MIND Education

English Mathematics, K

InsightMath Texas Grade K

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Full-Subject, Tier-1	**9781606653692**	**Both Print and Digital**	**Static**

Rating Overview

TEKS SCORE	ELPS SCORE	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	100%	8	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	28 out of 28	100%
2. Progress Monitoring	25 out of 26	96%
3. Supports for All Learners	27 out of 27	100%
4. Depth and Coherence of Key Concepts	19 out of 19	100%
5. Balance of Conceptual and Procedural Understanding	41 out of 41	100%
6. Productive Struggle	22 out of 22	100%

Breakdown by Suitability Noncompliance and Excellence Categories

SUITABILITY NONCOMPLIANCE FLAGS BY CATEGORY	IMRA REVIEWERS	PUBLIC	Flags NOT Addressed by November Vote
1. Prohibition on Common Core	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	7
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.	4/4
1.1b	All criteria for guidance met.	2/2
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**	12/12

1.1a – Materials include a scope and sequence outlining the TEKS, ELPS, and concepts taught in the course.

In the *Program Overview Guide*, the "Standards" section contains "Texas Essential Knowledge and Skills Content Standards" and "Texas Essential Knowledge and Skills Mathematical Process Standards" sections that organize the TEKS into Algebraic Reasoning, Data Analysis, Geometry, Number Operations, and Personal Financial Literacy. It outlines the TEKS and concepts taught in each unit throughout the instructional year. Additionally, there is an "English Language Proficiency Standard" section that organizes the ELPS into Listening, Speaking, Reading, and Writing and outlines the ELPS taught in each unit throughout the instructional year.

The materials include a yearlong *Scope and Sequence* of concepts for instruction, showing the order these concepts occur throughout the grade level from Unit 0 through Unit 10.

1.1b – Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days–165, 180, 210).

In the *Program Overview Guide*, the "Pacing Details" section in the "Pacing" section outlines the concepts and the suggested pacing for each unit. It includes a drop-down menu that further breaks down the pacing of each component. The materials provide a varied number of instructional days, between 168 and 179.

The kindergarten "Pacing Suggestions" include a 165-day pacing calendar to accommodate a modified school year while still fully covering each unit.

1.1c – Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.

In the "Mathematics" section for each unit, the "Conceptual Understanding" section provides explanations about the logic behind unit progression and how students use previously learned skills to build on their understanding. For example, in Unit 3, the "Conceptual Understanding" section notes that "In this unit, students build on their previously developed number sense, exploring how numbers are made up of other numbers by using number bonds and by understanding part–part–total relationships."

The "Mathematics" section also contains a "Coherence" section that outlines what students learned previously, what they will learn in the current unit, and how the concepts will be used in future units. For example, in Unit 3, the "In the Future" section notes that "In grade 1, students will continue to use this knowledge to add and subtract within 20."

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

At the beginning of each unit, the "Schema Building" section explains the "Big Ideas" within the unit with corresponding guidance for unit and lesson internalization. For example, in Unit 1, the "Schema Building" section clarifies that "In this unit, students begin to explore what it means to think mathematically. They develop their own schema for how to participate in a mathematics community as they describe various mathematical tools and consider how to use them." In the "Mathematics" section for each unit, the "In This Unit" section provides a more detailed explanation of the concept progression through the unit.

Each lesson contains questions, an overview, objectives, vocabulary, preparation for the lesson, standards, differentiation ideas, and a preview of the lesson slides. For example, in Unit 1: Lesson 6, the "Differentiation" section supports content understanding and further internalization of the concept of "longer" during the lesson.

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

The Digital Help website includes leader-specific documents focused on leading implementation across a campus, as well as planning ongoing professional development.

The "Supporting Teachers" section provides resources for effective implementation of the program and explains how to use the resources.

The "Support for District Level Leaders" section provides guidance for effective implementation of the program and explains how to structure the timeline to ensure instructional leaders understand the materials and are prepared for implementation.

The help desk contains various links for teachers, school leaders, and district leaders. For example, the help desk has articles to support teachers, students, and rostering.

1.2 Unit-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	All criteria for guidance met.	2/2
1.2b	All criteria for guidance met.	2/2
—	**TOTAL**	4/4

1.2a – Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.

In the "Mathematics" section, the "Coherence" section establishes connections between previously learned concepts and strategies. This section references where a topic was first introduced and outlines both the background knowledge teachers need to deliver the unit and what students need to understand it. For example, in Unit 6, the "Coherence" section clarifies that "In kindergarten, students have been developing foundational number sense through counting and comparing. In the first four units, they explored number relationships within 10 by counting objects, using five and ten frames, and understanding that numbers represent quantities. Students also discovered active addition and subtraction through joining and separating contexts, using concrete models to show these actions. These experiences with numbers and operations have prepared students to further explore the relationship between parts and totals, connecting physical arrangements to symbolic representations."

The materials provide the teacher with the academic vocabulary necessary to understand the concepts in each lesson within the unit. The academic vocabulary is listed in the intro of each lesson, below the questions, overview, and objectives. For example, in Unit 2: Lesson 8, the academic vocabulary is *strategy* (new), *count*, *count backward*, *number*, *number path*, *order* (noun), and *row*.

1.2b – Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

The *Family Guide* provides strategies and activities in both English and Spanish so families can support students' learning and development at home. In Unit 2, the *Family Guide* suggests using "Counting Everywhere!" to practice counting various objects.

The *Family Guide* lists the objectives of the unit and provides suggestions for how families can support student progress and achievement. In Unit 2, the "Helpful Hints" section provides advice such as, "Kindergarteners may see two equally-spaced rows that each have 5 coins and agree that they are equal, but when they watch someone spread out one of the rows, they will say that the wider-spaced row has more coins." This is an example of how parents can support learning and explain misconceptions.

1.3 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.3a	All criteria for guidance met.	8/8
1.3b	All criteria for guidance met.	3/3
1.3c	All criteria for guidance met.	1/1
—	**TOTAL**	12/12

1.3a – Materials include comprehensive, structured, detailed lesson plans that include daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson (aligned with the TEKS and the ELPS).

The lesson plans include daily learning and language objectives aligned to the TEKS and ELPS. For example, in Unit 4: Lesson 6, the content standards are "K.3A (model joining and separating)," "K.3B (solve word problems using objects and drawings)," and "K.3C (explain strategies used to solve problems)." The lesson objective states that students will "solve equations by telling an active addition story and drawing models." ELPS.2.D—"Speak using appropriate register to convey a message during formal and informal classroom interaction"—aligns to the stated language objective, that students will "offer their opinions about the accuracy of a pictorial model as they engage in informal classroom discussions about addition, then support their claims by citing what the picture does or does not show and explaining that attempting to draw real objects is inefficient."

