# Amplify Education, Inc.

English Mathematics, K

Amplify Desmos Math Texas GK Student Blended Package

| MATERIAL TYPE | ISBN | FORMAT | ADAPTIVE/STATIC |
|---|---|---|---|
| **Full-Subject, Tier-1** | **9798895806753** | **Both Print and Digital** | **Static** |

## Rating Overview

| TEKS SCORE | ELPS SCORE | ERROR CORRECTIONS (IMRA Reviewers) | SUITABILITY NONCOMPLIANCE | SUITABILITY EXCELLENCE | PUBLIC FEEDBACK (COUNT) |
|---|---|---|---|---|---|
| 100% | 100% | 26 | 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 | 26 out of 26 | 100% |
| 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 | 16 |
| 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.

The "Scope and Sequence" is a section in the front matter of the *Teacher Edition*. In it each unit of the materials is given a page with sub-units listed, and then individual lessons are listed under those. Next to each lesson is a section where the shorthand reference for the Texas Essential Knowledge and Skills (TEKS) in that lesson is listed, providing a scope and sequence for the TEKS for the entirety of the materials for kindergarten; listed next to the TEKS is the English Language Proficiency Standards (ELPS). In this section of the materials, each unit of the materials is given a page with sub-units listed, and individual lessons are listed under those. Next to each lesson is a section where the shorthand reference for the TEKS and ELPS in that lesson is listed, providing a scope and sequence for the TEKS and ELPS for the entirety of the materials for kindergarten.

On the pages titled "Proficiency-leveled ELPS Support," the materials state, "One activity in each lesson is paired with additional language support located in the 'Math Language Development Resources' booklet." There are lesson-level supports at each proficiency level, as well as unit-level and course-level supports provided.

In the front pages of the *Teacher Edition*, there is a document titled "Texas English Language Proficiency Standards (ELPS)" in which each student expectation for listening, speaking, reading, and writing is outlined, and a list of unit numbers, lesson numbers, and "Math Language Development Resources" are provided for each ELPS standard.

### 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).

On the pages titled "Scope and Sequence, Grades K–5," each unit lists the number of instructional days and the number of assessment days required to teach the unit lessons. The pacing for each grade level is specific to that grade level and varies between grade levels. At the bottom of the document, suggestions for pacing changes based on varying number of instructional days is provided.

In the kindergarten *Teacher Edition*, there is a suggested pacing guide to support effective implementation. Each unit overview provides a pacing guide for suggested implementation for two different options: 165 instructional days and 210 instructional days.

On the "Unit at a Glance" page, the materials detail how many days/lessons are in the unit and provide the "Pacing Considerations" section. For example, in kindergarten, Unit 5, this section gives specific guidance on Lessons 1 and 15. The guidance is that "this lesson can be omitted."

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

The kindergarten materials include an explanation for the rationale of unit order, which connects the TEKS to lessons previously presented and those slated in the future. These examples are provided in the unit overview and each lesson planning guide.

In the kindergarten "Teacher Edition" there is a rationale for the unit order in the "Designed Around the TEKS" section. The rationale is broken down by unit with an explanation under each that explains how lessons within the unit connect with one another, as well as connect with previous and future grade levels.

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

On the pages titled "Navigating This Program," there is a set of resources for each unit that includes an overview of the unit's math, a visual summary of the "Unit at a Glance," a preview of each of the unit assessments, and unit guidance for differentiation, centers, accessibility, language development, materials, technology, and connections to "Future Learning."

Each unit overview also includes a professional development activity and a "Unit Story" that provides an engaging narrative to frame students' explorations throughout the unit.

The lesson overview, in the "Navigating This Program" sections, provides an explanation of the purpose of the Warm-Up, Synthesis, and Show What You Know activities. There is suggested timing for each part

of the lesson, as well as guidance on whether students should work individually, in pairs, in small groups, or with the whole class. The page also lists which materials may be needed, as well as an understanding of what content students will learn and includes a "Key Concepts" and "Connections and Coherence" section for deeper teacher internalization.

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

In the "Professional Development Library," there are three resources available for Instructional Leaders to support the implementation of the program in the classroom. The "K–5 Look-for Guide" provides a checklist of items and behaviors for Instructional Leaders to look for in each of the following areas: "Classroom Set-Up & Materials," "Structured Approach to Problem-Based Learning," and "Student Thinking Is Made Evident." The "In the Moment Instructional Support Cards" provide possible questions and scenarios that teachers can ask of themselves or that Instructional Leaders can use to facilitate a discussion regarding ways to make the teaching and learning more effective. The "Facilitator Guide: End-of-Year Reflection" is a resource that provides Instructional Leaders with a set of questions intended to reflect on the overall implementation of the program across the academic year and find areas and actions to continue to work on in the next year.

In the "K–5 Look-for Guide," there is a checklist that Instructional Leaders can use to ensure teachers are correctly implementing the *Amplify Desmos Math Texas* curriculum. Important sections to look at include "Instructional Set-Up," "Structured Approach to Problem-Based Learning," and "Student Thinking."

## 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.

The kindergarten, Unit 3 *Teacher Edition* equips each unit with an overview. Under the "Connections and Coherence" section, "Prior Learning" and "Future Learning" for the lesson is reviewed. For example, in Unit 2, "students represent quantities of up to 10," and in Unit 4, "students represent groups of up to 20."

In the *Teacher Edition* unit overview, the page titled "Vocabulary of the Unit" lists the new vocabulary, review vocabulary, and contextual vocabulary of the unit needed for completing the lesson activities. Strategies for teaching the new vocabulary are also provided (e.g., using word structure (prefixes) and the Frayer Model).

In the kindergarten online platform for each unit, there is an overview of the skills taught and vocabulary used (review, contextual, and upcoming) in each unit.

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

In the "Paper Resources" unit overview section, there is a letter in English and in Spanish, providing families with a visual representation of the strategies being taught in the unit and the academic vocabulary necessary for comprehension.

The "Caregiver Hub" in the online resources is available in both English and Spanish. This resource offers information for caregivers to be able to engage in their student's learning. Under the section "How can I support math learning at home," there is a Spanish PDF for each unit. The PDF includes an overview of what is learned, a summary of each lesson, and a quick practice section.

Resources include review practice problems with questions to ask during the practice, games to play to reinforce the learning, unit stories to re-read and discuss, finding math and reinforcing learning in everyday life, and access to a collection of free K–5 lessons and activities offered in the materials.

## 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 kindergarten materials present lessons that include the TEKS and ELPS being covered, daily objectives and sub-unit goals, questions to assess understanding and to promote the use of language, a variety of whole group, small group, center activities, lesson activities, and formative and summative assessments to master the lesson objectives.

The activity section of the kindergarten lessons is broken into parts. The "Monitor and Connect" sections both have questions to ensure student understanding. These sections also include information on how these questions support Emergent Bilingual (EB) students, and how to connect these questions to assess if students are understanding the material.

Throughout the kindergarten lesson pages, there are multiple opportunities for students to engage in practicing and mastering the lesson objectives. There are whole group activities, paired activities, and independent practice. Some of the independent practice includes optional worksheets to assess the learning that has been achieved in each lesson.

