends in assessment performance. The *Implementation Guide* identifies the "Progress Check" as a tool for collecting data on student proficiency, supported by a rubric that highlights strengths and intervention needs.

The *Implementation Guide* provides direction for using tools like the "Analyze Student Progress" section, "Observational Data Recording Sheet," and "Progress Check Tool" to respond to performance trends.

These tools help track proficiency, record notes during lessons, and analyze student work to determine next steps.

Each "Concept Mini Lesson" includes a "Progression of Mini Lesson Objectives" aligned with the previous "Progress Check," and provides skill-specific guidance. Lessons include scripted support, examples, activities, and differentiation tips. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," teachers are directed to begin with students who can count to 20, but need help describing teen numbers as ten ones and some ones.

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 tools for teachers to track student progress and growth, as well as tools for students to monitor their own development. One tool is the "Observational Data Recording Sheet," embedded in every concept. This sheet allows teachers to document performance on each objective and make notes during any lesson component, including written practice.

The "Pause and Monitor Tool" supports student self-assessment by prompting reflection on learning and progress. According to the *Implementation Guide*, students use it to write "I can" statements, track skill development, gather evidence, and collaborate on goals.

The "Progress Check Tool" is used as a pre- and post-assessment to evaluate proficiency with skills taught in "Concept Mini Lessons." It includes a rubric to help teachers analyze responses, celebrate progress, and plan for mastery.

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

The materials provide prompts and guidance to support educators in conducting frequent checks for understanding at key points throughout each lesson or activity. "Teacher Tips" in the "Application" section offer strategies for monitoring progress and differentiating instruction. For example, in the kindergarten "Conceptual Subitizing Within 10," a tip suggests facilitating a small-group activity to informally assess understanding and provide support.

Each "Concept Mini Lesson" includes an "Analyze Student Progress" section with targeted questions to help teachers assess understanding. In the kindergarten "Place Value" lesson, teachers monitor learning by asking if students can represent and describe teen numbers as 10 ones and some more ones using objects.

Scripted questions embedded in each "Concept Mini Lesson" guide teachers in checking for understanding during instruction. For example, in the kindergarten "Addition: Composition and

Decomposition Within 10," the teacher asks students to identify parts of a story, represent them on a whiteboard, and express their thinking in a number sentence.

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

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

3. Supports for All Learners

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

3.1 Differentiation and Scaffolds

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	All criteria for guidance met.	4/4
3.1c	All criteria for guidance met.	2/2
3.1d	This is a static product, and materials do not have a digital component. Therefore, they do not include digital materials with accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.	Not Scored
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	9/9

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

Materials provide explicit guidance for lessons and activities scaffolded for students who have not yet mastered prerequisite or grade-level concepts and skills. The "Determining Intervention Needs for Students" section of the *Implementation Guide* advises teachers to collect informal data and identify appropriate interventions by asking students to explain their thinking during math instruction, recording classroom observations, and listening to student conversations.

The *Implementation Guide*'s "Possible Ways to Use Components" section explains how to incorporate the "Concept Mini Lessons" that guide teachers to review or preview concepts in small groups and embed the appropriate content within lessons to strengthen skills.

Each "Concept Mini Lesson" opens with a "Progression of Mini Lesson Objectives," guiding the teacher on entry points based on the student's current proficiency. For instance, in the kindergarten lesson "Early Numeracy: Perceptual Subitizing Within 5," Objective 1 advises starting with students who can count to five and connect quantities to numbers but still need support instantly recognizing up to five objects.

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 support for pre-teaching unfamiliar references in text or for developing academic vocabulary. The "Development of Academic Mathematical Language" of the *Implementation Guide* describes the embedded support for teachers to help students understand and use precise mathematical language such as using manipulatives and visuals, and following the "Language Support" notes in "Concept Mini Lessons" to scaffold vocabulary growth. Further, the materials include "Key Terminology" cards in each "Concept Guide." The cards include "student-friendly definitions and visual representations that provide a flexible opportunity for pre-teaching and reinforcing academic mathematical language." Each set of cards can be used as flashcards, portable word walls, and sorting activities.

The materials embed support for developing academic vocabulary during instruction. In the lesson "Concept Mini Lessons: Compose, Decompose, and Represent Teen Numbers," Objective 1 begins with students reading the numbers 11–19 as the teacher asks, "Did you hear the word teen when you said the numbers?" The teacher then gestures to the numbers and clarifies, "We call the numbers 11 through 19 teen numbers; we do not hear the word teen when we say eleven and twelve, but they are still teen numbers."

The materials also embed supports for unfamiliar references in text. In the kindergarten lesson "Addition: Compose and Decompose Numbers to 10," a picture shows various vehicles, and the "Language Support" section instructs the teacher to define a vehicle as "a machine that moves people or things, such as a car, truck, or bus." Students are encouraged to name other vehicles, such as trains, airplanes, or helicopters, and to identify the vehicles they see in the picture.

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 *Strand by Grade Scope and Sequence* document shows how concepts build across grades, enabling teachers to identify opportunities for extending learning beyond the current grade level. The "Start here if students can . . ." statements in each "Progression of Mini Lesson Objectives" chart allow teachers the opportunity to work with students on above-grade-level skills for enrichment or extension. Teachers then use the "Solve a Task" in the "Application" activities to promote enrichment through open-ended problem solving and flexible reasoning.