The questions in the lesson plans check for understanding of lesson objectives and promote the use of language to meet language objectives. The tasks promote mastery of the lesson objectives. For example, in Unit 7: Lesson 12, the language objective is to "read written content-area text and demonstrate their comprehension through active participation in partner and whole-group activities and discussions where they model quantities with ten frames and stickers and justify their comparisons using comparative language (e.g., greater, less, more, fewer, equal)." The "Discourse Questions" within each lesson meet the stated ELPS, such as "How do the ten frames help you know who had more or fewer without counting?" The "Discourse Questions" also check for understanding of the content objective to compare numerals using *more than*, *less than*, and *equal to*. In addition, students use ten frames to demonstrate *more than, fewer than*, and *equal to* a given number during the lesson.

The lesson plans include lists of materials to support instructional activities and a reference on how the teacher will assess mastery of the content standards. For example, in Unit 10: Lesson 5, the "Preparing for the Lesson" section lists the necessary materials, including a whiteboard, "Practice Pages," a game link, and subtraction templates. The assessment is listed at the end of the lesson and includes "Look Fors" and "Discourse Questions" to assess understanding. In addition, the *Unit Guide* includes an

"Assessment Guide" for "Diagnostic Assessments," "Summative Assessments," and "Formative Assessments."

1.3b – Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson, and the suggested timing for each lesson component.

The overview contains a list of teacher and student materials. For example, in Unit 1: Lesson 9, in the "Preparing for the Lesson" section, the "Prep Notes" section guides the teacher to "make a plan to either laminate and tape or use contact paper to adhere students' number paths to their desks for reference throughout the year." In addition, the "Prep Notes" section provides a list of required materials, game assignment, templates, and "Practice Pages."

The materials include suggested timing of lesson components, listed at the beginning of the lesson and within each section. For example, in Unit 6: Lesson 3, the suggested timing is eight minutes for "Launch," 17 minutes for "Explore," five minutes for "Reflect and Connect," and 15-plus minutes for "Workshop Time."

1.3c – Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).

The materials offer strategies to adapt extended practice materials. For example, in Unit 3: Lesson 10, the "Differentiation" section contains an "Extension" section with suggestions for extending the lesson on counting on from a numeral by challenging "students to explain how they could use 5 and some more to identify the total or how they could use 5 as a friendly number if the total is fewer than five objects."

The "Explore" section provides tips on the effective use of lesson materials for extended practice. In Unit 7: Lesson 1, the "Extension" section in the "Explore" section challenges "students to make their own picture with more than 10 dots or objects and explain how circling a group of 10 makes it easier to figure out the total."

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.	9/9
2.1b	All criteria for guidance met.	2/2
2.1c	All criteria for guidance met.	2/2
2.1d	All criteria for guidance met.	6/6
2.1e	All criteria for guidance met.	2/2
—	**TOTAL**	21/21

2.1a – Materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions.

"Diagnostic Assessments" with a variety of question types and tasks (including problem-solving tasks, concrete representation, fill-in-the-blank, and real-world application questions) determine students' readiness for new mathematical concepts. For example, in the Unit 5 "Diagnostic Assessment," which uses Questions 1 and 2 from the Unit 4 "Summative Assessment," students solve a story problem using counting bears and number representation and are required to fill in the missing numbers on a number path.

"Summative Assessments" are embedded within the unit and lessons to measure mastery of all skills taught. For example, the Unit 10 "Summative Assessment" assesses student understanding of number sense and fluency through a variety of tasks and questions. Students are expected to identify groups of objects with "more and fewer," circle the number that is "greater or less," complete equations, and solve real-world story problems using pictorial representations and equations. In Unit 10: Lesson 8, students are expected to compose and decompose 10 to identify unknown parts. In the Unit 10: Lesson 8 "Practice Page," students are asked to identify number order using ordinal numbers, fill in missing numbers on equations with unknown parts, and solve a real-world story problem with an unknown part using pictorial representation and an equation.

The "Formative Assessment Opportunities" assess a combination of skills from each lesson cluster within the unit. For example, in the Unit 5 "Assessments" section, "Formative Assessment Opportunities" are listed for the three lesson clusters. The "Formative Assessment Opportunities" come from different components within the Cluster 1 lessons. The "Formative Assessment Opportunities" provide a variety of tasks and questions as well as what to look for during each activity. One example is when students compare objects using comparative language, identify objects that are "taller or shorter," predict and test

to determine "heavier and lighter," compare and explain an object that may be "bigger but also lighter" than another object, and fill containers to determine capacity.

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

The materials clearly define "Diagnostic Assessments," "Formative Assessment Opportunities," and "Summative Assessments." Each unit has an "Assessment" section that provides information on each assessment type. A definition of the purpose of each assessment is at the beginning of each section. The guidance states that a "diagnostic assessment is an opportunity for students to show the foundational skills and knowledge they have previously mastered and to reveal areas in which they may need additional support to be successful in the unit."

The intended purpose is included for each assessment type and how they inform instruction, help educators and students adjust, identify misconceptions, gauge progress, and guide instructional decisions. For example, the guidance states, "The summative assessment provides an opportunity for students to demonstrate they have met the key learning objectives of the unit. The results of this assessment can provide information about successes to celebrate with students and areas where students are in need of further support. See Supporting Students after this unit for suggestions on ways to address unfinished learning."

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

Scripts ensure the assessments are administered consistently and across examiners. For example, in the Unit 4 "Summative Assessment," the teacher is expected to say, "You have learned a lot about math! These are problems for you to do by yourself so that I can see what you know. You cannot work with a partner or look at someone else's work. If you do not know how to do something, just try your best. I will read each problem aloud two times. If you want me to read it again, raise your hand."

Instructional assessments are supported by a guiding document, which gives an overview of the assessment, step-by-step guidance for administering each component of the assessment, and support for the teacher in understanding the assessments to ensure consistency and standardized administration across examiners. In the Unit 9 "Summative Assessment," the teacher directions include student seating guidance, directions to read aloud, how to help students locate the current problem, steps to ensure students are ready for the next question or to hear the second reading of the question, and which vocabulary words the teacher can provide support for. For example, the last step of the teacher directions is "define or show examples of non-mathematical words related to the context of the problems (e.g., apples, playground, buy, fly away) but do not define or show examples of mathematical words (e.g., add, count, length, triangle)."

2.1d – Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.

Alignment of "Diagnostic Assessments" with the TEKS for the course are included in the "Item Map" and "Supports" at the beginning of each "Diagnostic Assessment Guide" guide. For example, in the Unit 10 "Diagnostic Assessment Guide," the "Item Map" and "Supports" identify the first question source from the Unit 9 "Written Assessment" optional Question 9 and aligns to the TEKS K.3B and K.3C. In addition, the first question source aligns to the objective of decomposing numbers and representing word problems that are addressed in Cluster 2 "Solving Problems with Numbers and Models" and Cluster 3 "Solving Problems with Words within the Unit."

Alignment of "Summative Assessments" with the TEKS for the course are included, such as identifying the TEKS numbers in the "Item Map" and "Teacher Recording Sheet" at the beginning of each "Summative Assessment Guide." For example, in the Unit 7 "Summative Assessment Guide," the "Item Map" identifies that Item 1 on the "Summative Assessment" aligns to the TEKS K.2B and K.2C. In addition, Item 1 aligns to Cluster 1 "A Group of 10 and Some More" and Cluster 2 "Using Digits to Represent 10 and Some More within the Unit."