### 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.

In the kindergarten "At a Glance" section of the online teacher materials, there is a summary of the lesson. A prep checklist is included, as well as additional materials needed. There is also a "Lesson at a Glance" that has an overview of the activities and the time frame needed to complete it.

In the kindergarten unit overviews there is a section titled "Material and Prep." There is a list of resources used in the unit and where to find them in the program materials. The program lists materials from the manipulative kit that will be used in that unit, classroom materials that will be needed and the corresponding lesson number, and additional resources, such as digital resources, centers, assessment resources, and *Intervention and Extension Resources*.

Within each unit, a "Lesson at a Glance" page is provided for each lesson. In the "Lesson at a Glance," a suggested time for the lesson components is given by each component. For example, in a 60 minute lesson, the different components of the lesson are assigned a suggested time: "Warm-Up" (10 minutes), Activity 1 (15 minutes), Activity 2 (15 minutes), etc.

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

In the kindergarten materials, the section titled "Differentiation—Teacher Moves" provides teachers with examples of student responses to observe and ways that teachers can respond to support, strengthen, and/or stretch learning.

In the kindergarten "Extensions," found in the online platform, there is an option for each lesson within the unit to extend learning. For example, in the kindergarten overview of Unit 3: "Shapes, Coins, and Financial Literacy," there is a "Differentiation" page listing additional resources to "support, strengthen, and stretch" student learning.

The kindergarten "Boost Personalize Learning" found in the online platform includes an online activity paired to the lesson objective. Teachers can assign this to students needing extended practice. Students work their way through an online interactive activity where students practice their recently learned skills.

# 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.

The *Kindergarten Teacher Edition Overview* includes a section titled "Program Assessments," which details assessments used in the program. There are "Lesson-Level Assessments," which highlight opportunities in each lesson for students to "show what they understand and what they are still learning." There are "Unit-Level Assessments," which "provide regular, actionable information about how students are thinking about and processing math." This is offered with a Pre-Unit Check, Sub-Unit Quizzes, and an End-of-Unit Assessment. At the lesson level, there is a section of the lesson titled Show What You Know, which helps teachers learn more about students' progress towards lesson goal(s).

The kindergarten materials include formative assessments for each stage of the lesson cycle, as well as teacher guidance to support students who may struggle to grasp the concept or those who have grasped it fairly quickly and require additional rigor. For example, in Unit 1, Lesson 7, the formative assessment requires students to identify the same quantity in different groups, demonstrating their knowledge of equivalent representations.

Each unit in the kindergarten curriculum includes Sub-Unit Quizzes to assess learning progression throughout each lesson of the units. These are given after multiple lessons throughout the unit on paper until the summative assessment. For example, Unit 4 offers different question types (i.e., matching and fill in the blank) and assesses multiple types of tasks (i.e., matching pictures to number sentences and word problems).

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

The kindergarten curriculum features a unit overview that outlines the materials to be used, the corresponding TEKS, and the anticipated outcomes, as well as explicates the intended purpose of the various instructional assessments included. This overview provides important details on the definitions and intended uses of each assessment, demonstrating how these assessments drive instruction and help teachers monitor student progress.

The kindergarten "Assessment Resources Overview" details the kinds of assessments and the purpose of the assessments in the materials. The "Assessment Overview" states, "Throughout the lessons, units, and course, teachers will find summative and formative assessments that provide insights into students' conceptual understanding, procedural fluency, and application, as described in the grade-level standards." There are assessment opportunities embedded into daily lessons through the form of digital lessons, which "offer moments of assessment and provide valuable information for both the teacher and students."

The *Kindergarten Teacher Edition Overview* defines the types of assessment materials included in the curriculum. For example, it states that, "Sub-Unit Checklists enable teachers to observe key skills and concepts that cannot be assessed on a pencil-and-paper assessment."

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

The kindergarten materials include teacher support designed to guarantee the reliable and precise administration of summative instructional assessments. This is illustrated through an "End-of-Unit 5 Assessment" rubric that highlights the TEKS assessed in each question. The rubric also includes grading criteria for each question in the areas of meeting, approaching, developing, and beginning.

The kindergarten materials include an "Assess and Respond" page in the *Teacher Edition*, which includes teacher guidance for each unit's Sub-Unit Quizzes. For example, in Unit 1, Sub-Unit Quiz 2, the time allocated for the quiz is listed as 20 minutes. The materials needed for the teacher are also specified, explaining that teachers need to provide students with a bag containing 5–10 counters. The materials also include facilitating directions stating, "Assign this Sub-Unit Quiz at the end of Sub-Unit 2 to evaluate students' proficiency with the key concepts and skills addressed in this sub-unit... Read aloud the problems to students."

The kindergarten End-of-Unit Assessments include teacher guidance on both the number of minutes the assessment should take, as well as facilitation instructions. For example, in the Unit 7 End-of-Unit Assessment, the directions state, "Assign the End-of-Unit Assessment to learn about your students' understandings of concepts and skills in this unit. Then, read aloud the problems to students."

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

In the kindergarten materials, formative assessments are provided as an optional lesson component titled Show What You Know, which the materials state is "designed to take less time to complete while maximizing the insight the teacher receives on a daily basis to attend to students' needs during the following class." In Unit 2, Lesson 5, the Show What You Know lesson component, students are given a page with eight circles on it and are instructed to "Use connecting cubes to make a group that has MORE than the group of counters." This aligns with the TEKS and the lesson's objective, allowing the teacher to gather formative information based on student success.

Each unit in the kindergarten materials includes a summative assessment in the form of an End-of-Unit Assessment that allows teachers to "learn about your students' understanding of concepts and skills in this unit." In the *Teacher Edition* on the "Assess and Respond" page, which includes teacher guidance for the assessment, there is an "Item Analysis" section that provides the concept or skill associated with each problem, as well as the TEKS aligned to each problem in the assessment. Unit 3 addresses 17 kindergarten TEKS, all of which are included in the Unit 3 End-of-Unit Assessment.

The materials include a brief "mCLASS Beginning-of-Year-Screener" that is provided for users. The mCLASS assesses kindergarten students on basic counting, adding, subtracting, and shape identification, aligning itself to kindergarten TEKS.

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

The kindergarten materials include End-of-Unit Assessments that are TEKS-aligned. The items vary in complexity levels, which are measured using the DOK system. The End-of-Unit Assessments consist of TEKS-aligned items at only DOK levels I, II, and III. The TEKS-aligned items do not contain levels of complexity at DOK level IV.

In the kindergarten, Unit 4 "Assess and Respond," the End-of-Unit Assessment is aligned with TEKS in order for students to solve problems including adding and subtracting. This assessment ensures students can match pictorial number representations to standard algorithms for adding and subtracting. It also requires students to solve word problems and standard algorithms and explain their thinking. In the "Assess and Respond Item Analysis" in the online resources, the DOK levels for each item are provided with either a DOK I or II for all seven of the TEKS-aligned items. The DOK levels do not exceed levels III or IV.

