IMRA Review Cycle 2024 Report

Publisher Name	Program Name
Alba Educational Consulting, LLC	*Progressions by Alba Math*
Subject	**Grade Level**
Mathematics	Kindergarten

Texas Essential Knowledge and Skills (TEKS) Coverage: **100%**

English Language Proficiency Standards (ELPS) Coverage: **100%**

Quality Review Overall Score: **227 / 227**

IMRA Reviewers

Flags for Suitability Noncompliance **0**

Indicator	Count of Flags
1. Prohibition on Common Core	**0**
2. Alignment with Public Education's Constitutional Goal	**0**
3. Parental Rights and Responsibilities	**0**
4. Prohibition on Forced Political Activity	**0**
5. Protecting Children's Innocence	**0**
6. Promoting Sexual Risk Avoidance	**0**
7. Compliance with the Children's Internet Protection Act (CIPA)	**0**

Flags for Suitability Compliance **0**

Indicator	Count of Flags
Alignment with Public Education's Constitutional Goal, 2.1.1	**0**
Promoting Sexual Risk Avoidance, 6.2	**0**

Alleged Factual Errors **0**

Public Feedback

Flags for Suitability Noncompliance **0**

Rubric Indicator	Count of Flags
1. Prohibition on Common Core:	**0**
2. Alignment with Public Education's Constitutional Goal	**0**
3. Parental Rights and Responsibilities	**0**
4. Prohibition on Forced Political Activity	**0**
5. Protecting Children's Innocence	**0**
6. Promoting Sexual Risk Avoidance	**0**
7. Compliance with the Children's Internet Protection Act (CIPA)	**0**

Alleged Factual Errors **0**

Public Comments **0**

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	53 / 53
2. Progress Monitoring	28 / 28
3. Supports for All Learners	32 / 32
4. Depth and Coherence of Key Concepts	23 / 23
5. Balance of Conceptual and Procedural Understanding	66 / 66
6. Productive Struggle	25 / 25

Strengths

- 1.1 Course-Level Design: Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course, with suggested pacing guides for various instructional calendars, explanations for the rationale of unit order and concept connections, guidance for unit and lesson internalization, and resources to support administrators and instructional coaches in implementing the materials as designed.
- 1.2 Unit-Level Design: Materials include comprehensive unit overviews that provide background content knowledge and academic vocabulary necessary for effective teaching, and contain supports for families in both Spanish and English with suggestions for supporting their student's progress.
- 1.3 Lesson-Level Design: Materials include comprehensive, structured lesson plans with daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards. They also provide a lesson overview outlining the suggested timing for each component, a list of necessary teacher and student materials, and guidance on the effective use of lesson materials for extended practice, such as homework, extension, and enrichment.
- 2.1 Instructional Assessments: Materials include a variety of instructional assessments at the unit and lesson levels, including diagnostic, formative, and summative assessments with varied tasks and questions, along with definitions and purposes, teacher guidance for consistent administration, alignment to TEKS and objectives, and standards-aligned items at different levels of complexity.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provide guidance for interpreting and responding to student performance, offer guidance on using tasks and activities to address student performance trends, and include tools for students to track their own progress and growth.

- 3.1 Differentiation and Scaffolds: Materials include teacher guidance for differentiated instruction, activities, and scaffolded lessons for students who have not yet reached proficiency, pre-teaching or embedded supports for unfamiliar vocabulary and references in text, and guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.
- 3.2 Instructional Methods: Materials include prompts and guidance to support teachers in modeling, explaining, and directly and explicitly communicating concepts to be learned. They provide teacher guidance and recommendations for effective lesson delivery using various instructional approaches, and support multiple types of practice with guidance on recommended structures, such as whole group, small group, and individual settings, to ensure effective implementation.
- 3.3 Support for Emergent Bilingual Students: Materials provide guidance for teachers in bilingual/ESL programs, support academic vocabulary and comprehension, and include resources for metalinguistic transfer in dual language immersion programs.
- 4.1 Depth of Key Concepts: Materials provide practice opportunities and instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.
- 4.2 Coherence of Key Concepts: Materials demonstrate coherence across courses and grade bands through a logically sequenced scope and sequence, explicitly connecting patterns, big ideas, and relationships between mathematical concepts, linking content and language across grade levels, and connecting students' prior knowledge to new mathematical knowledge and skills.
- 4.3 Spaced and Interleaved Practice: Materials provide spaced retrieval and interleaved practice opportunities with previously learned skills and concepts across lessons and units.
- 5.1 Development of Conceptual Understanding: Materials include questions and tasks that require students to interpret, analyze, and evaluate various models for mathematical concepts, create models to represent mathematical situations, and apply conceptual understanding to new problem situations and contexts.
- 5.2 Development of Fluency: Materials provide tasks designed to build student automaticity and fluency for grade-level tasks, offer opportunities to practice efficient and accurate mathematical procedures, evaluate procedures for efficiency and accuracy, and include embedded supports for teachers to guide students toward more efficient approaches.
- 5.3 Balance of Conceptual Understanding and Procedural Fluency: Materials

explicitly state how the conceptual and procedural emphasis of the TEKS is addressed, include questions and tasks that use concrete models, pictorial representations, and abstract representations, and provide supports for students in connecting and explaining these models to abstract concepts.