Alignment of "Formative Assessments Opportunities" with the TEKS and objectives for the course, lesson, and unit are included. The Unit 9 guidance for "Formative Assessment Opportunities" can be found under the "Assessment" section and identifies the first "Formative Assessment Opportunity" from Lesson 1 "Using Strip Diagrams to Compare Amounts." Activity RC1 assesses students' ability to identify and sort a group of coins and align to the objective to "identify pennies, nickels, dimes, and quarters by name and attributes," aligning with TEKS K.4A.

2.1e – Instructional assessments include TEKS-aligned items at varying levels of complexity.

"Summative Assessments" aligned to the TEKS for the course assess at different levels of complexity and include procedural tasks, fill-in-the-blank and multiple-choice questions, and application of multiple skills to problems and tasks. For example, in the Unit 5 "Summative Assessment," the questions require students to identify the correct shape, describe the attributes of a shape and circle the correct name, draw shapes, and solve a real-world story problem using a pictorial representation and an equation.

"Formative Assessment Opportunities" aligned to the TEKS for the course contain procedural, open-response items and application of multiple skills to problems and tasks. For example, in Unit 8: Cluster 2, the "Formative Assessments" require students to collect data, create a graph using data and answer a question using the data, and explain how collecting data helps people to make decisions.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	All criteria for guidance met.	2/2
2.2b	All criteria for guidance met.	1/1
2.2c	Materials provide teacher tools to track student progress and growth. Materials include class goal-setting opportunities; however, the materials do not provide student-friendly tools for students to track their own data and progress throughout units.	1/2
—	**TOTAL**	4/5

2.2a – Instructional assessments and scoring information provide guidance for interpreting student performance.

Teacher guidance is provided on how to interpret student performance on assessments and reflect on levels of understanding and/or proficiency. For example, the Unit 1 "Summative Assessment Guide" has the teacher record student responses in the following way: If the student's response matches the text in italics, they are to give a checkmark. If the student makes a mistake, they are to record the error. If the student makes a mistake and then corrects it, teachers will record the error and give a checkmark indicating a self-correction. Based on the students' responses, the teacher can then visit the "Supporting Students: After This Unit" link for suggestions on ways to address unfinished learning.

Scoring information about the student's strengths, weaknesses and gaps, and common misconceptions is included in the materials. For example, in the *Teaching Guide*, a "Formative Assessment Recording Log" allows the teacher to track mastery of cluster outcomes, barriers, and strengths and determine whether support is needed. Teachers can make notes about specific barriers and the type of support provided or needed in the future.

The "Summative Assessment Guide" contains examples of student responses to guide teachers in interpreting performance. For example, in the Unit 6 "Summative Assessment Guide," the "Teacher Recording Sheet" provides correct response examples for the first assessed skill of subitizing with 5 and 10 as anchors. Examples include "4 fingers; 6 dice dots; 7 fingers; 9 dots in a ten frame; 8 in a 1 × 10 frame; 0 in a ten frame."

The kindergarten materials guide teachers on how to interpret student performance on assessments and reflect on levels of understanding and/or proficiency through the "Supporting Students: After This Unit" section. For example, Unit 7 says that "concepts like recognizing groups of 10, comparing teen numbers, and skip counting by tens should be developed with conceptual understanding by the end of this unit." In addition, the section breaks down the different areas of struggle students may have if they are not successful on the assessment, such as "skip counting by tens to 100 and comparing teen numbers."

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

In kindergarten, the materials include guidance that supports the teacher in utilizing results from "Diagnostic Assessments" to support the purposeful planning of tasks and activities for the appropriate grade level or course. This guidance is listed by question source and aligned TEKS within the "Diagnostic Assessment Guide." For example, in the Unit 6 "Diagnostic Assessment Guide," Item 1 comes from the Unit 5 "Summative Assessment" Question 1 and assesses and provides guidance for supporting emerging students on rote counting forward and backward through various activities. Item 1 states, "tossing a ball across a circle and having the student who catches it say the next number in the counting sequence," which correlates to K.2A and K.5A.

Instructional guidance for tasks and activities to target various skills is included, as determined by "Summative Assessment" data. For example, in Unit 6 under the "Assessment" section, there is information for supporting students after the "Summative Assessment." If students are struggling to use connecting multiple representations, the guidance suggests "counting tables in the classroom or sunny days in the week and then drawing the corresponding number bond, can help show how math relates to the real world."

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

Editable "Formative Assessment Recording Logs" allow teachers to customize and track the growth of individual students or the whole class throughout the unit. For example, the "Formative Assessment Recording Log" has an area for each student's name, whether the cluster objective was met, anecdotal notes, and if support was needed or provided.

Kindergarten materials include student-friendly class data discussions through "Our Thinking Path," which is embedded throughout units at the end of each cluster, allowing time for setting class goals recorded on chart paper to be referenced during the unit. Materials include class goal-setting opportunities; however, they do not provide student-friendly tools for students to track their own data and progress throughout units.

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 marked with a (T) refers to teacher-facing components. Guidance with an (S) refers to student-facing components.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	3/3
3.1b	All criteria for guidance met.	2/2
3.1c	All criteria for guidance met.	2/2
—	**TOTAL**	7/7

3.1a – Materials include teacher guidance for differentiated instruction, activities, and paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.

The materials guide teachers to support students' thinking within the lesson through differentiated supports, such as scaffolded questions to activate prior knowledge, sentence stems to aid students with their thinking, and visual aids and manipulatives to enhance comprehension. For example, in Unit 8: Lesson 4, there are sentence stems under the "Differentiation" section, such as, "There are the most / fewest _____." In addition, the guidance suggests using a sticky note to cover and reduce the amount of information so only one graph is visible at a time and suggests having the student identify and discuss the commonalities before completing the sorting activity.

In kindergarten, the materials provide paired lessons for students who have not yet reached proficiency on grade-level content and skills. For example, in the Unit 2: Lesson 4 *Teaching Guide*, there is a scaffolded lesson for students who are miscounting a set of objects. The guidance suggests having the student recount a group of objects while physically manipulating and pulling the object away as it is counted.

3.1b – Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). (T/S)

The materials include teaching academic vocabulary and symbols through hands-on experiences, manipulatives, or visuals. For example, in Unit 4: Lesson 3, the guidance suggests providing a visual of *more*, *fewer*, and *same* when comparing two ten frames.

Lesson activity guidance includes "Discourse Questions" that support student understanding of academic vocabulary and unfamiliar references in the lesson. For example, in Unit 4: Lesson 3, the "Explore" section provides "Discourse Questions" such as, "What does the equal sign mean in our math story? Can I put the

equal sign here (between the two blue columns) instead? Why does it not work?" These questions ensure students understand what an equal size is and what it means in an equation.

3.1c – Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skill.