The *Implementation Guide* states the "Practice and Application" sections are to "provide enrichment and extension opportunities." Each "Practice and Application" has a chart with listed activities, the purpose of

the activity, and considerations. These considerations make suggestions on how to modify the activities to meet the needs of the student based on proficiency level.

The materials include specific prompts for advanced questioning during discussions. At the end of each objective in the "Concept Mini Lesson," there are "Questions to Advance Student Thinking." For example, in the lesson "Early Numeracy: Verbal and Object Counting to 10," Objective 3 asks, "How do you know you counted all the objects? When you are counting, what does the last number you say tell you?"

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

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

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

The materials include a "Read-Draw-Write Tool" for students to use throughout the lesson independently, with a partner, and in stations. The *Implementation Guide* states, "The Read–Draw–Write Tool can support students as they use the Read–Draw–Write process to solve problems." This tool provides visuals, prompts, and questions to remind students how to approach solving a variety of problems.

The section "TEKS Mathematical Process Standards" in the *Implementation Guide* states, "The TEKS Mathematical Process Standards (MPS) are seamlessly woven into different components of the program. Students use objects, drawings, numeric representations, and precise language to communicate mathematical ideas. In the "Application" section, students select tools and techniques to solve problems, and in Concept Mini Lessons, they analyze relationships to connect prior learning to new concepts."

Each "Concept Mini Lesson" guides teachers in supporting student demonstrations of understanding mathematical concepts. For example, in the lesson "Place Value: Concept Mini Lessons: Compose, Decompose, and Represent Teen Numbers," students use objects and a ten-frame to represent teen numbers. They also use place value cards, create number bonds to show teen numbers as a ten and some ones, and write addition sentences to represent teen numbers.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	Materials do not 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.	0/5
3.2b	All criteria for guidance met.	2/2
3.2c	All criteria for guidance met.	3/3
3.2d	All criteria for guidance met.	2/2
3.2e	Materials do not include prompts, and guidance to support educators in providing timely feedback during lesson delivery.	0/2
—	**TOTAL**	7/14

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

Materials do not 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.

While the materials do offer connections between patterns and big ideas, the materials do not offer prompts and guidance for educators to build this knowledge. The connections are embedded on the student side of the materials.

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

The materials offer educator guidance for effective instruction using strategies like "sharing the learning objective with students visually and verbally," which the *Implementation Guide* calls "an essential instructional approach" for supporting students not yet proficient in math. This practice connects new learning to prior knowledge, introduces terminology, and builds student confidence. Additional strategies—such as choral reading, partner reading, and visual support—enhance understanding.

The *Implementation Guide* outlines how to structure instruction through components like "Possible Ways to Use Components," "Sample Schedules," and "Station Rotations." For example, the "Concept Mini Lessons station" provides small-group instruction, while the "Practice and Application stations" support aligned practice and enrichment. The "Bring Your Own Tech Station" allows students to complete teacher-selected digital activities related to the concept.

Under "Tiered Instructional Recommendations," the guide states, "For supplemental support, instruction can be delivered in a small-group setting," and for intensive support, it "can be individualized, adapted, and delivered in a group size that meets the needs of students." *Math Catalyst* offers short, targeted Tier 2 and Tier 3 lessons outside of core instruction. These lessons follow three–four sequenced objectives and use the "Progression of Mini Lesson Objectives" to address specific student needs.

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

The materials offer multi-tiered intervention strategies and educator guidance for implementation. In the "Possible Ways to Use Components" section of the *Implementation Guide*, "Concept Mini Lessons" are recommended for small-group instruction to "review, preview, strengthen skills and concepts," while "Practice and Application" components can "build stations" or offer direct instruction. "Practice Pages" support "spaced retrieval, spiral review, and interleaved practice," and "Application" tasks offer "enrichment and extension opportunities" and help "build fluency and automaticity."

According to the *Implementation Guide*, "Math Catalyst is a supplemental instructional resource designed to be used within a Multi-Tiered System of Supports (MTSS) to maximize student achievement in mathematics." It supports Tier 2 and Tier 3 instruction through short, targeted lessons delivered outside of core instruction and sequenced across three–four objectives. Lessons can be used in small groups or individualized settings, with "Practice and Application" activities offering aligned, guided, or independent practice; in kindergarten, these are combined into a single "Practice and Application" component.

The "Practice and Application" section of each concept guides teachers in choosing flexible activities based on student needs. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," the materials advise, "Use any combination of the activities to support students as they compose, decompose, and represent teen numbers." Activities include tracing number sentences, modeling equations in different ways, using visual supports like linking cubes, and extending learning through student-written number sentences.

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 and extension methods that promote varied student engagement, along with implementation guidance for educators. The *Implementation Guide* states, "The Practice and Application stations can be used flexibly to engage students in aligned practice and enrichment activities," allowing them to "work independently, with a partner, or in a small group" to build fluency and automaticity. These components support differentiated instruction through targeted practice.

"Concept Internalization" in the *Implementation Guide* provides guiding questions for planning enrichment and extension across lesson components. In "Concept Mini Lessons," teachers are prompted to ask, "What do my students already know? What can they already do? What do they need support with?"

Similarly, in "Practice and Application" and "Progress Check," teachers reflect on questions such as, "How do the Practice Pages progress from simple to complex?" and "What does proficiency look like with the content of this concept?"