## 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 | All criteria for guidance met. | 2/2 |
| — | **TOTAL** | 5/5 |

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

The kindergarten materials include instructional assessments and scoring guidance to help teachers interpret scores and take appropriate action to increase scaffolding activities, thereby helping students achieve mastery or build upon their existing knowledge. For example, the End-of-Unit Assessment has four levels of student achievement and provides instructional steps for teachers to take moving forward.

The kindergarten materials include a rubric for the End-of-Unit Assessments. The rubric outlines how to interpret each student's response on the assessment to determine if the student is exceeding, meeting, approaching, or beginning the TEKS standard.

The kindergarten End-of-Unit Assessment rubric for Unit 7 includes scoring information along with examples of answers. Possible misconceptions are also broken down for Problems 1, 2, 3, and 6. For example, the rubric states on Question 1 that "Students who select the pencil may have associated length with weight and may need support in understanding that an object's appearance does not always reflect its heaviness."

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

The kindergarten "Assess and Respond" section offers guidance for teachers to extend student learning based on their End-of-Unit Assessment data. There is an "Item Analysis" section that outlines the skills and concepts for each problem. There is also a section titled "Differentiation (End-of-Unit Assessment)" that outlines support recommendation activities for each problem and task.

In the kindergarten optional Show What You Know formative assessment section within each lesson is accompanied by a table with suggestions in three categories: "students who need support, students who would benefit from more practice to strengthen their understanding, and students who are interested in a stretch to deepen their understanding." Teachers are provided with materials to assist students in all three categories to support their learning.

Throughout the kindergarten materials and lessons, there are sections for teachers titled "Differentiation—Teacher Moves". As teachers monitor student performance in lesson activities, these

sections of the units guide teachers in what to look for in students' work and responses, and ways to respond to either support, strengthen, or extend students' understanding.

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

In the student materials for kindergarten, each unit has a "Watch Your Knowledge Grow" page with the concepts and skills of that unit outlined. Students self-assess their level of knowledge at the beginning of the unit and then again at the end of the unit by bubbling in a chart to assess their learning, with teacher assistance, indicating for each skill or concept either "Not Yet," "Almost," or "I Got It!"

In kindergarten, for each "Sub-Unit Assessment" on the checklist pages, the materials include a page provided for teachers to keep a list of their students and notes about each student's progress toward mastery of the skills and concepts of that sub-unit.

The kindergarten materials include tools for teachers to track student progress and growth. For example, the teacher's dashboard features a "Summary View" for each student, along with a quick overview of student performance, a symbol describing their work on each screen, and an indicator if the teacher has sent feedback. This tool, included in the materials, can help identify students who need additional support or who are ready for extensions.

# 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 kindergarten materials include teacher guidance for differentiated instruction, activities, and paired lessons for students who have not yet reached proficiency on grade-level content. For example, the kindergarten materials include a document titled *Intervention and Extension Resources*. The differentiation resources provide beyond the lesson support for those students needing additional instruction and practice with a concept or skill. These resources include mini-lessons, which are 15-minute targeted intervention lessons to support students with a specific concept or skill.

In kindergarten, Unit 6, Lesson 5, the mini-lesson on showing teen numbers on fingers and with ten-frames includes a modeled review section (with teacher guidance and notes provided), a guided practice section, and questions for student reflection in wrapping up the mini-lesson. There are suggestions for further mini-lessons for students who are still not grasping the concept and suggestions for further practice for those who have mastered the concept.

The kindergarten materials include teacher guidance for differentiated instruction, as well as activities and paired lessons for students. For example, Unit 3, Lesson 5 features a "Personalization" section, which allows teachers to personalize learning by assigning the personalized practice activity that aligns with the lesson and provides differentiated and adaptive support.

### 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 kindergarten overview materials include a document titled "Math Language Development Resources." In the section titled "Vocabulary Routines," there are four routines: Frayer Model, Total

Physical Response, Word Connections, and Word Structure. The Frayer Model requires students to complete a four-part graphic organizer that centers around a vocabulary word or phrase, which includes the definition, characteristics of the term, examples, and non-examples of the vocabulary term. The Total Physical Response routine is used to support students' language acquisition of new vocabulary words and phrases by connecting listening with physical movement. The Word Connections routine supports students in using context to understand words with multiple meanings, connecting words to prior knowledge, and making predictions to help them deconstruct the meaning of new words. The Word Structure routine focuses on compound words and cognates in grades K–1.

The kindergarten materials include vocabulary cards for each vocabulary word introduced. Each new vocabulary term is listed on the "Vocabulary Cards" PDF for each unit with a supporting teacher notes page. These cards are to be used throughout the unit and grade. For example, the kindergarten, Unit 3 materials include lesson support for teaching the word "sort" as a multiple meaning word and then focusing on the word "sort" as used in a mathematical context.

### 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 kindergarten materials include a resource titled *Intervention and Extension Resources*. The extension activities are presented after each sub-unit set. "Extensions build on our student-led, problem-based approach because they provide more opportunities for students to engage in creative and rigorous problems that can be approached using different strategies." The activities are "print-based, hands-on problems structured on the principle of student choice and designed to be student-led. The math is designed to be accessible to students at any time they are ready for more during the sub-unit." For example, in kindergarten, Unit 5, Sub-Unit 1, students have been composing and decomposing numbers within nine. The extension activity for this sub-unit has two problems. First, students are given number grids with single digits in each cell. Students look for two or three digits that compose a given digit. Second, students decompose numbers using linking cubes and record all the ways a given number can be decomposed.

The kindergarten materials include "digital, adaptive practice that provides personalized support targeting a skill or concept aligned to the unit." As part of the "Strengthen and Stretch" knowledge goals of the program, digital resources are included with each unit for this purpose. "Math Adventures are strategy-based, digital math games offering students a fun, engaging, and low stakes way of practicing math skills. For example, in kindergarten, Unit 6, the "Math Adventures" digital activity requires students to use blocks to compose different combinations of target numbers. Students see equations that match their block representation and receive feedback in the form of a length bar. Students develop their fluency through repeated opportunities to flexibly build and recognize different parts of a whole.

## 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.

The kindergarten *Teacher Edition* includes explicit directions and guidance to support the teacher in modeling and explaining the concept. For example, in Unit 5, Lesson 4, Activity 1, the lesson begins with a "Launch" and includes directions and a teacher script to use when displaying the problem. Students are asked to use a learning routine to share ideas and answer the question posed by the teacher. Next, the lesson includes a "Monitor" section with question prompts the teacher can ask students, particularly students who are having difficulty getting started with the task. Finally, the lesson includes a "Connect" section. In this section, there are guiding questions for the teacher to ask, and explicit steps to take when explaining the concept. In this lesson, teachers are directed to record student responses and given questions to ask of the students regarding the lesson objective as students' responses are being recorded.

The lesson materials for kindergarten, Unit 5, Lesson 4, Activity 1, include a "Differentiation/Teacher Moves" chart that guides teachers in what to look for and listen for from students during the "Monitor" and "Connect" parts of the lesson. For example, to differentiate a lesson based on students' responses and teacher's observations, the materials suggest teachers look for students who "notice the numbers in the number sentences match the quantities in the image." The chart then offers an example of what that might look and/or sound like: "There are two shaded circles and four unshaded circles, and two and four are in the number sentence." Finally, the chart provides guidance on how teachers can extend the learning of the concept for students who have shown mastery. The suggestion is that teachers should, "point to the plus sign and ask, 'What does this math symbol tell you about two and four?'"