The materials include specific prompts for advanced questioning during discussions, such as asking students to justify their problem-solving strategies or compare different mathematical approaches. For example, in Unit 3: Lesson 9, under the "Differentiation" section, the "Extension" section suggests challenging students to explain their thinking beyond creating the number bond to explain why the total remains the same even though the parts have changed.

The *Teaching Guide* suggests enrichment activities, such as a project-based learning activity, research project, or creative project that synthesizes content and student learning for students who have demonstrated proficiency in grade-level content and skills. For example, in Unit 3: Lesson 9, students are challenged to extend their learning from solving a fruit salad problem to creating their own fruit salad problem for their partner to solve.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	4/4
3.2b	All criteria for guidance met.	2/2
3.2c	All criteria for guidance met.	3/3
—	**TOTAL**	9/9

3.2a – Materials include explicit (direct) prompts and guidance to support the teacher in modeling and explaining the concept(s) to be learned.

Lesson materials include questioning strategies and discussion prompts that guide teachers in clearly explaining concepts and engaging students in deeper understandings. For example, in Unit 5: Lesson 8, students are exploring a set of quadrilaterals. "Discourse Questions" guide the discussion, such as "Do you notice any shapes that look like each other? How are they similar? What is different about these two shapes? (Point to any two shapes.) What is the same about them? What do you notice about the corners? How many sides and/or vertices do these shapes have?"

In kindergarten, the materials include guidance to support the teacher in explaining and modeling, such as providing exemplar student responses to prompts and visuals to aid in teacher explanations. For example, in Unit 7: Lesson 8, the "Explore" section has nine lesson slides that provide visuals demonstrating skip counting with cubes and 10 sticks. Student responses are provided for the questions. For example, the question on Slide E2 asks, "How many sticks do we need to cover the whole number path?" The "Answer Key" states, "10 sticks."

3.2b – Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.

Lessons include teacher guidance and recommendations for effective lesson delivery using a variety of instructional approaches, such as providing opportunities for student discourse, independent learning activities, incorporating written responses and explanations to justify thinking, incorporating hands-on explorations using math manipulatives, and connecting to real-world problems and scenarios to learn about mathematical concepts. For example, in Unit 8: Lesson 6, the materials provide an opportunity for students to explore asking questions about preferences using a real-world problem involving food at a party. The materials provide "Discourse Questions" to facilitate student understanding of the concept. During the "Workshop Time," students work with a partner on a game. During the game, students write out their thoughts on a sticky note and then use classroom manipulatives to explain their thinking to their partner. Later in the lesson, students apply their understanding of asking questions and interpreting data to complete an independent "Practice Page."

The kindergarten materials incorporate and provide guidance on more than one instructional approach, such as direct instruction, guided practice, inquiry-based learning, collaborative learning, and exploratory learning. For example, in Unit 6: Lesson 2, students explore word problems with two groups of things by using models, drawings, and fingers. Later in the lessons, students reflect and share with the class about the strategy they used on a problem. Students discuss the different representations used by the class. The teacher uses this to facilitate a discussion on multiple representations.

3.2c – Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.

The kindergarten materials provide a variety of opportunities for students to practice and apply the concepts they learn, including individual, partnered, guided, whole-group, and small-group opportunities. For example, in Unit 5: Lesson 13, students explore the written form of the numerals 7 and 8 as a whole group. Students do a guided exploration of spheres and cylinders, including connecting to prior concepts using beads, using clay to make spheres and cylinders, and identifying spheres and cylinders. During "Workshop Time," students complete a page from the *Playbook* with partners or in small groups and complete an independent "Practice Page" at the end of the lesson.

Lesson plans provide teachers with guidance on structuring and implementing multiple types of practice, including explicit instructions for guided practice, opportunities for independent application, and collaborative activities. Lesson plans include notes on each lesson component and whether its recommended grouping is whole group, partners, small group, or independent. For example, in Unit 7: Lesson 10, students work as a whole group to answer questions during the "Launch" section. In the "Explore" section, students work as a whole class through guided practice and "Discourse Questions." In the final activity of the "Explore" section, students work with a partner. Students also work with a partner during "Workshop Time" before completing their independent "Practice Page."

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.	2/2
3.3b	All criteria for guidance met.	1/1
3.3c	All criteria for guidance met.	8/8
3.3d	This guidance is not applicable to the program.	N/A
—	**TOTAL**	11/11

3.3a – Materials include teacher guidance on providing linguistic accommodations for various 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 kindergarten materials detail ways that the teacher can build academic vocabulary as the unit progresses, including support after the unit. For example, in the Unit 5 *Teaching Guide*, the "Supporting Students" section has areas of potential struggle after the unit and how to continue to support students. For example, if a student is struggling to use positional language to describe the relative locations of objects, the guidance states the teacher should "Incorporate positional language into daily classroom routines and directions (e.g., 'Please put your pencil inside your desk;' 'Line up beside the door'). Play games in which students must follow or give directions using positional language."

Lessons contain a "Differentiation" section that provides educators with guidance on incorporating multiple levels of support to help students build academic language, such as sentence stems, productive and expressive language support, and a list of words that need a visual or example. For example, in Unit 2: Lesson 8, the guidance for productive and expressive language support states, "When rote counting or counting objects as a class, adjust the speed to match students' ability to say each number, speaking more slowly and clearly if students are learning the number names for the first time." In addition, the materials provide sentence stems to support language development, such as "My counting strategy is _____. I counted __ [objects] by _____. I checked by _____. We got the same number of [objects] with both strategies because _____."

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

In kindergarten, the materials provide embedded guidance for effective implementation through plans with specific language objectives and language supports provided through the differentiation section of each lesson. For example, in Unit 4: Lesson 4, the language objective is, "Students develop an understanding of text structure and organization as they determine the meaning of words and phrases presented in addition word problems (e.g., numbers being added), then summarize the information as they write representative equations." In addition, the materials further support this objective with guidance that states, "For each problem, ask students to verbally label the on-screen information before starting the problem to build contextual language. Act out any unfamiliar verbs (e.g., recycle) or provide real-life objects."

The materials provide resources on how to support language development and acquisition. For example, in the "InsightMath Help" section for *Addressing the Needs of Special Populations in Texas*, the guidance states that teachers should use the math language routines to guide discussion and support language acquisition. In addition, the guidance lists the math language routine steps: "Revoice student ideas to model mathematical language use by restating a statement as a question in order to clarify, apply appropriate language, and involve more students. Press for details in students' explanations by requesting for students to challenge an idea, elaborate on an idea, or give an example. Show central concepts multi-modally by utilizing different types of sensory inputs: acting out scenarios or inviting students to do so, showing videos or images, using gestures, and talking about the context of what is happening. Practice phrases or words through choral response. Think aloud by talking through thinking about a mathematical concept while solving a related problem or doing a task. Model detailing steps, describing and justifying reasoning, and questioning strategies."