Additional support is embedded in each concept's "Practice and Application" section. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," the materials advise teachers to use a chart to "determine how to use the activities to best meet the needs of your students." Activities address key mathematical ideas including "quantity, number, and subitizing; counting; counting and ordering; composition of number and place value; and early addition and subtraction."

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

The materials do not include prompts and guidance to support educators in providing timely feedback during lesson delivery. Guidance for educators comes at the beginning of the unit as teachers choose a starting point based on student skills, and at the end of lessons and units in the form of progress monitoring, but not as 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	All criteria for guidance met.	4/4
3.3b	This guidance is not applicable to the program.	N/A
3.3c	All criteria for guidance met.	1/1
3.3d	All criteria for guidance met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	13/13

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

The materials include educator guidance on providing linguistic accommodations for all English language proficiency levels, as outlined by the ELPS. Although the *Implementation Guide* states that "Guidance for supporting EB students in making cross-linguistic connections through oral and written discourse is embedded in the Concept Guide," this guidance is uniform across grades K–2. The materials offer tips for EBs, including differentiated accommodations by proficiency level at the beginning of each concept's "Alignment Guide," which supports advancing students toward higher levels of academic language across lesson components.

The *Implementation Guide* notes that the "Alignment Guide for each concept includes alignment to the ELPS and highlights embedded supports for different levels of language proficiency." Most lessons include one embedded support, which often consists of gestures or visuals like number cards, and are similar across all lessons.

The materials include "Language Support" notes within some "Concept Mini Lessons," offering guidance to build vocabulary, comprehension, and background knowledge. However, not every lesson contains this support, and when provided, it typically consists of teacher-modeled phrases and simple sentence frames that are uniform across lessons. These methods primarily assist students at the beginning level of language acquisition and offer a scaffold for students progressing toward advanced proficiency.

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

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

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

The materials include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs. The *Implementation Guide* contains support in the "Using Math Catalyst in State-Approved Bilingual/ESL Programs" section of the materials. A table is presented for educators with the "Instructional Model, Recommended Structure, and Recommended Modification" available to support educators in their specific program.

The "Using Math Catalyst in State-Approved Bilingual/ESL Programs" guidance includes references to the other sources of support available to the teacher. For example, in the row designated as the "Transitional Bilingual Early Exit/Late Exit" program, educators can use the materials "as designed, allowing the certified bilingual teacher to use materials (Key Terminology, Play a Game, Family Math) creatively to support learning."

The *Implementation Guide* states that materials include "built-in support for emergent bilingual (EB) students so they can gain proficiency with the English they need to access the mathematics." Supports are embedded in the "Concept Guide," "Alignment Guide," and "Language Support" notes, including opportunities for students to speak with a partner before sharing with their peers and an exemplar response for teachers to clarify, restate, or summarize student output.

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

The materials include embedded guidance to support emergent bilinguals in increasing comprehension, building background knowledge, or making cross-linguistic connections through written discourse or increasing comprehension through oral discourse. Each "Concept Guide" contains "Key Terminology" cards and a "Family Math" page that references the same cards. When used in the classroom and at home, the cards increase "comprehension through discourse, leveraging home language through cross-linguistic connections, or supporting writing or spelling of key vocabulary."

The materials include guidance to support emergent bilingual students in building academic vocabulary, background knowledge, and making cross-linguistic connections through oral discourse. For example, in

"Subtraction: Take Away to Subtract Within 10," students "turn and talk" using manipulatives to explain their thinking, and in "Composition and Decomposition Within 10, Objective 3," the teacher defines *vehicle* and uses images before introducing a story problem.

The materials guidance for supporting oral cross-linguistic connections across all "Concept Guides." For instance, in "Early Numeracy: Perceptual Subitizing Within 5," teachers are advised to create cross-linguistic anchor charts with key terms in English and students' home languages, along with images. The materials provide examples of "Key Terminology" along with visual support in English and Spanish to aid in the creation of these charts.

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

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

4. Depth and Coherence of Key Concepts

Materials are designed to meet the rigor of the standards while connecting concepts within and across grade levels/courses.

4.1 Depth of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	Materials do not include enrichment and extension materials that lead students beyond grade level.	2/4
—	**TOTAL**	4/6

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

The materials provide TEKS-aligned practice opportunities that develop conceptual understanding. Each concept includes worksheets, games, and hands-on activities in the "Practice and Application" section. For example, in the kindergarten teen numbers lesson, students play "Teen Numbers Race" using number cards to represent teen numbers as ten ones and some more ones.

Students demonstrate understanding by responding to teacher questions and completing structured tasks. In the kindergarten "Early Numeracy" lesson, the teacher uses a show-and-respond subitizing activity and guides students to recreate numbers with counters. The "Monitor" section helps identify learning gaps or misunderstandings.

In the kindergarten "Progress Check: Place Value" assessment, students use counters, ten-frames, and number bonds to show understanding of TEKS K.2B. Students are assessed using a rubric that measures proficiency in reading, writing, and representing numbers to 20. Students demonstrate mastery by composing, decomposing, and representing numbers like 16 as 10 and 6, and completing number bonds and sentences for numbers such as 14.