- 5.4 Development of Academic Mathematical Language: Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and language strategies, with embedded teacher guidance on scaffolding vocabulary, syntax, and discourse, and supporting mathematical conversations to refine and use math language.
- 5.5 Process Standards Connections: Materials integrate process standards appropriately, providing descriptions of how they are incorporated and connected throughout the course, within each unit, and in each lesson.
- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and requiring them to engage with math through doing, writing, and discussion.
- 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

Challenges

- No challenges in this material.

Summary

Progressions by Alba Math is a mathematics K–1 program fully aligned to the Texas Essential Knowledge and Skills (TEKS). Each unit in this curriculum begins with a Learning Progression document that graphically displays the progression of standards and how they connect to previously taught content. Every unit includes pre-assessments to help teachers gauge their understanding of prior knowledge. Pre-assessments allow teachers to address unfinished learning in these prerequisite skills before beginning grade-level instruction. At the same time, scaffolding back and scaffold-forward lessons help teachers differentiate during instruction. Each unit includes a range of days to accommodate various instructional calendars. Detailed Unit Overviews identify instructional alignment to the TEKS and ELPS, the recommended number of days for each lesson, a summary of the unit content, common misconceptions, vocabulary, and suggested sentence stems.

Campus and district instructional leaders should consider the following:

- The product includes complete and comprehensive lessons for teachers that support effective instructional delivery and TEKS-aligned assessment opportunities to support student learning.

These lessons provide grade-level-appropriate content knowledge and balance conceptual understanding and procedural fluency.

- The program provides integrated support for developing academic vocabulary, sentence stems, and ELPS connections at the unit level to support Emergent Bilingual Students (EBS). The materials also provide appropriate support through differentiation in tasks and activities for students who have and have not achieved mastery, to support achievement for all students.

Intentional Instructional Design

1.1	Course-Level Design	15/15
1.1a	Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.	**5/5**
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).	**2/2**
1.1c	Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.	**2/2**
1.1d	Materials include guidance, protocols, and/or templates for unit and lesson internalization.	**2/2**
1.1e	Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.	**4/4**

The materials include a scope and sequence outlining the Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), concepts, and knowledge taught in the course. Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days– 165, 180, and 210). Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course. Materials include guidance, protocols, and templates for unit and lesson internalization. Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

Evidence includes, but is not limited to:

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

- The materials include a scope and sequence in the Program Overview outlining the TEKS taught in each unit. For example, the grade K Addition & Subtraction unit covers the TEKS K.3(B), K.3(A), and K.3(C).
- The Program Overview contains a Program Unit Map, an ELPS Map, and a Process Standards Map. Each section includes a rationale and progression for the entire year. The ELPS Map describes how the units incorporate the ELPS into instruction across the course. Teachers are provided with the specific ELPS written out on each lesson plan. For example, in the lesson titled "Subitizing Flash," the specific ELPS are listed in the “Language Standards” section. The ELPS listed include the following: “1(A) Use prior knowledge and experiences to understand meanings in English”; “3(A) Practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible”; “3(J) Respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment.”