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

Throughout each lesson, materials provide opportunities for oral discourse through questions that develop academic vocabulary, increase comprehension, build background knowledge, and make cross-linguistic connections. For example, in Unit 2: Lesson 11, students build background knowledge about fairness through oral "Discourse Questions" such as, "Is this a fair way to share the empanadas? How do you know? How do you share something fairly?" Students then use oral "Discourse Questions" to support understanding of the word *equal* and connect *equal* to *fairness* such as, "What do you think equal means? We can see Naomi's oranges. What can we do to give Jaymie an equal amount? Do they have equal amounts now? How do you know? How could we check to see if they have equal amounts?" As the lesson progresses, there are oral "Discourse Questions" that check for increasing comprehension such as, "Does this arrangement still show an equal amount? How do you know? How do you make an equal number of

cookies? How do you know that they are equal? How do you know that the ten frames have an equal number of cookies?"

The materials include activities that require students to use written discourse to develop academic vocabulary, increase comprehension, build background knowledge, and make cross-linguistic connections. For example, in Unit 5: Lesson 2, students write their thoughts while playing an ST Math Game during "Workshop Time." The teacher uses "Discourse Questions" to support students with their thinking such as, "What do you see on the screen? What do you notice or wonder? What is this puzzle asking you to do? What do you think is going to happen when you use the Go button? What have you tried? Why did it work or not work? What did you learn from the animation after you used the Go button?" This allows students to use and develop academic vocabulary from the word wall and for the teacher to check for increasing comprehension. In addition, during the "Investigation" section at the beginning of Unit 5, students write about how they were mathematicians and have the opportunity to build background knowledge before starting the lesson. Students are able to use the math word wall and make their own cross-linguistic connections through the open-ended "Discourse Questions" such as, "How did making mistakes help you grow as a mathematician? How did describing these shapes help you grow as a mathematician? Where do you see shapes around you? Where do you see shapes change?"

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

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

4. Depth and Coherence of Key Concepts

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

4.1 Depth of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	All criteria for guidance met.	1/1
—	**TOTAL**	3/3

4.1a – Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

In kindergarten, practice opportunities require students to demonstrate depth of understanding of place value throughout Unit 6 "Exploring Parts and Totals." They begin with writing and modeling part-part-total situations before decomposing totals using concrete objects, number bonds, equations, and drawings. Finally, students compose totals using concrete objects, number bonds, equations, and drawings.

Student-friendly data discussions are encouraged through "Our Thinking Path," which is embedded throughout the units.

4.1b – Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics TEKS.

In kindergarten, students work with understanding numbers in increasing complexity through the units.

Throughout the grade level, the materials are scaffolded by units as students use one-to-one correspondence to count objects, learn that numbers are a fixed quantity and are ordered sequentially, learn that numbers are composed of other numbers or parts, use parts and totals to understand addition and subtraction, use counting to determine attributes of shapes, understand that a number can be expressed with different equations using different parts to get the same total, begin making groups of 10 to understand place value, and use their number sense and problem solving with data analysis and financial literacy skills.

In Unit 5 "Discovering Shapes," students begin by observing similar objects before sorting, identifying, and constructing 2-D shapes. Students then move on to sorting, identifying, and constructing 3-D Shapes.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	All criteria for guidance met.	3/3
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	8/8

4.2a – Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.

The "Unit Overview" describes connections to previous units where students obtained prior knowledge needed for the upcoming unit. The "Unit Overview" identifies previously learned "Big Ideas" and identifies how students will expand their knowledge of mathematical concepts. For example, in Unit 7 "Discovering Number Structure," the "Unit Overview" notes that students will "expand their schema of numbers from individual counting to recognizing the efficiency of organizing quantities into groups of 10 and some more." This shift in their number schema enables them to interpret the digits in teen numbers, with the first digit representing a group of 10 and the second digit representing the additional amount.

In kindergarten, the materials connect understanding that numbers are composed of other numbers to understand addition and subtraction. For example, in Unit 3, students build an understanding of composing a total from parts using number bonds and ten frames. In Unit 4, students use parts and totals to build an understanding of addition and subtraction within 10.

4.2b – Materials demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses/grade levels to the content to be learned in the current course/grade level.

In kindergarten, the "Coherence" section within the "Mathematics" section identifies previously learned concepts that will be used and developed in the current unit and how the concepts will be applied in the future. For example, in Unit 8 "Discovering Data," the "Coherence" section notes that students will use their understanding of organizing and sorting objects at home and in the classroom to objects into ten frames and number paths, sort shapes to expand that understanding to organize data into graphs, and use the data to make decisions. Students will apply their understanding of organizing data in grades 1 and 2 by expanding the number of categories and using the data to answer comparison questions. Students will also analyze data on line plots in grade 3.

The materials use consistent vocabulary terms and tools year to year from kindergarten to grade 2. For example, in kindergarten, students are introduced to the terms *two-dimensional shapes* and *three-dimensional shapes*. Students sort and name the shapes. In grade 1, students continue to use the terms *two-dimensional shapes* and *three-dimensional shapes* and expand their vocabulary to identify the

attributes using the terms *sides*, *vertices*, *faces*, and *edges*. In grade 2, students continue using the same vocabulary when identifying shapes, composing new shapes, and decomposing shapes.

4.2c – Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

In kindergarten, a lesson on modeling and solving static addition word problems with the total unknown includes scaffolding questions that help students bridge earlier learning to current concepts. For example, questions such as "How do mathematicians draw math pictures? How can we show the two different groups? Should we add or subtract? Why?" encourage students to apply previously learned strategies in new contexts.

At the lesson level, materials connect concepts and procedures from the prior grade level. The materials use previously learned concepts and procedures to support learning at the lesson level. For example, in Unit 8: Lesson 1 "Sorting Objects into Data Categories," students use their prior understanding of number bonds and identifying parts and totals within the number bond to understand sorting data into categories.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	4/4
4.3b	All criteria for guidance met.	4/4
—	**TOTAL**	8/8

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

In kindergarten, during the "Launch" section of Lesson 7 "Using Number Bonds to Represent Parts and Totals," students subitize objects, fingers, dice, and ten frames to confirm key patterns within five to help students begin to subitize conceptually before beginning the lesson on using parts and totals on a number bond.

In kindergarten, students complete an investigation on working memory before beginning Unit 4. The investigation requires students to think like a mathematician and identify prior understanding of solving puzzles to determine questions they need to ask to solve the puzzle before moving into the new concepts in Unit 4 "Discovering Addition and Subtraction."

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

In kindergarten, students practice addition and subtraction within Unit 4 "Discovering Addition and Subtraction." This grouping is reiterated in Units 6 and 7, with the complexity increasing by incorporating greater place values. Students use place value, drawings, and number bonds to solve addition and subtraction problems and engage in problem sets that require understanding word problems. Students plan whether to use an addition or a subtraction strategy.

Materials prompt students to apply a previously learned subitizing strategy to make an estimate of a number from a group of objects in Unit 10: Lesson 1 "Estimating, Counting, and Subitizing Quantities Within 20." For example, in the "Explore" section, the teacher is prompted to ask, "How could we count? How could we use groups of 5 or 10 to help us count?"