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 do not include opportunities that move students beyond grade-level TEKS; however, they do include enrichment and extension tasks that increase in rigor. For example, the "Place Value" strand ranges from K–5, allowing teachers to select lessons based on student needs. However, these lessons remain within grade-level standards.

Instruction is structured around "Concept Mini Lessons" for Tier 2 and Tier 3 support, with hands-on "Practice and Application" activities for enrichment and extension. In kindergarten, perceptual subitizing tasks extend conceptual understanding of quantity, number composition, and early operations beyond TEKS K.2D. These activities help deepen learning but stay within the scope of the grade-level TEKS.

Each "Concept Mini Lesson" ends with an "Analyze Student Progress" section that includes questions and tasks to assess understanding and guide instruction. While enrichment and extension are embedded in the core content, they are limited in number—typically only two–three questions and three–four activities. This may not provide enough opportunities for students to engage with content beyond grade level.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	Materials do not demonstrate coherence vertically across concepts and grade bands, including connections from grade K–6, by connecting patterns, big ideas, and relationships.	0/1
4.2c	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**	1/6

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

The materials demonstrate coherence across concepts horizontally within the grade level by connecting patterns, big ideas, and relationships. The *Implementation Guide* notes that concepts build upon one another—for example, understanding multiplication foundations supports multiplying two-digit by one-digit numbers. The sequence of objectives highlights this horizontal alignment across lessons.

The *Strand by Grade Scope and Sequence* outlines both horizontal and vertical alignment, showing how concepts build across and within grades. It states, "Concepts and Objectives within each strand build upon each other to form a ladder of mathematical understanding." In kindergarten, students progress from "Verbal and Object Counting to 5" through "Counting to 20," then transition to "Number Symbols to 10."

In kindergarten, students begin composing and decomposing numbers up to 10 using counters before applying the concept with number bonds and numerals. This progression from concrete to abstract is reinforced in the "Addition: Count All to Add Within 10" lesson, where students model math stories in early objectives.

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 coherence vertically across concepts and grade bands, including connections from grade K–6. The materials only go through grade 5.

In the *Implementation Guide* under "Supplemental Instructional Materials Design," the materials state, "Within a grade level, concepts are structured to build upon one another. For example, students learn about the basic foundations of multiplication to apply this understanding when multiplying a two-digit

number by a one-digit number. Similarly, concepts build across grade levels, such as when students apply their understanding of whole-number multiplication to multiply decimals."

In the *Strand by Grade Scope and Sequence*, the materials list the concepts in strands with the vertical alignment of the concept from grades K–5. The materials state, "Math Catalyst Texas provides a mathematical progression of concepts unbound by the constraints of grade-level standards. Although the Texas Essential Knowledge and Skills (TEKS) are provided as a useful reference for teachers, the Concepts and Objectives within each strand build upon each other to form a ladder of mathematical understanding. These objectives can be used to find a student's last secure rung on that ladder—the rung where their knowledge is sturdy enough to stand on."

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 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 include prompts or reviews for students to connect to prior learning or explanations about how their current learning is connected to future learning.

Each "Concept Mini Lesson" includes a "Progression of Mini Lesson Objectives" that helps teachers assess prior knowledge before instruction. In "Perceptual Subitizing Within 5," students begin with linear arrangements and progress to recognizing objects in varied formats. While this structure enables students to build on what they already know, it does not explicitly connect prior knowledge to current or future grade levels.

4.3 Coherence and Variety of Practice

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

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

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

Though the *Implementation Guide* recommends starting each lesson by sharing objectives and connecting them to prior learning and key terms. It also emphasizes using "Concept Mini Lessons" to help students analyze mathematical relationships between past and current concepts. There are no opportunities for spaced retrieval with previously learned skills across the learning pathways.

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

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

Though the materials suggest stations are built from "Practice and Application" components—where teachers are encouraged via the "Components" and "Possible Ways to Use Components" sections of the *Implementation Guide* to assign practice pages for spaced retrieval, spiral review, enrichment, and fluency-building—these stations are not interleaved as part of the lessons or activities and are separate.

5. Balance of Conceptual and Procedural Understanding

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

5.1 Development of Conceptual Understanding

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

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

The *Implementation Guide* explains that the program balances conceptual understanding and procedural skills through progressively complex "Concept Mini Lessons" and supporting "Practice" activities. "Application" tasks extend learning by having students transfer knowledge to new contexts using tools and strategies of their choice. TEKS "Mathematical Process Standards" are integrated throughout as students use objects, drawings, numeric representations, and precise language to build understanding.

The materials provide opportunities for students to interpret and analyze visual models. In the kindergarten "Place Value: Composition and Decomposition Within 10, Objective 2," students examine a picture of sharks and answer guided questions to understand part-whole relationships. The lesson encourages them to group the sharks in different ways to explore number composition within 10.

The materials use common misconceptions to deepen understanding of models and representations. In the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers Concept Guide," students use ten-frames and number bonds to decompose teen numbers as 10 ones and some more ones. Teachers are prompted to ask, "Do you see 10 ones? Where? How many extra ones? How many in all?" to guide interpretation.

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

The materials include tasks that prompt students to create concrete and pictorial models of math situations. The *Implementation Guide* highlights the "Read–Draw–Write Tool," which uses visuals, prompts, and questions to support problem-solving. Students read the problem, create or adjust drawings as new information is discovered, and write number sentences or equations to represent their thinking.