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

In the kindergarten overview booklet, the materials include a section titled "Instructional Routines." There are twenty instructional routines listed that are used throughout the program in various lessons. For teachers needing guidance in implementing them, further information can be found under the "Professional Development" tab. The instructional routines are listed in a PDF document. By clicking on one of the routines, the teacher is given an explanation of the routine and how to facilitate its use in lessons.

In kindergarten, Unit 5, Lesson 4, there are a variety of "Instructional Routines" recommended or implemented throughout the lesson as part of the effective lesson delivery. For example, during the Warm-Up section and lesson activities, the What Do You Know About _____? routine is implemented. In the Notice and Wonder section of Activity 1, it is recommended that the Think-Pair-Share routine be used. The "Connect" section of Activity 1 is structured using the Discussion Supports—Make a Conjecture routine. Similarly, the "Connect" section of Activity 2 is structured using the Compare and Connect routine. Finally, in the Synthesis section, the Think-Pair-Share routine is again recommended along with the Word Connections routine when focusing on lesson vocabulary.

A variety of instructional approaches are embedded into kindergarten lessons. For example, Unit 3, Lesson 3 uses the instructional approach of "Which One Does Not Belong?" The materials explain that this "communicates to students that their ideas have value, that there are many ways to be correct in math, and that they can learn math by sharing their math thinking with each other." Another example is in Unit 4, Lesson 14, which uses "Stronger and Clearer Each Time." The materials explain that this "communicates the importance of feedback and creates an opportunity for students to learn from each other."

### 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 support multiple types of practice and include guidance for teachers, as well as a recommended structure. For example, Unit 2, Lesson 4, Activity 1 includes guided, independent, and collaborative activities that provide teacher guidance on when and how to facilitate whole-group, small-group, and individual practices.

On the "Lesson at a Glance" page of each kindergarten lesson, the materials advise the teacher on what types of recommended structure each lesson component should have. In Unit 5, Lesson 11, students engage in whole-class, independent, paired, and small-group activities. This lesson includes a "Center Choice" time, where students work in small groups. The activities include detailed instructions for implementation. For example, the cover page includes clear directions for the teacher, along with all the materials needed by the student.

The kindergarten, Unit 3, Lesson 13 materials provide a lesson overview that includes a page called "Lesson at a Glance." This page describes each part of the lesson in brief. There are multiple types of practice included throughout various stages of the lesson to support effective implementation. For example, during the "Warm-Up" section and lesson activities, students work collaboratively with a partner (through instructional routines like Think-Pair-Share), while the teacher questions, observes, and guides students through the lesson based on formative assessments. The lesson also provides an opportunity for students to independently practice the lesson concepts with practice pages from the Show What You Know materials in the "Student Edition."

## 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 include a document titled "Math Language Development Resources," which contains information and guidance for teachers on providing linguistic accommodations for students with various levels of proficiency. The materials state that "The Math Language Development Resources is one part of an integrated system of lesson-level language supports, unit-level language supports, and course-level language supports." Course-level supports include documents, such as a list of English-Spanish cognates and an alignment guide for the ELPS. Unit-level supports include graphic organizers for supporting the understanding of multiple-meaning words and vocabulary cards for academic terms. Lesson-level supports include a language goal with each lesson to support students' access to math language acquisition and development.

The kindergarten materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency. For example, Unit 2, Lesson 1, Activity 1 features a "Launch" section where teachers are encouraged to consider pairing students with partners who speak the same primary language and inviting them to share their responses first in their primary language or using a mixture of their primary language and English before recording each example on their paper.

Each unit of the kindergarten materials is supported by the "Math Language Development Resources" vocabulary routines. This resource includes cards with the vocabulary term and a picture of the term. A teacher script is provided with directions on how to introduce the vocabulary cards, and how to address the needs of students based on level of language proficiency. For example, in Unit 3, the materials state

that teachers can "Invite students to respond to the above questions in their primary language or use gestures."

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

The kindergarten materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual or English as a Second Language (ESL) programs. For example, the overview of Unit 5 features a language development section that explains every lesson includes embedded opportunities for all students to develop their mathematical language skills, engage in meaningful language interactions, and provide visual examples.

The kindergarten overview materials include the "Math Language Development Resources." In this guide, teachers are provided with tools to understand the support provided within the materials. For example, teachers are provided with implementation guidance on "Supporting Students' Language Acquisition and Development," and "Vocabulary Routines." A list of cognates and pronunciation guides is also included.

In the kindergarten overview of Unit 2, the ELPS covered are listed on the opening page, along with a "Language Development" section that highlights "Math Language Routines" and strategies for supporting meaningful language interactions. Every lesson includes embedded opportunities for all students, including English learners, to develop mathematical language skills. The "Lesson at a Glance" offers guidance on incorporating language supports for all proficiency levels.

### 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.

In kindergarten, teachers are provided materials to support written discourse for EB students. The Frayer Model and Word Connections routines support written vocabulary acquisition. These practices increase comprehension of math terms. The Frayer Model increases comprehension for EB students defining, describing, and providing examples or non-examples. The "Word Connections" activity "supports students in using context to understand words with multiple meanings, connecting words to prior knowledge, and making predictions to help them deconstruct the meaning of new words." Each of these components is further explained within the document. Building these connections supports cross-linguistic learning for students at varying language acquisition levels.

The kindergarten materials provide embedded guidance for teachers working with EB students. Every unit in the program has a "Unit Story" to "engage students and help them make connections between math and authentic contexts." For example, the narrative story included in Unit 2 is titled "What's in a Restaurant?" This part of the lesson provides an opportunity for teachers to assess the level of

background knowledge students have and to scaffold the class discussions to help students build background knowledge. Subsequent lessons in the unit connect the lesson and activities to the unit narrative about the topic of the story.

### 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.

The kindergarten materials provide Show What You Know opportunities after each lesson. Students are given practice tasks or problems after each lesson, requiring students to use the content and process skills of the lesson's TEKS focus.

The kindergarten, Unit 4, Lesson 17 requires students to demonstrate an understanding of key concepts by matching pictorial number representations to standard algorithms with addition and subtraction. Students must also be able to explain orally how they knew the representations matched. For example, a student could respond, "I see 4+2 in the expression. I see 4 red dots and 2 red dots together in the drawing. I know they match because ____."

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

The kindergarten lessons include questions and tasks that begin by asking students to activate their prior knowledge. Students are then asked questions to help them process the information as it is being presented. At the conclusion of the lesson, students are asked to synthesize their learning and apply it by answering questions that increase in rigor and complexity.

The kindergarten, Unit 4 lessons require students to learn through a progression in understanding addition. For example, in Lesson 2, Problem 2, students must recognize that their four cubes and their partners four cubes equal eight when put together. By Lesson 19, Activity 2, Problem 1, students must be able to solve a numerical expression using addition.

The kindergarten, Unit 4 End-of-Unit Assessment progressively increases in rigor and complexity by requiring students to understand and match pictorial representations of addition and subtraction equations, to solving equations by expressing the representations independently, and word problems.