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.	1/1
5.1c	All criteria for guidance met.	1/1
—	**TOTAL**	5/5

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

In kindergarten, students use number bonds in Unit 7: Lesson 4 to represent teen numbers as 10 and some more. The teacher shows number bonds using ten frames and pictorials before displaying a number bond with numbers and asks, "How is this number bond different from the last number bond? How is it the same? How can you find the total amount now that you can no longer count objects?" To respond, students identify the parts represented, interpret the number bond to identify the total, and explain how they used the number bond to identify the teen number that is represented.

In kindergarten, students use data in Unit 8: Lesson 10 to answer questions and make predictions. The teacher asks students to make a prediction on whether more students will choose the theatre or the museum. The teacher then shows the students the data in a table and asks students, "Was your prediction correct? How do you know? Which field trip option did more kids like? How do you know?" To respond, students analyze the data to determine which category had the most votes and then compare it to their prediction to explain if their prediction was correct.

5.1b – Questions and tasks require students to create models to represent mathematical situations.

In kindergarten, in Unit 6: Lesson 15, students use manipulatives and drawings to model addition and subtraction story problems and then write an equation to match the model. The teacher asks the student, "Where do you see each part of your model in your equation?"

In kindergarten, in Unit 7: Lesson 11, students use magnets, ten frames, and fingers to model composing and decomposing numbers between 11 and 20. The teacher asks the student, "Use your fingers to show me your thinking. What should I do first to make an amount that is __? Now that I made a group of 10, what should I do next?"

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

Lessons provide opportunities for students to apply conceptual understanding to new problem situations and contexts. For example, in Unit 6: Lesson 14, students use their understanding of composing numbers using parts and totals in a number bond to show different ways to compose the same total. Students use a set of creatures to determine the different ways to compose six. The teacher asks, "What is the total of each number bond? How do you know? Which creatures did you use first to compose six? Why? Did you find all of the ways to compose six? How do you know? Could there be other pairs if we used other creatures, or do we have them all? What patterns do you notice in the number pairs?"

In kindergarten, students engage in a problem about making a fruit salad. Using a set of pears and apples, students sort the shapes into two groups and determine how many shapes are in each group. After creating a model of the groups, students use a number bond to connect their visual understanding to numerical representations to solve the following problem: "How many fruits altogether?"

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 tasks.

During the "Launch" section, students practice automaticity by subitizing quickly to determine how many. For example, in Unit 3: Lesson 7, in the "Launch" section, students practice subitizing objects, fingers, dice, and ten frames to confirm key patterns within five. Students look at a group of objects that are shown on a slide, determine the number of objects, and explain their thinking. Students then practice counting backward from 20.

In kindergarten, students build fluency with mathematical patterns. For example, in Unit 6, students complete an investigation on recognizing patterns. The investigation has students complete pattern puzzles. Students begin to recognize and look for mathematical patterns. Recognizing patterns is a skill that students will use with multiple mathematical concepts.

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit.

In kindergarten, Unit 4: Lesson 15, students represent addition and subtraction word problems with models and equations. The materials prompt students to use efficient strategies, such as concrete objects, drawings, their fingers, and equations. Word problems include teacher guidance like, "Ask students what they could draw for a math picture that is easier than a carrot to remind them to draw lines (or circles) instead of carrot shapes," to support students in identifying methods that reduce cognitive load while maintaining accuracy.

In kindergarten, lessons prompt students to choose a method, encouraging flexibility in selecting and applying strategies that make sense for different problem types. Questions provided for discourse allow students to explain their strategy in addition to hearing other students explain their strategies. For example, in Unit 4: Lesson 15, the "Discourse Questions" following a word problem ask, "How did you model the story? How did you write the equation? Where do you see [starting with three lemons; two more lemons; the amount in all]? Did anyone model it a different way?"

5.2c – Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit.

In kindergarten, Unit 10: Lesson 14, students evaluate two different models for solving a story problem. The materials provide the teacher with questions to guide the students to evaluate both models and strategies by asking, "Do both drawings show the same numbers? How? What is 6 − 4 equal to? How do you know? Does the other model tell you the same thing?"

Throughout Unit 10 "Building Number Sense and Fluency," during independent practice, the *Teaching Guide* prompts the teacher to have students reflect on and evaluate their chosen strategy. The teacher asks, "Are you confident in your answer? Why or why not? In what ways have you already tried, or not yet tried, to solve this problem?"

5.2d – Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.

In kindergarten, Unit 4: Lesson 15, students are shown a story problem with three different strategies to solve. Teacher guidance provides three argumenteers and their strategies and instructs the teacher to guide students to noticing errors and less-efficient strategies before having them model their own problem-solving for a story problem.

During a "Formative Assessment Opportunity" in the "Explore" section of Unit 10: Lesson 5, teacher guidance suggests supporting students that are solving a subtraction problem within five by counting or modeling toward the more efficient strategy of mental math.

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 kindergarten materials provide an overview of the progression of procedural skills and fluency through the unit. For example, in Unit 6, the materials note that students "practice recording part–part–total relationships using number bonds and equations, strengthening the connection between concrete experiences and symbolic notation." In addition, the materials note that students will explore problem solving strategies from trial and error to systematic approaches. By the end of the unit, "students should demonstrate increasing automaticity with number pairs that total 5 and progress toward fluency with combinations that make 10."

In kindergarten, each unit has a "Mathematics" section with a "Conceptual Understanding" section. For example, in Unit 6, the "Conceptual Understanding" section states, "In this unit, students develop a deep understanding that numbers can be broken into parts and combined in multiple ways while the total remains unchanged—a principle known as conservation of number." Students use hands-on experiences with objects, ten frames, and number paths and discover that any number can be represented as the sum of two parts. In addition, this understanding "progresses from recognition of part–part–total relationships to systematic exploration of all possible combinations."

5.3b – Questions and tasks include the use of concrete models and manipulatives, pictorial representations (figures/drawings), and abstract representations, as required by the TEKS.

In kindergarten, tasks include the use of concrete models, pictorial representations, and abstract representations, as required by the TEKS. For example, in Unit 2: Lesson 1, students use counters to represent a number, understanding that a counter can represent any object. In Lessons 2 and 3, students determine a number from a group of given objects, use fingers to represent a number, and then move into representing a number on a ten frame. In Lessons 13 and 14, students are introduced to the equal sign and compare quantities using connecting cubes. In Lesson 18, students compare groups of objects and use comparative language. In Lesson 19, students compare numerals using comparative language.

In kindergarten, questions include the use of concrete models, pictorial representations, and abstract representations, as required by the TEKS. For example, in Unit 10: Lesson 1, students look at a model and

determine an estimate. The teacher asks the students, "I wonder how many stamps I have on this page. Write an estimate." Students then use beads from a jar to determine an estimate before placing the beads on a ten frame. The teacher asks the students, "What could we do to make it easier to know how many? Did we count correctly?" Students are given a group of objects with an estimate and must determine if the estimate is correct. The teacher asks, "My estimate is 5. Does that make sense?"