Each "Concept Mini Lesson" provides questions and tasks for students to create models and pictorial representations. For example, in the kindergarten "Early Numeracy: Concept Mini Lessons: Verbal and Object Counting to 5," students use linking cubes and their own hands to show one-to-one

correspondence of numbers through 5. Later in the lesson, students use the "mark-and-count strategy" to count items in a given image.

The "Progress Check Tool" includes tasks that progress from simple to complex, requiring students to create concrete and pictorial representations of learned concepts. In the kindergarten "Addition: Composition and Decomposition Within 10," students use counters and number sentences in Problem 1 and pictures in Problem 2. Problems 3 and 4 ask students to represent compositions and decompositions using number bonds.

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

The materials provide opportunities for students to apply conceptual understanding to new contexts through all curriculum components. The *Implementation Guide* states, "The objectives in Concept Mini Lessons progress in complexity and provide opportunities for students to develop conceptual understanding and procedural fluency," while the "Practice" and "Application" components help students "solidify" skills and "transfer knowledge to new applications and build fluency."

Each strand's "Progression of Mini Lesson Objectives" supports applying conceptual understanding across tasks. In the K–1 "Addition: Concept Mini Lessons: Composition and Decomposition Within 10," students move from using objects and pictures to number bonds, then apply this understanding in "Count All to Add Within 10" by using linking cubes and number lines to create equations.

Students extend learning in the "Practice and Application" section by applying conceptual understanding in new situations. For example, in the K–1 "Composition and Decomposition Within 10," students play "Shake Those Disks" and use "Part–Total Pictures" to complete number bonds and show thinking with or without manipulatives, helping build part–whole understanding.

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.

In the "Station Rotations" section of the *Implementation Guide*, the materials include two suggested schedules to support the use of the included materials to build student automaticity and fluency. Rotations include working with the teacher, one practice station, and two application stations for working independently or with peers on grade-level mathematical tasks.

According to the *Implementation Guide*, "Practice and Application" supports fluency-building through "spaced retrieval, spiral review, and interleaved practice," as well as through games. In the kindergarten, "Place Value: Compose, Decompose, and Represent Teen Numbers," students trace number sentences, use 10-frames, and organize objects from 11 to 19 to reinforce TEKS K.2B by representing teen numbers as "10 ones and some more ones."

Each "Concept Mini Lesson" includes an "Analyze Student Progress" section with "Questions to Advance Student Thinking" that are paired with student tasks. For example, in the same kindergarten unit, the teacher asks, "Can you say the number the Say Ten way? Now the regular way? Show me your group of 10 . . . How many extra ones do you have after you make a group of 10?" These questions guide students in applying and articulating their understanding of place value concepts.

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

The materials provide consistent opportunities for students to apply efficient, flexible, and accurate mathematical procedures. The *Implementation Guide* highlights the "Read–Draw–Write Tool," which offers visuals, prompts, and questions such as "Can I draw something?" and "What can I draw?" to support students as they solve problems and write equations that reflect their thinking.

"Concept Mini Lessons" include tasks that build procedural fluency through a progression of strategies. For example, in the kindergarten "Addition: Count All to Add Within 10," students begin with linking cubes to model joining, then count using a number path, and finally create number sentences. During the "Progress Check," students demonstrate procedural accuracy and flexibility by choosing among multiple methods to solve problems.

In the "Practice and Application" section of the kindergarten "Addition: Count All to Add Within 10," students apply procedures using hands-on and visual tools. Activities include tracing number sentences, using dice with 10-frames, and building number bonds to explore composition and decomposition. These tasks help students move from concrete models to abstract representations while reinforcing fluency.

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 provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy. In the kindergarten "Concept Mini Lessons" for "Subtraction: Take Away to Subtract Within 10," students build sets with linking cubes to model 5−1=4, then apply this understanding to pictorial representations by identifying the subtrahend, minuend, and difference.

Teachers use questions paired with tasks to assess students' ability to evaluate mathematical thinking. For example, in the "Analyze Student Progress" section of Objective 4 in the kindergarten "Subtraction: Take Away to Subtract Within 10," questions include, "How can you use dots and the number bond to show the subtraction?" and "Where do you see the total and parts in the number bond? In the number sentence?"

The "Practice and Application" component allows students to evaluate models and strategies independently or with a partner. In the kindergarten "Subtraction: Take Away to Subtract Within 10," students trace subtraction sentences, tell subtraction stories, roll dice to subtract and cross off items, and match picture cards to number sentences using printed or self-made number bonds. These activities reinforce subtraction concepts through multiple representations.

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

The materials provide guidance to help students choose efficient problem-solving strategies. In the *Implementation Guide* under "About the Read–Draw–Write Tool," it states the tool includes "visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Students read the problem, draw to represent it, revise their drawings with new information, and then write equations and a concluding statement.

The "Progress Check Tool" guides students through increasingly efficient strategies. In the kindergarten "Addition: Count All to Add Within 10," the materials note, "The Progress Check Tool has problems that are sequenced from simple to complex," starting with using a number path and progressing to solving without context. Students move from one-to-one correspondence to visual representations using available tools.

The "Progression of Mini Lesson Objectives" supports the development of increasingly efficient problem-solving methods. In the kindergarten "Subtraction: Take Away to Subtract Within 10," students begin with linking cubes and pictorial models, advance to number paths and number bonds, and eventually create their own visual models using dots. This progression supports flexible and efficient mathematical thinking.