## 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 kindergarten "Teacher Edition" has a "Rationale of Unit Order" that connects the learning in each unit to the following unit. Each unit contents are described, and followed by how the lesson "builds upon their understanding," and how it is "necessary to prepare students for further work."

In the kindergarten overview of Unit 2, in the "Prior Learning" section, there is a list of knowledge and skills that students worked on in previous units in the program. For example, previously, students used objects to represent a number up to 10 that is equal. In Unit 2, students will build on that learning to begin using numerals to represent quantities up to 10. They will then use that knowledge to compare numbers up to 10. These concepts will be used to further learning and knowledge in Unit 6, where students will learn to count and represent numbers up to 20.

In kindergarten, Unit 6, in the "Focus on the TEKS" section, there is a summary statement of the learning objectives for the unit. The lessons in this unit build on the learning from previous units. The materials state, "Students continue to develop counting skills as they answer "how many?" questions about quantities within 20. They determine and generate quantities within 20 that are more than, less than, or equal to a given number. Students deepen their understanding of teen numbers by comparing sets of objects to 20 and using comparative language to describe sets of objects and written numerals up to 20."

### 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.

The kindergarten materials demonstrate coherence across units by explicitly connecting patterns, big ideas, vocabulary, and relationships between mathematical concepts. For example, the kindergarten overview features unit overviews that connect standards to inform teachers what students are learning to master.

In the kindergarten materials, each unit includes a unit overview. Within the overview there is a page titled "Connections to Future Learning." This page outlines how the current lessons and learning connect to lessons and concepts to be learned in the future—either within the kindergarten scope and sequence

or in the grade 1 units. For example, in kindergarten, Unit 5, "Make and Break Apart Numbers Within 10," the materials state, "In this unit, students decompose 10 and find the number that makes 10 when added to a given number. In grade 1, Unit 3, they will decompose one of the addends to make 10 when adding two one-digit numbers."

At the beginning of each *Teacher Edition* of the kindergarten materials, a section titled "Connections and Coherence" is included, which features subsections titled "Prior Learning" and "Future Learning." In kindergarten, Unit 3, the "Prior Learning" sections detail what relevant concepts students have engaged in previously. For example, "Students subitized groups of up to four objects and images. They determined and represented the quantity of a group of up to 10 objects." The "Future Learning" section details concepts at grade level and beyond kindergarten. For example, "Students will explore how income is used to obtain goods and services, and using income for spending, saving, charitable giving purposes in grade 1."

### 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.

The "Connections and Coherence" section of this kindergarten lesson connects concepts of "Prior Learning" and "Future Learning" within units and lessons. The TEKS portion highlights which TEKS are being addressed and which ones are forthcoming. For example, in Unit 5, the concept of composing and decomposing numbers 1–10 is connected to the learning of numbers 1–10 in Unit 2. The lesson procedures are structured the same throughout grade level and lessons to create procedural connections throughout the materials.

In kindergarten, Unit 4, Lesson 6, there is a routine used which is called the Think-Pair-Share routine. This routine is meant to "increase student collaboration and leverage student ideas during lessons." The Think-Pair-Share routine is first introduced in the beginning lessons of Unit 1, and then continually implemented and practiced throughout all units thereafter.

In kindergarten, Unit 4, Lesson 6, the materials are coherent at the lesson level as students' prior knowledge of concepts from the current grade level are applied to the new knowledge and skills learned in the current lesson. For example, in Lesson 6, students use the "Warm-Up" to subitize a set of figures. In prior lessons, students have subitized by adding objects to the collection. However, in Lesson 6, as students subitize a set of objects, they should notice the decreasing number of objects projected, preparing them conceptually for subtraction.

## 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, a spiraled review is included at the end of lessons in worksheet form, providing students with retrieval opportunities throughout units and lessons. For example, Unit 4 covers "Understanding Addition and Subtraction." In Lesson 4, students review counting within 5 and matching shapes and more than, while Lesson 15 reviews counting within 5 and less than 10.

In kindergarten, Unit 4, Sub-Unit 1, students are provided opportunities to use previously learned skills and concepts from Units 1–3 in order to add numbers up to 10. For example, in Unit 4, Sub-Unit 1, Lesson 4, as the lesson is launched, teachers are guided to activate prior knowledge by asking students to recall the strategies they used in prior counting work to keep track of images as they counted. Then, students notice and make use of structure as they determine the total of two groups.

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

In kindergarten, there are interleaved practice opportunities throughout the program, providing students a chance to practice previously learned skills and concepts. For example, in Unit 6, Lesson 2, there is independent practice of the current skill. Included in the independent practice are problems for students to solve that require learning from previous units. In this example, students have to count the number represented in a ten-frame. That is a skill taught previously. The skill ties into the current lesson, as students are then asked to identify the amount needed to make a 10.

In the kindergarten, Unit 7, Lesson 10, "Practice" section, students are able to "build and reinforce their conceptual understanding, fluency and application of mathematical topics." Students are able to switch between different processes, such as sorting shapes by faces and graphing them, counting within 25, and writing numerals, creating interleaved practice across units and lessons.

Each kindergarten unit offers center ideas for students to practice skills and concepts learned in current or prior lessons and units. For example, Unit 5 center ideas include "Show Two Parts," which is introduced in Lesson 3 and used throughout Lesson 6, and "Addition Expressions," which is introduced in Unit 4.

# 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, Unit 6, Lesson 1, the materials include an activity in which the objective is for students to "apply their understanding of compositions of 10 to interpret given information and then make a group of 10 using smaller numbers." Unit 6 is about numbers 0–20. Lesson 1 is about composing the number 10 in multiple ways. As the lesson progresses, students are asked to use the Think-Pair-Share routine and respond to the following questions about their work and the work of other groups (which are now displayed): "How did each group make 10? Which numbers did they put together? What is different about how each group made 10? What would happen if there were more than 10 people on the soccer team and the coach needed to bring more snacks?" Through the questions and tasks of this lesson, students are interpreting, analyzing, and evaluating the representations of all the teams in the class.

In kindergarten, Unit 3, Lesson 8, students compare the length of straws and will use that information to build shapes. The "Integrating Rigor in Student Thinking" section adds that students will "compare the lengths of two straws to further their conceptual understanding of measurable attributes of objects, analyze the attributes of rectangles and squares to further their conceptual understanding of shapes, and apply their understanding of shape attributes as they build shapes from components." In the Synthesis portion of the lesson, the teacher asks, "Which of these shapes are rectangles? Which of these shapes are squares? How do you know this shape is not a rectangle? (Point to the trapezoid.) How do you know this shape is not a rectangle?"

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

The kindergarten materials include questions and tasks that require students to create models to represent mathematical situations. For example, in Unit 5, Lesson 9, Activity 2 requires students to solve the "Put Together/Take Apart, Total Unknown and Put Together/Take Apart, Both Addends Unknown" story problems from Activity 1 using drawings. Students compare the solutions to the problems and discuss why some story problems have more than one answer and others have only one answer.