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

In kindergarten, materials include support for students in connecting and creating concrete models to abstract concepts, as required by the TEKS. For example, in Unit 3: Lesson 7, students use counters on a five frame to represent parts of a whole before representing the parts and whole on a number bond. Students practice modeling numbers as a class, with a partner, and independently. In addition, through modeling on the teacher slides and "Discourse Questions," the teacher guidance supports the students by defining and explaining the concepts. For example, during the "Explore" section of the lesson, the teacher guidance states, "Use the Discourse Questions to facilitate a discussion about finding another way to make 5. Use student input to fill in the five frame, keeping the red and yellow counters in groups. Use student input and the Pen Tool to count or subitize and record the parts and total in the number bond. If necessary for student understanding, repeat with another student-generated example." Using the "Discourse Questions," the teacher asks the students, "How do you want to make 5? How many yellow counters or red counters should we use? How do you know how many more counters we need to make 5? How do we show this in our number bond? What are the parts? What is the total?"

In kindergarten, materials include support for students in connecting and creating representational models to abstract concepts, as required by the TEKS. For example, in Unit 6: Lesson 10, students draw a picture to represent a word problem. Students use the drawing to help create an equation to match the word problem. In addition, through modeling on the teacher slides and "Discourse Questions," the teacher guidance supports the students by defining and explaining the concepts. For example, during the "Explore" section of the lesson, the teacher is instructed to let students share how to represent the word problem on the slides. The teacher asks, "What should we do to model the problem? How can we show how many muffins Brian has in all? How can we show how many he keeps and/or gives away? How many can he give away? How do you know? How can we write an equation? Why did you use subtraction? What does the equation mean?"

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	3/3
5.4b	All criteria for guidance met.	1/1
5.4c	All criteria for guidance met.	6/6
—	**TOTAL**	10/10

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

In Unit 5: Lesson 7, the materials prompt students to explain the visual using AngLegs on the slide. After the student discussion, the teacher introduces the word *triangle* before students construct triangles using AngLegs. "Discourse Questions" include "Let's look at this figure. Is it a triangle? How do you know? What plan can we make to count the sides and/or vertices?"

Lesson materials include bolded words throughout the lesson that introduce academic mathematical language. In addition, students use visuals with manipulatives to discuss, explain, and model mathematical language. For example, in Unit 4: Lesson 8, visuals include subtraction with push boxes and magnets. "Discourse Questions" include "What does JiJi need to do? What strategy did you use to find how many boxes are left? How many boxes does JiJi have after the bulldozer puts some in the holes?"

5.4b – Materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context.

The "Differentiation" section provides guidance to scaffold and support students' development and use of academic mathematical vocabulary in context. For example, in Unit 7: Lesson 5, the "Differentiation" section provides additional vocabulary students may need visuals for, language support stems, and content support to address misconceptions with mathematical vocabulary. Additional mathematical terms students need to know are *complete*, *place value chart*, *more*, and *ten frame*. Sentence stems support the understanding of digits: "In the word 'fifteen,' 'fif' means _____ and 'teen' means _____. I can use the digits to understand what a numeral means by _____." For students who are struggling to understand digits, the guidance suggests that "When students explain that they know that the 1 in 14 means 1 group of 10, circle the digit 1 and the group of 10. Repeat with the number 4 and the 4 more objects to support students in connecting the representations of numbers."

In kindergarten, materials provide embedded support for scaffolding and supporting expressive and productive language development of mathematical vocabulary in context. For example, in Unit 7: Lesson 2, in the "Supporting Language" section of the "Differentiation" section, the guidance states, "Allow students to work with a partner who shares the same preferred language so they can discuss their

thinking while using less working memory for language; this allows students to use more working memory for mathematical ideas."

5.4c – Materials include embedded teacher guidance to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.

Embedded teacher guidance supports student responses. Lesson materials provide lesson tasks on slides, "Discourse Questions" in the *Teaching Guide*, and exemplar responses for both questions and tasks. For example, in Unit 6: Lesson 2, the task on the slide asks students to look at the items on the page and determine an equation that could be used to represent the problem. The teacher guidance provides the following "Discourse Questions" to support the task: "Should we add or subtract? Why? Where should I put the plus symbol? Could I put it somewhere else? What numbers are we adding? Where should I put them? What else does our equation need? Where should I put the equal sign? What is two and three equal to? What does the equal sign mean?" The possible answers for the equations are 2 + 3 = 5; 3 + 2 = 5; 5 = 2 + 3; and 5 = 3 + 2 and are listed in the *Teaching Guide*.

Sentence stems are provided to support students in using mathematical language. In addition, language supports are provided to support expressive, productive, receptive, and interpretive mathematical language use. For example, in Unit 3: Lesson 1, in the "Explore" section of the lesson, the language support states, "Ask students to verbally label the math tools before beginning their sort, then hold up or point to each math tool as students use the associated vocabulary throughout the discussion." In addition, the materials provide language support sentence stems, such as "There are __ [pretzels, bars, counting bears, etc.] in this group. There are __ [pretzels, bars, counting bears, etc.] [Sorting; Groups] can help us _____."

During a lesson on making groups of 10 to count teen numbers, kindergarten teachers provide a visual of a jar of beads and then a picture of the beads spread out to help students visualize making groups of ten to count a collection. Students use "Discourse Questions" such as "How do you know when you have ten? How does finding a group of ten make it easier to figure out how many total? How can you count the beads? What should you do if you do not know how to write a number?" This allows students to explain their reasoning.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	All criteria for guidance met.	2/2
5.5c	All criteria for guidance met.	2/2
5.5d	All criteria for guidance met.	1/1
—	**TOTAL**	6/6

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

In kindergarten, in Unit 7: Lesson 8, students demonstrate K.1.E by using 10 sticks and a number path to organize numbers into sets of 10 up to 100 and record their answer. Students explain their thinking through "Discourse Questions," such as "What does each cube show on the number path? What number is the last cube above? What does that tell you about the total number of cubes? How many cubes are in ten ten sticks? How can you figure out the total number of cubes without counting? How many cubes are in five groups of ten?"

Materials provide guidance on how process standards are addressed within a lesson. For example, in Unit 2: Lesson 2, guidance for K.1.F states, "Students analyze the relationship between the structure and quantity of objects. They observe arrangements of objects (e.g., shells on a tray) and connect the visual structure of the arrangements to the numerical quantities they represent. This analysis allows students to communicate their understanding of conservation (i.e., that different arrangements can still represent equal quantities) and comparison (i.e., that one group of objects is larger or smaller than another)."

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

The " Standards" section in the "Unit Overview" contains links for each unit and the progression of the process standards through the course. For example, in Unit 2, K.1.B states, "Students apply a structured problem-solving model to accurately count and compare quantities. They begin by analyzing a set of objects—arranged in a line or scattered—to determine an efficient counting strategy. Using their understanding of number relationships, they estimate the total before implementing a counting plan, such as grouping objects, counting systematically, or marking items as they count. Students then justify their solution by explaining their strategy and assess the reasonableness of their answer by using a different counting method, making adjustments as needed." In Unit 5, the guidance demonstrates how students will continue to demonstrate the process standard K.1.B; for example, the guidance states, "Throughout this unit, students develop a problem-solving approach by analyzing given information, formulating strategies, determining solutions, and evaluating their reasoning. They engage in hands-on activities that require them to make predictions, test their ideas, and justify their thinking. By exploring mathematical concepts through inquiry and discussion, students refine their ability to explain their

reasoning and assess the reasonableness of their solutions. Students engage in a structured approach to problem solving that encourages them to think critically, reflect on their processes, and apply their learning to new situations."