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 materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. The *Implementation Guide* states that program components are "structured to balance the development of conceptual understanding with procedural skills," with "Concept Mini Lessons" building complexity, "Practice" solidifying understanding, and "Application" promoting fluency through real-world contexts. This structure ensures students develop a deep understanding while gaining procedural accuracy and flexibility.

In "Concept Mini Lessons: Composition and Decomposition Within 10," students build part–whole understanding by using objects, pictures, and number bonds to represent compositions and decompositions. They also write number sentences and use visual models to show their thinking. Teachers use questions from "Analyze Student Progress: Monitor" to assess whether students can compose and decompose numbers and represent them accurately.

In "Practice & Application: Composition and Decomposition Within 10," students work independently or with a partner using hands-on materials and number sentences to explore part–whole relationships. These tasks reinforce conceptual understanding and help students apply procedures accurately and efficiently. This structure supports the transition from conceptual knowledge to procedural fluency.

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 include questions and tasks that provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS. In the *Implementation Guide* under "About the Read–Draw–Write Tool," the materials state the tool "provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Prompts include "Can I draw something? What can I draw?" followed by drawing, labeling known and unknown values, writing equations, solving, and stating the answer.

Each "Concept Mini Lesson" begins with a progression from concrete to pictorial to abstract models. For example, in the kindergarten "Addition: Composition and Decomposition Within 10," students compose

and decompose numbers using objects, pictures, and number bonds. Tasks involve counting bears, fingers, and partitioning sets, with guiding questions like "What does a number bond help us see?"

The "Progress Check Tool" allows students to demonstrate understanding through concrete, pictorial, and abstract models. In the kindergarten's "Addition: Composition and Decomposition Within 10," students use two-color counters to act out stories, identify parts in pictures, and complete number bonds to show decompositions from visual models.

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.

Each "Concept Mini Lesson" contains "Teacher Tips" and "Language Support" notes, which offer guidance to educators to support students in explaining and defining concrete models, representational models, and abstract concepts. Guidance includes how to engage students in mathematical discourse with their peers to explain models and concepts, sentence frames and sentence starters to support students in defining and explaining concrete and representational models, and ideas for creating anchor charts to support understanding of models and concepts.

The materials support students in connecting and creating concrete and representational models to abstract concepts through tools like the "Read–Draw–Write Tool," which provides visuals, prompts, and guiding questions. In the kindergarten "Progress Check" for "Subtraction: Take Away to Subtract Within 10," students use linking cubes, pictorial models, and number bonds to show their understanding and explain the parts of a subtraction sentence. These tasks help students make connections between mathematical ideas using concrete and abstract representations, as outlined by the TEKS.

Embedded support in lessons and take-home activities reinforces connections between models and abstract ideas. The *Implementation Guide* highlights that students use drawings, numeric representations, and precise language to communicate mathematical thinking. In both classwork and "Family Math" pages, students analyze relationships, apply strategies, and explain their thinking using visual models and guided questions.

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 provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies using the "Read-Draw-Write" tool. For example, the *Implementation Guide* states, "The tool provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Prompts include, "Ask, 'Can I draw something?' Then ask, 'What can I draw?' Draw to represent the problem as you reread . . . Label what is known and unknown. Ask, 'What does my drawing show me?' Write number sentences or equations to represent your thinking. Solve. Write a statement that answers the original question."

The materials include "Language Support" for students to develop academic mathematical language. For example, in the kindergarten "Concept Mini Lesson: Compose, Decompose, and Represent Teen Numbers," the materials state, "Saying teen numbers the Say Ten way supports students in understanding the numbers as ten ones and some more ones. Consider creating an anchor chart listing numbers 11 through 19 the Say Ten way followed by the numeral."

In the "Practice and Application" sections of the materials, students use manipulatives to develop their academic language. For example, in the kindergarten "Early Numeracy: Verbal and Object Counting to 10," students practice verbal counting and one-to-one correspondence by using "concrete objects for counting to ten . . . pictures of cats and of dots on dice . . . items in various arrangements . . . [and] count cubes, matching each cube to a numeral."

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 to extend students' use of academic mathematical vocabulary in context when communicating with peers and educators. Each "Concept Guide" contains "Key Terminology" cards. Mathematical terms paired with visuals and a definition are presented in English and Spanish. Students and educators use these cards in various ways to extend academic

vocabulary between peers such as using the cards "as flashcards, as a portable word wall, to build background knowledge, or to use in semantic sorts."

The materials include embedded educator guidance to scaffold and support students' use of precise mathematical vocabulary during communication with peers and teachers. The *Implementation Guide* states, "Math Catalyst includes embedded support to help students understand and use precise mathematical language," noting that teachers model precision by restating student responses and using visuals. "Language Support" notes in "Concept Mini Lessons" provide additional scaffolding strategies to develop and reinforce vocabulary.

The guide emphasizes vocabulary consistency, especially when teaching composition and decomposition of place value, stating, "Math Catalyst strives for consistency by using the terms as indicated in the chart." Teachers are encouraged to "validate and restate students' statements" using alternative terms to deepen understanding. Students apply academic language with support—for example, in the kindergarten "Early Numeracy: Verbal and Object Counting to 20," teachers offer sentence starters such as "We counted the cubes by . . ." to guide mathematical explanations.