In kindergarten, Unit 7, Lesson 12, students learn about picture graphs. In this lesson, students are tasked with collecting data by asking their classmates which shape they like most when presented with triangles, circles, or squares. The students record each vote by writing the shape name or drawing the shape. Students use the data they collected to create a picture graph and discuss how a picture graph can be helpful to organize and represent data. The picture graph is the model used to represent the mathematical situation of classmates' favorite shape.

The kindergarten materials include questions and tasks that require students to create models to represent mathematical situations. For example, in Activity 1, Unit 4, Lesson 5, students count out a group of counters, add a given quantity, and then determine the sum to understand addition as adding to an existing group. In the "Connect" section of the lesson, students explain their strategies for determining the sum.

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

The online activities throughout the kindergarten lessons provide multiple opportunities for conceptual understanding through questioning and tasks. For example, in Unit 4, Lesson 7, "students express creativity when adding or subtracting buses and receive feedback when determining the total or difference" while using the student paired lesson screens. Students will have multiple opportunities within the lesson to practice "addition and subtraction in a real-world context."

The kindergarten, Unit 4, Lesson 15 materials supports the building of conceptual understanding through "symbolic notation by solving an "Add To, Result Unknown" story problem and examining an addition expression that represents it." For example, students use "expressions as a representation of story problems" within the lesson.

In kindergarten, Unit 3, Lesson 2, materials include student practice, which involves student engagement in one of three centers: Bingo, Mystery Shape, and Pattern Blocks. In Mystery Shape, students apply their new understanding of the attributes of shapes. In this center, students choose a shape on the board and ask their partner a yes-or-no question. The other partner names the shape when they have identified enough attributes, thus applying conceptual understanding to new problem situations and contexts.

## 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.

The kindergarten materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks. For example, Unit 2 includes a "Fluency Practice" section that provides students daily, personalized fluency practice on math facts.

The kindergarten materials include a section called "Fluency Practice" accessible via the online platform. This consists of an activity called "Numbers by Heart." The activity provides "daily personalized fluency practice on math facts." It is recommended that teachers "Incorporate Fluency Practice into the daily routine for 5 to 10 minutes."

The kindergarten overview of Unit 1includes "Fluency Practice" accessible via the online platform. The materials provide an activity titled "Numbers by Heart," which is a flashcard activity focusing on counting from 1 to 10, comparing numbers, and adding within 5. Representations include fingers, dots, and ten-frames. The materials provide a summary of the fluency activity stating, "Using the theory of spaced repetition, students more frequently practice the facts they are most likely to forget. When students correctly answer a fact, they will not see that same fact again for one to two days to a few weeks, depending upon how many times they have already correctly answered that fact. If students answer a fact incorrectly, they will see that fact again the next time they practice." This activity is digital and personalized to student individual needs.

### 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.

The 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, students understand addition and subtraction. The unit begins by building foundational skills to recognize how many objects there are in total when given two sets within 10. These mathematical procedures allow students to use manipulatives when adding and subtracting. Students gain accuracy, being able to efficiently solve algorithms by the end of the unit.

In kindergarten, students are introduced to the attributes of coins in Unit 3, Lesson 12. This lesson teaches students efficient and flexible foundational skills involving coins. Students learn to describe and identify coins. This builds accuracy and sets students up for success in future lessons.

In kindergarten, Unit 5, Lesson 8, students find multiple accurate answers to "Both Addends Unknown" story problems. Students compare two drawings that represent solutions to the same story problem and notice that number labels can help them understand the parts in a drawing. Students find and represent a different solution to the problem. In the next activity, students find and represent as many solutions as they can to a new story problem. Students use patterns to identify all the possible solutions and explore the idea that parts can be switched to find a new solution. Students look for as many solutions as possible and use patterns to identify all possible solutions that contribute to efficient and accurate problem solving.

### 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.

The kindergarten materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit. For example, in Unit 5, students understand addition as "putting together" and "adding to," and understand subtraction as "taking apart" and "taking from." Students count to tell the number of objects. Students explore different ways to compose and decompose numbers within 10 and represent those compositions and decompositions in different ways, including connecting number sentences and drawings. They are introduced to "Put Together/Take Apart" story problems where both addends are unknown and later where the total is unknown.

The kindergarten materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson. For example, in Unit 5, Lesson 13, during the "Connect" part of Activity 1, students use a Think-Pair-Share routine and are asked to discuss how students' strategies for solving a given problem are the same and how they are different. Students are also tasked with explaining to their partner which strategy makes the most sense to that particular student and why. At the end of the lesson, during the Synthesis portion, students reflect on their learning. One question posed by the teacher during this time is, "How can ten-frames or fingers help you find the number that makes 10 without counting?"

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

In kindergarten, Unit 4, Lesson 17, teachers are provided for increasingly efficient student performance. In the "Monitor" section, there are embedded questions, such as, "What do you notice about the drawing?" and "How could you show each part of the drawing in an expression?"

The "Connect" section of Unit 6, Lesson 7 gives teachers guidance to provide students with efficient approaches by explicitly teaching them to make a 10 and then count on. Students who used this strategy are asked to share. The teacher then reviews this concept in the "Key Takeaway" portion of the lesson.

In kindergarten, Unit 7, Lesson 5, students are learning to represent the composition of a number using 2D and 3D shapes and number sentences. Throughout the lesson, the materials include embedded support for teachers. The materials provide support predominantly through questioning to guide students toward increasingly efficient approaches to solving problems. As students work on completing the first task of Lesson 2, the materials provide a "Differentiation/Teacher Moves" chart for a teacher to refer to with questions to ask students for the purpose of supporting, strengthening, or stretching student knowledge and skill level depending on teacher observation of student performance. For students who have a difficult time getting started with the task, the materials include embedded questions within the lesson structure for a teacher to ask. For example, "Which number sentences did you match with this object?" and "How did you know that both number sentences matched this object?"

## 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 explicitly state how the conceptual emphasis of the TEKS is addressed. For example, Unit 4, Lesson 1 addresses the concept standard of K.3.B., which states, "The student is expected to solve word problems using objects and drawing to find sums up to 10 and differences within 10." In the "Key Concepts" section of the lesson overview states, "The Exploration sets the stage for a focus on addition and subtraction, including story problems, in this unit. Students will apply the counting strategies they explored in previous units to add and subtract. They will then apply their understanding of the operations to solve Add To, Result Unknown and Take From, Result Unknown story problems."

### 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 the kindergarten materials, Unit 7, Lessons 1–4, students progress from concrete to pictorial to abstract representations as they explore 3D geometric shapes. Lessons begin with hands-on activities using manipulatives to build and identify shapes, connect 2D and 3D forms, and describe attributes using geometric language. As students gain understanding, they compare, sort, and justify classifications of 3D shapes, gradually transitioning from physical models to pictorial representations. By Lesson 4, students begin identifying real-world examples of 3D shapes, applying their knowledge at a more abstract level.

The questions and tasks in the kindergarten, Unit 4, Sub-Unit 3, Lessons 15–20, progress through the use of concrete models and manipulatives to pictorial representations to abstract representations. In this unit, the goal is for students to relate addition and subtraction expressions to story problems. The sub-unit lessons begin by introducing students to expressions. Lessons move through using expressions to represent story problems to connecting expressions to drawings to finding the values of expressions. Ultimately, students end the unit by creating/telling story problems to match expressions.