In a lesson on using organized arrangements to compare quantities, the kindergarten materials highlight how students apply TEKS K.1.F by analyzing the relationship between the structure and quantity of objects. The guidance describes how students will, "observe arrangements of objects (e.g., shells on a tray) and connect the visual structure of the arrangements to the numerical quantities they represent." In addition, "This analysis allows students to communicate their understanding of conservation (i.e., that different arrangements can still represent equal quantities) and comparison (i.e., that one group of objects is larger or smaller than another)."

5.5c – Materials include a description for each unit of how TEKS process standards are incorporated and connected throughout the unit.

A "Unit Overview" provides information about how process standards are connected through the unit. For example, in Unit 6, under the "Standards" section, the guidance for K.1.E states, "Students create and use representations to explore the many ways numbers can be composed and decomposed. They organize their thinking using concrete objects, drawings, number bonds, and equations to record part–part–total relationships. These representations allow students to systematically find all possible ways to compose a given number and to communicate their mathematical ideas effectively. Students also use their representations to compare different ways of breaking apart the same number, recognizing that the total remains unchanged regardless of how it is decomposed."

The materials include an overview of where each process standard is included in the lesson. For example, in Unit 6, under the "Standards" section, the guidance indicates that K.1.F is incorporated into Lessons 3, 6, and 9.

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

The "Lesson Overview" provides information about how process standards are incorporated through the lesson. For example, in Unit 2: Lesson 9, under the "Standards" section, the guidance for K.1.B states, "Students analyze a given set of scattered objects to determine how to count them accurately. They formulate a plan to count efficiently (e.g., counting systematically or crossing off objects as they count them). After determining their total, they justify their solution by explaining their strategy to peers or teachers. Students evaluate the reasonableness of their answer by counting again in a different order or by using a different method."

The materials include an overview of each process standard included in the lesson. For example, in Unit 11: Lesson 12, under the "Standards" section, the guidance indicates that the lesson incorporates both K.1.A and K.1.C.

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.	6/6
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	12/12

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

Tasks gradually increase in difficulty, allowing students to build confidence before tackling more complex problems. For example, in Unit 7: Cluster 1, students make a group of 10 and some more by first grouping objects or manipulatives and then representing the number using ten frames before moving into number bonds and equations.

The materials provide guiding questions when students encounter difficulties. Examples in Unit 2: Lesson 13 include "Discourse Questions" that ask, "What math do you see on the page? What is this problem asking you to do? What information do you know or not know? How can you use the information you know to find the information you do not know?" Such questions encourage students to think critically about their next steps.

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

In kindergarten, the materials support students in understanding, explaining, and justifying multiple ways to represent problems. For example, in Unit 6, students represent problems using equations, number bonds, and concrete objects. In addition, teacher guidance prompts students to explain and justify ways to represent a problem. For example, in Unit 6: Lesson 6, "Discourse Questions" prompt the students to answer, "How are your classmates' models similar and different? Why do everyone's models have the same total? Do you think we have modeled all the ways to split up six balls into two bins? Why or why not?"

Lessons support students in understanding, explaining, and justifying multiple ways to solve problems and complete tasks. For example, in Unit 10: Lesson 9, students solve +1 and -1 problems and complete tasks using number paths, memorized facts, and matching to make five. In addition, teacher guidance prompts students to explain and justify their solutions. For example, "Discourse Questions" prompt the

students to answer, "Are you confident in your answer? Why or why not? In what ways have you already tried or not yet tried to solve this problem?"

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 teachers.

"Discourse Questions" provide opportunities for students to verbally express their mathematical thinking through discussion prompts, teacher-facilitated questioning, structured math talk routines, turn-and-talk activities, whole-class discussions, and partner sharing routines. For example, in Unit 1: Lesson 5, students have a whole-class discussion with prompts such as, "How have you used shapes in our class, mathematicians? How else could you use shapes to think about the world?" In addition, students work with a partner to show AB and ABA patterns. The teacher facilitates questions during partner work time and prompts students to answer, "What is your pattern? How did you decide what shape comes next?"

In kindergarten, the materials engage students in hands-on experiences with their peers. For example, in Unit 6: Lesson 10, during "Workshop Time," students play the Ten Stick Game where one partner decomposes their 10 stick into two parts and hides one of them. The other partner looks at the part that is still visible and guesses the part that is missing. This supports students in visualizing patterns that make 10 on a 1×10 frame and moving toward fluency with all pairs that make 10 by the end of kindergarten.

6.2 Facilitating Productive Struggle

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

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

The materials include open-ended problems that allow students to use different strategies to find a solution. After solving the problems, students explain their reasoning through peer discussions. For example, in Unit 6: Lesson 15, students choose a strategy to represent 10. The teacher facilitates a discussion by asking, "How did you decompose 10 into two parts? What tool did you use? Why? What does your picture mean? How many pens or pencils in all? How is your work similar to and/or different from your classmate's work?"

Lessons provide opportunities for teachers to guide students in reflecting on their problem-solving processes by considering alternative methods. For example, in Unit 6: Lesson 11, students choose a strategy to solve a subtraction problem. The teacher facilitates a discussion for students to consider alternative methods for solving. "Discourse Questions" prompt students to think and answer, "How many? What strategy did you use to figure it out? Did anyone get a different number? Did anyone get the same number a different way? How could you solve it with your fingers? How could you solve it by imagining a five or ten frame?"

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

In kindergarten, the *Teaching Guide* provides guidance and prompts to support teachers with anticipated misconceptions. The *Teaching Guide* addresses common misconceptions and provides guidance on how to address the misconceptions. For example, in Unit 5, a common misconception is attributing more weight based on size. Guidance suggests that if a student expresses "surprise when a small, dense object (e.g., small steel ball) weighs more than a larger object," then the teacher should "create a class chart of surprising weights with pictures of objects that contradict the misconception." In addition, if a student is confusing relative positions based on their own perspectives, the teacher should "ask students to look at the same objects from different perspectives."

Materials offer guidance and prompts to support teachers in providing explanatory feedback. Each lesson component has a list of "Look Fors" for teachers to use to identify specific skills and components needed to master the lesson content. For example, in Unit 3: Lesson 1, the teacher is looking for students who "explain that Brian needs to organize the pastries because they are mixed up, suggest using one tray for

each type of pastry, and appropriately use the word sort to describe their thinking." The teacher is provided prompts through "Discourse Questions" to guide students toward understanding the content and skills. For example, the "Discourse Questions" for the same lesson component state, "What is Brian's problem? What should we do to help him? What does sorting mean?"