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

The materials include embedded guidance to support student use of appropriate mathematical language and academic vocabulary in discourse. The *Implementation Guide* recommends the "Read–Draw–Write Tool," which "provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." It offers two versions of the tool, advising teachers to "select and print the version . . . appropriate for your students" and to consider laminating it for repeated use throughout the year.

Embedded support for students is found in "Concept Mini Lessons" in the "Language Support" section. For example, in the kindergarten "Early Numeracy: Verbal and Object Counting to 5," the "Language Support" in Objective 2 states, "Consider offering sentence starters such as 'We counted the cars by . . .' to support students in describing how they counted."

Support for student application of appropriate mathematical language and academic vocabulary in discourse is found in the "Concept Mini Lessons." For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," teachers guide students to "Use the following sentence frame to demonstrate how to represent the number 15: is 10 ones and ___ ones." Students are invited "to turn and talk about how they can show teen numbers as 10 ones and some more ones."

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, allowing students to hear, refine, and use math language with peers in "Concept Mini Lessons." For example, in the kindergarten "Subtract: Take Away to Subtract Within 10," students review the use of mathematical symbols to relay information. The materials state, "We use special symbols to write a subtraction number sentence. Instead of writing the words 'take away,' we write a subtraction sign. Instead of writing the word 'is,' we write an equal sign. Read the number sentence like this: 5 minus 1 equals 4. Try it."

The materials include "Teacher Tips" and "Language Support" in the "Concept Mini Lessons" to facilitate mathematical conversations. For example, in the kindergarten "Addition: Composition and Decomposition Within 10," the "Teacher Tip" states, "Students may begin to informally discover the commutative property of addition. For example, students may say, '5 is 1 and 4' or '5 is 4 and 1.' Consider using this discovery to emphasize that the order of the parts does not change the total." The "Language Support" states, "Support students with language production by using the Number Sentences template from Objective 1. Consider posting and pointing to these sentence frames as students share their number sentences."

In the "Practice and Application" section, students hear, refine, and use math language with peers. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," students engage in a game where they must complete number bonds. As the game progresses, "Each player then writes the teen number in the total. Players say the teen number as 10 ones and ____ ones."

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

The materials provide embedded guidance to anticipate a variety of student answers, including exemplar responses to questions and tasks, and guidance to support and/or redirect inaccurate student responses through structured teacher guidance. For example, the "Concept Mini Lessons" in each unit include crafted sample dialogues with anticipated student responses, exemplar answers, and strategies for refining or redirecting student thinking.

The materials include visual and analytical tools to support educators with various student responses. For example, lessons provide visual examples of proficient student work and include "Questions to Advance Student Thinking" at the end of each "Concept Mini Lesson" to help teachers identify misconceptions and scaffold guidance based on student responses.

Each "Concept Guide" contains a "Student Misconceptions" section, which includes explicit strategies for addressing common misunderstandings, enabling educators to give timely, targeted feedback that fosters accurate learning.

5.5 Process Standards Connection

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

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

The materials include TEKS process standards integrated appropriately into the materials. The "Family Math" page for each unit contains visual representations of the concepts to be taught, along with information for families. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," students "use objects like counters to help them see a teen number as 10 ones and some more ones," represent teen numbers with 10-frames and number bonds, and write addition sentences to show composition and decomposition.

Each "Concept Mini Lesson" includes a "Progression of Mini Lesson Objectives" that outlines the concept, tools, and representations used. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," the "Progression of Mini Lesson Objectives" lists ten-frames, counters, place value cards, number bonds, and number sentences to support composing and decomposing teen numbers. Students select appropriate tools, solve problems using manipulatives, and explain their thinking through symbols, diagrams, and precise language both verbally and in writing.

In "Practice and Application," students access the integrated TEKS process standards by using appropriate tools and techniques to solve problems and communicating and justifying their mathematical thinking using various representations. For example, in the kindergarten "Place Value: Compose, Decompose, and Represent Teen Numbers," students use 10-frames and number cards to count and organize items from 11 to 19 and use number bonds to help them understand how teen numbers are composed of 10 ones and some more ones.

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, the *Implementation Guide* states, "The TEKS Mathematical Process Standards (MPS) are seamlessly woven into different components of the program." Integration of the process standards includes students communicating mathematical ideas using various representations and precise language, choosing appropriate tools and methods to solve problems in

"Application," and exploring relationships between past and current concepts to deepen understanding in "Concept Mini Lessons."

The "Alignment Guide" for each strand lists the TEKS and the process standards for each concept. For example, the "Place Value" strand lists process standards 1.C, 1.D, 1.E, 1.G for the kindergarten "Compose, Decompose, and Represent Teen Numbers," process standards 1.A, 1.C, 1.D, 1.E, 1.G for the grade 1 "Compose, Decompose, and Represent Numbers to 120," and process standards 1.A–1.G for the grade 2 "Compose, Decompose, and Represent Numbers to 1,200."

The *Strand by Grade Scope and Sequence*, states "Math Catalyst Texas provides a mathematical progression of concepts unbound by the constraints of grade-level standards. Although the Texas Essential Knowledge and Skills (TEKS) are provided as a useful reference for teachers, the Concepts and Objectives within each strand build upon each other to form a ladder of mathematical understanding." Teachers use the objectives and current student data to determine a starting point for the student based on the strand versus the specific TEKS.