In the kindergarten materials, questions in Unit 3, Lesson 13, incorporate concrete, pictorial, and abstract representations. In Activity 1, students sort coins into groups. In Activity 2, students use a pictorial representation of the coin, and must write how many they have using numerals.

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

The kindergarten materials guide students through a progression from concrete models and manipulatives to pictorial and abstract representations. Students are supported in connecting, creating, defining, and explaining how concrete and representational models relate to abstract concepts. Each unit provides opportunities to use tools, such as manipulatives, picture cards, and paper to build understanding through hands-on modeling. Students regularly explain their thinking to peers, groups, or the teacher, reinforcing their learning as they move toward abstraction. For example, in Unit 3, Lesson 2, Activity 2, students work with a partner to identify a mystery shape using yes-or-no questions. While written responses are not expected, the "Student Edition" includes visual instructions and prompts, and the *Teacher Edition* provides guiding questions and strategies to support instruction and ensure students can complete the task successfully with teacher facilitation.

The kindergarten materials are intentionally designed to move students from concrete experiences to pictorial and, ultimately, abstract representations. This progression is consistently embedded across Units. For example, in Unit 6, Sub-Unit 2, students read, write, and represent numbers 11–19 using objects or images, building numbers with 10 ones and some more ones. As students model these quantities with manipulatives and images, they simultaneously learn to write the numbers symbolically. Similarly, in Unit 5, the "Mathematical Background" explains how students use concrete and pictorial models to solve story problems with unknown addends or totals, supporting a strong connection to abstract problem-solving strategies.

## 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.

The kindergarten materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies. For example, in Unit 2, Lesson 2, students begin with a Warm-Up where students count by ones to the number 10 to practice the verbal count sequence. Students then move on to an activity where students recognize and name quantities of one to 10, represented on fingers, to consider fingers as math tools and represent the quantities with their fingers. Additionally, in the overview of Unit 2, students are invited to hold/open both hands wide apart to show "more" and bring both hands closer together to show "fewer." Students are encouraged to perform these physical movements as the terms are spoken aloud, integrating kinesthetic learning with vocabulary acquisition.

In the Unit 4, Lesson 15, "Teacher Overview," new vocabulary and review vocabulary for this particular unit is listed. In this case, the new vocabulary word for the lesson is "expression." Vocabulary instruction is embedded within the lesson activities. Students are encouraged to speak and listen to one another, and the teacher provides support, such as sentence stems incorporating the new vocabulary word as well. In the Synthesis portion of the unit, the teacher reviews the learning and formalizes the vocabulary word "expression," asking students to compare and contrast expressions and give the meaning of "expression." The teacher also incorporates the language development strategy of "Total Physical Response" and "Multiple Meaning" words to solidify the vocabulary in students' minds.

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

The kindergarten materials include embedded teacher guidance that supports the development and contextual use of academic mathematical vocabulary. For example, each *Teacher Edition* includes a "Vocabulary of the Unit" section. This section lists the academic mathematical vocabulary for the unit and the lesson in which each term is introduced. This helps educators plan and prepare for vocabulary instruction. A key strategy highlighted is Total Physical Response (TPR), as seen in Unit 3 for terms like "curved" and "straight," where students use their fingers to demonstrate the concepts while saying the words. This active engagement helps solidify vocabulary understanding.

The kindergarten materials offer further guidance in the "Math Language Development Resources" vocabulary routines. These resources provide additional support for each lesson, ensuring educators have tools to address vocabulary development. In Unit 3, Lesson 8, for the word "square," teachers are advised to use TPR by having students create rectangles and then squares with their arms. This is followed by prompts for students to describe what is similar about the shapes, encouraging deeper understanding and communication. The inclusion of vocabulary cards with visuals and pronunciation guidance further aids both educators and students in mastering new terms.

The kindergarten resource embeds guidance to extend vocabulary use in diverse learning scenarios. In Unit 3, Lesson 6, and Unit 5, Lesson 4, educator materials offer strategies to make learning—including academic vocabulary—more accessible, especially for students with visual-spatial and conceptual processing needs. This guidance includes scaffolding questions that prompt student thinking and provide structured support. Additionally, sentence frames are provided in Unit 5, Lesson 4, to help students communicate effectively with peers, ensuring they can articulate their mathematical ideas using precise academic language in context.

### 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.

The kindergarten materials include embedded teacher guidance to support students in using appropriate mathematical language, encompassing vocabulary, syntax, and discourse, to foster rich mathematical conversations. For example, in Unit 5, Lesson 12, students engage in peer discussions. The *Teacher Edition* provides various suggestions and routines to facilitate this discourse. Teachers introduce lesson vocabulary after students initially discuss problems using their own words, then model connecting academic vocabulary with correct syntax. Students are then encouraged to apply this precise language in their ongoing conversations. Routines like Notice and Wonder, Think-Pair-Share, and Compare and Connect are integrated to promote discourse. Additionally, a "Differentiation/Teacher Moves" section helps teachers identify and respond to student work and discussions, supporting their learning and language development.

The kindergarten materials include embedded teacher guidance for applying mathematical language in peer conversations. For example, in Unit 2, Lesson 3, "Warm-Up," students engage in mathematical discourse. The embedded teacher guidance prompts, "What do you notice? What do you wonder?" The materials prompt teachers to encourage students to use varied sentence structures, including questions and statements, and to employ connecting words like "and." Exemplar student responses are provided, such as, "I notice there are two lines of dots," and "I wonder why there are big spaces in the second row?"

## 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.

The kindergarten materials appropriately integrate the TEKS process standards. For example, in Unit 7, Lesson 8, Activity 2, students use a problem-solving model (TEKS K.1.B) to compare the capacities of two containers to determine which can hold more and which can hold less. The task arises from the teacher giving students a real-world problem of a person wanting a container that holds the most drinking water.

The kindergarten process standard K.1.F is integrated into Unit 5, Lesson 3, when students complete Activity 1 and Activity 2. Students must "analyze mathematical relationships to connect and communicate ideas" by breaking numbers apart in more than one way, such as breaking apart seven cubes to build multiple different equations.

The "Item Analysis" for kindergarten, Unit 6 End-of-Unit Assessment identifies how the process standards are integrated into the materials. For example, K.1.D is integrated into Problems 4 and 6 by communicating "mathematical ideas, reasoning, and their implications using multiple representations" of numbers (concrete, pictorial, and abstract).

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

In the kindergarten overview, the "Texas Essential Knowledge and Skills (TEKS) Kindergarten" section lists each process standard along with the specific units and lessons in which it is addressed. For example, process standard K.1.D is extensively covered across numerous units and lessons, including: Unit 1, Lessons 9–11, 17; Unit 2, Lessons 4–6, 11, 13–16; Unit 3, Lessons 14, 17; Unit 4, Lessons 6, 7, 12, 16, 17, 19, 20; Unit 5, Lessons 1, 6, 8, 10–15; Unit 6, Lessons 2, 4, 5, 9, 10, 12; and Unit 7, Lessons 3, 10–14.