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

The materials do not include an overview of the TEKS process standards incorporated into each lesson. The "Alignment Guide" for each unit lists the TEKS process standards incorporated into the unit, but the full process standard is not defined. The TEKS process standards are not included in any other overviews. The *Implementation Guide* states, "Although all components provide space for TEKS MPS by design, the 'Alignment Guides' help teachers track which TEKS MPS are emphasized in each concept. More than one TEKS MPS may be identified per concept."

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.

The materials provide opportunities for students to think mathematically during "Concept Mini Lessons" and "Questions to Advance Student Thinking." For example, in the kindergarten "Concept Mini Lesson: Addition: Composition and Decomposition Within 10," students build their understanding of part–total relationships by using objects dispersed on paper plates to represent number bonds, verbally describing the relationships, and completing number sentences to represent their thinking. The "Questions to Advance Student Thinking" further support students by asking, "Where is the total in your number bond? How can you break apart the total to show the parts? Can you do it another way?"

The materials provide opportunities for students to persevere through solving problems using the "Read-Draw-Write Tool" from the *Implementation Guide*, which "provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Students persevere by reading parts of the problem, asking questions to themselves about the problem, creating drawings and representations, labeling the known and unknown, and finally adding number sentences and statements to their solutions.

The materials provide opportunities for students to make sense of mathematics by providing "Practice and Application" sessions. For example, in the kindergarten "Addition: Composition and Decomposition Within 10," students work independently or with a partner to play games and complete tasks to develop an understanding of part–total relationships by decomposing numbers in various ways using number bonds, pictures, objects, and number sentences to represent their thinking.

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

The materials support students in understanding that there can be multiple ways to solve problems and complete tasks. For example, in the kindergarten "Concept Mini Lesson: Addition: Composition and Decomposition Within 10," the "Questions to Advance Student Thinking" asks, "How can you break apart

the total to show the parts? Can you do it another way? How does your number bond match the parts and total in the picture?"

The materials support students in explaining that there can be multiple ways to solve problems and complete tasks. For example, in the kindergarten "Practice and Application" for "Addition: Composition and Decomposition Within 10," students explore part–total relationships by composing and decomposing numbers using number bonds, pictures, and objects, both independently and with partners. In each task, students must determine the parts "in more than one way."

The materials support students in justifying that there can be multiple ways to solve problems and complete tasks. For example, in the kindergarten "Concept Mini Lesson: Addition: Composition and Decomposition Within 10," students determine the parts and the total from an image of vehicles in two rows presented by the teacher. The teacher guides the students to determine other ways to find the total of seven. "We know that 3 and 4 are parts inside 7. I wonder if there is a different way to sort these vehicles. Think. Do you see different parts inside the total? . . . How did you break apart the total to show the parts?"

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 are designed to require students to make sense of mathematics through multiple opportunities for students to do math with peers and/or educators using "Practice and Application." For example, in the kindergarten "Subtraction: Take Away to Subtract Within 10," students work in pairs to practice subtraction within 10 by tracing numerals and symbols, telling subtraction stories, using dice and crossing off items, and matching picture cards to number sentences.

The materials are designed to require students to make sense of mathematics through multiple opportunities for students to write about math with peers and/or educators by using the "Read-Draw-Write Tool" from the *Implementation Guide*, which "provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Students read parts of the problem, ask questions to themselves about the problem, create drawings and representations, then label the known and unknown. Finally, students add number sentences and written statements to their solutions.

The materials are designed to require students to make sense of mathematics through multiple opportunities for students to discuss math with peers and/or educators using "Questions to Advance Student Thinking." For example, in the kindergarten "Concept Mini Lesson: Subtraction: Take Away to Subtract Within 10," questions include, "How can you use cubes and the number bond to show the subtraction? How can you write numbers in the number bond to show the subtraction? What can you cross out? How does the number bond help you see the part that is left?"

6.2 Facilitating Productive Struggle

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

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

The materials support educators in guiding students to share their problem-solving approaches, including explanations, arguments, and justifications. For example, in the kindergarten "Concept Mini Lesson: Addition: Compose 10," students use linking cubes to compose the number 10 and explore the commutative property. Students are encouraged to "turn and talk about why 6 + 4 and 4 + 6 both equal 10" while using their linking cubes, explaining, arguing, and justifying their reasoning.

The materials support educators in guiding students to reflect on their problem-solving approaches, including explanations and justifications through the use of "Questions to Advance Student Thinking." For example, in the kindergarten "Concept Mini Lesson: Addition: Compose 10," questions include, "Can you compose 10 with two parts? . . . with three parts? . . . How does the number path help you see the parts that make 10? . . . Does the total change if you switch the order of the parts?" Students use the tools available to them to justify their explanation.

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

The materials do include prompts and guidance to support educators in providing explanatory feedback based on anticipated misconceptions. However, the guidance is found at the beginning of the unit and not in the lessons. For example, in the "Concept Guide" of the kindergarten "Subtraction: Take Away to Subtract Within 10," the common misconception among students is not understanding where the total belongs in a subtraction number bond. Teachers are prompted to "remind students that a number bond models how a total can be broken up into parts, with the total in the circle where two arms connect."