The *Kindergarten Teacher Edition Overview* includes a breakdown of each lesson within each unit, and the standards covered. The overview informs teachers of when a process standard is building toward a specific content standard. For example, in Unit 1, Lesson 1, K.1.E builds toward K.2.C, K.7.A, K.6.F, K.8.A, while in Unit 6, Lesson 1, K.1.A, K.1.B, K.1.E, and K.1.F build toward K.2.B.

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

Each unit in the kindergarten materials includes a *Teacher Edition* that details the integration of process standards within the unit's "Unit at a Glance" section. Units are organized into sub-units and lessons, with the corresponding process standards listed. For example, in Unit 1, process standard K.1.E (creating and using representations to organize, record, and communicate mathematical ideas) is being taught in Lessons 1, 2, 4, 9, 10, and 17.

Each unit in the grade 1 materials includes the "Connections and Coherence" section. The overview of Unit 3 features a "Spotlight on Connecting the Content and Process Standards" section. This section outlines specific lessons where a process standard is applied, describing student activities that engage with that standard.  It also explicitly links the process standard to the corresponding content standard for that lesson. For example, process standard K.1.F (create and use representations to organize, record, and communicate mathematical ideas) will be addressed in Lesson 9, Activity 1. Here, students analyze and sort two-dimensional shapes into categories based on their attributes, then predict how a third shape will be sorted based on how two others were sorted. This activity directly supports content standard K.6.E (classify and sort a variety of regular and irregular two- and three-dimensional figures regardless of orientation or size).

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

The kindergarten materials provide an overview of the TEKS process standards incorporated in each lesson. For example, in Unit 2, Lesson 1, two process standards are addressed. There is an explanation for teachers in the "Key Concepts" section regarding how one of these standards is integrated into the lesson, while the "Lesson at a Glance" section provides a summary of the second process standard.

The kindergarten materials ensure clear integration of the TEKS process standards within each lesson. Every lesson provides an overview that explicitly lists the incorporated mathematical process standards, such as K.1.F. The "Connections and Coherence" section then details how these standards are woven into the lesson's activities. For example, it explains that students will describe shapes from "Unit Story" illustrations, beginning to notice their structures and using developing geometric language to articulate shape attributes. The guidance clarifies that while some students may use formal terms, they are not yet expected to know specific shape names or use formal language for attributes like "sides" or "vertices."

# 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.

The kindergarten materials provide numerous opportunities within the "Monitor" section for students to think mathematically, persevere through problem-solving, and make sense of math concepts. For example, in Unit 4, Lesson 6, Activity 2, the guiding questions that engage students to make sense of their work include, "What do you need to do first?" and "Fill the five-frame. What do you need to do next?"

The materials provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. In Unit 5, Lesson 11, students are introduced to the ten-frame as two combined five-frames and use it to represent numbers within 10. The lesson encourages students to relate the ten-frame to their fingers, helping them see numbers in relation to benchmarks five and ten. Teachers are guided to support students who struggle by asking questions, such as, "What number do you need to show? How could you use the five-frames to show it?" The lesson concludes with a whole-group Synthesis where students reflect on the mathematics in real-world contexts.

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

The kindergarten materials support students in understanding and explaining that problems can be represented and solved in multiple ways. In Unit 2, Lesson 1, students focus on recognizing and representing mathematical situations in real-world contexts by exploring the school cafeteria for math-related observations and questions. The "Key Concepts" section of the *Teacher Edition* states that the lesson is designed to build curiosity through a non-routine task that encourages multiple strategies and solutions, allowing students to apply their own knowledge and language. During Activity 1, students are directed to find and record at least three examples or questions involving math in the cafeteria. At the end of the lesson, student pairs share and explain their findings with the class, supporting the development of mathematical communication and reinforcing the idea that problems can be approached and represented in various ways.

In kindergarten, Unit 1, Lesson 14, students deepen their understanding of cardinality and the conservation of numbers. The "Connections and Coherence" section of the teacher notes states, "Students also build an understanding of conservation of number by justifying that a quantity does not change even if the objects are rearranged or hidden." Through lesson activities, such as counting snacks, students engage in explaining their problem-solving approaches to partners, peers, or the whole class, comparing responses, and justifying their own solutions.

### 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.

The kindergarten materials provide multiple opportunities for students to make sense of mathematics by engaging in hands-on activities, mathematical discussions, and written reflections. In the "Connections and Coherence" section of Unit 5, Lesson 15, the lesson focuses on decomposing the number 10 in as many ways as possible using objects, followed by recording the decompositions on posters. As students complete these tasks, they collaborate to create a chart of their solutions, promoting peer discussion and analysis. The lesson extends into a Gallery Walk, where student pairs observe and discuss the mathematical thinking and representations of other groups. The lesson concludes with a Show What You Know activity where students write about their mathematical understanding.

In Unit 7 of the kindergarten materials, students have multiple opportunities to work and discuss math with partners. For example, in Lesson 5, the center activity "Pattern Blocks" has students build a picture using pattern blocks, count and record the number of each shape used, and discuss their results with a partner. Similarly, in Activity 1 of Lesson 10, students work with a partner to sort two-dimensional shapes and describe their attributes, promoting mathematical discourse and collaborative reasoning.

## 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 kindergarten materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications. In Unit 2, Lesson 20, students compare quantities using numeral and image cards in the game "Less, Same, More." The teacher is prompted to model comparison statements and encourage students to explain their reasoning using mathematical vocabulary. The Think-Pair-Share routine deepens this reflection as students are asked to agree or disagree with their partner's comparison and justify their thinking.

In Unit 5, Lesson 15, the kindergarten materials provide another strong example of supporting student reflection through a "Gallery Tour" activity, where students analyze multiple ways to make 10. Teachers guide the class in observing patterns and decompositions through student-created posters. Prompts like, "How did this group find more than one way to make 10?" and "Do you think they found all the ways to make 10?" encourage students to not only explain but also justify and critique problem-solving strategies.

In Unit 4, Lesson 7, the kindergarten materials provide teacher prompts and observation guidance as students solve problems and record their thinking in math journals. Teachers are equipped with questions to prompt reflection, such as, "Why did you choose this strategy?" and are guided on what to look for in student responses. Students then share their reasoning in small groups or with partners, providing justifications for their solutions.

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

The kindergarten materials include prompts to support teachers in providing explanatory feedback based on student responses. In Unit 3, Lesson 4, students compare 2D shapes, and the lesson ends with a Differentiation/Teacher Moves chart that helps teachers identify student thinking and offers prompts to support or extend understanding. For example, teachers are encouraged to ask, "What other shapes in the picture have the same number of parts as your shape?"

The kindergarten materials include a "Monitor" section within both Activity 1 and Activity 2 that offers teachers questioning prompts and guidance to address common student misconceptions. These prompts align with the strategies outlined in the "Differentiation/Teacher Moves" section. For example, in Unit 5,

Lesson 9, Activity 1, teachers supporting students who struggle might ask, "What do you know from each story? How could you act that out or show it with objects?" and "What is something you do not know from the story?" These questions help guide student thinking and build understanding.