- Each unit begins with an overview that contains the lesson title, content standards, process skills, ELPS, and suggested days. For example, the grade K: Geometry Overview informs the reader that the first lesson after a scaffold-back lesson is called “Vacation Time” for TEKS K.6(A), K.6(E), and K.6(D), Process Standards 1(D), 1(F), and 1(G), as well as ELPS 1(B), 2(C), and 2(G). Following the table, the student expectations listed in the table are explicitly written out.
- The “Unit Rationale” section located in the Program Overview shows a clear alignment to concepts and knowledge in the unit and lesson progression. As the grade K, Unit 5 rationale within the Program Overview states, “This unit introduces students to ways to measure objects, including length, weight, and capacity. Students explore a variety of objects that share these measurable attributes and compare them based on their observations.”
- The Program Overview contains a Program Unit Map, an ELPS Map, and a Process Standards Map. Each section includes a rationale and progression for the entire year. The ELPS Map includes a description of how the units incorporate the ELPS into instruction across the course. Teachers are provided with the specific ELPS written out on each lesson plan. For example, in the lesson titled "Subitizing Flash," the specific ELPS are listed in the “Language Standards” section. The ELPS listed include the following: “1(A) Use prior knowledge and experiences to understand meanings in English”; “3(A) Practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible”; “3(J) Respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment.”
- Each unit begins with an overview that contains the lesson title, content standards, process skills, ELPS, and suggested days. For example, the grade K: Geometry Overview informs the reader that the first lesson after a scaffold-back lesson is called “Vacation Time” for TEKS K.6(A), K.6(E), and K.6(D), Process Standards 1(D), 1(F), and 1(G), as well as ELPS 1(B), 2(C), and 2(G). Following the table, the student expectations listed in the table are explicitly written out.
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Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days–165, 180, and 210.

- The Unit Rationale includes pacing that would support an instructional calendar ranging from 145 to 210 days. The Unit Rationale includes a note to teachers stating that “each unit's schedule includes days for pre-assessments, re-teaching opportunities, scaffold-back lessons, scaffold-forward lessons, and unit assessments. When planning, materials provide guidance concerning the number of days on your instructional calendar and on adjusting as necessary.”

- The materials include “Unit Overview” and “Pacing Snapshot” sections, which list each unit and the suggested range of instructional days, respectively. For example, the materials suggest that grade K, Unit 1: Number Sense should last 39-58 days.
- The materials offer ways for teachers to transition lessons into workstations, allowing students to continue practicing skills throughout the year. The grade K, Unit 4: Numbers to 20 materials include workstations such as “Tens and Ones on the Beach” and “Teen Bingo,” which students can continue practicing throughout the year until they demonstrate mastery.

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

- The materials recommend a specific unit sequence that establishes connections between concepts taught throughout the year. For example, as the Program Unit Map for grade K states, "Unit 1 begins with ‘Number Sense,’ and these concepts are embedded throughout the year. Students then explore ‘Geometry’ and move to ‘Numbers to 20,’ where they extend their number sense understanding to numbers up to at least twenty”. Students are later introduced to measurement, money & personal financial literacy, and data analysis at the end of the year.
- The materials include a progression graphic on the Program Unit Map that visually shows how the concepts and knowledge connect to the skills and recurring topics across units. The Program Unit Map also contains a unit rationale for each unit that explains how the unit connects to prior and future learning. As the unit rationale for grade K, Unit 2: Addition and Subtraction states, "The goal with addition and subtraction in kindergarten is to begin exposing students to the different problem types, although they are not required to know this terminology. The work they do here prepares them for adding and subtracting within twenty and solving all problem types in first grade."
- Each unit contains a “Content Map” listing previously taught standards in the “Scaffold-Back” section, current grade level focal standards for the unit in the “Concept Development” section, and opportunities for extension in the “Scaffold-Forward” section. The grade K Program Overview explains, “While students are engaged in the Concept Development phase of learning, some students need prior concepts reinforced, and others are ready for extensions.” “Scaffold-Back” and “Scaffold-Forward” lessons address reinforcement, providing guidance for teachers to easily differentiate to meet all students' needs. For example, the Content Map for grade K, Unit 1: Number Sense explains that "students are able to tell how many objects are in a set after counting." The “Scaffold-Back” section extends this lesson to include students “breaking apart and putting back together quantities in more than one way.”

Materials include guidance, protocols, and/or templates for unit and lesson internalization.

- The Implementation Support Guide includes detailed protocols for district mathematics leaders, instructional coaches, and teachers on internalizing the program. The grade K materials include templates and step-by-step instructions to create a “Year-at-a-Glance” for a school year containing four or six grading periods.

- The grade K materials provide a template for creating a “Unit-at-a-Glance,” which allows teachers to unpack the big ideas from the unit. For example, the “Addition and Subtraction Unit-at-a-Glance” template guides how to read through the unit overview and annotate findings such as manipulatives, models, and strategies within the unit, misconceptions, and vocabulary. In addition, the Implementation Support Guide provides a pre-filled sample template, which serves as an example that can be used during planning.
- The Implementation Support Guide also provides a template for internalizing each unit by asking questions promoting deep thinking about its content. The first part of the “Unit Internalization Template” is specific to the unit. For example, the grade K, Unit 1: Number Sense Unit Internalization Template asks, “Read the Lesson titled ‘Stacking Cats.’ How does this lesson support the big ideas in Unit 1?” The second part of the Unit Internalization Template is applicable to all the units throughout the course. This section promotes deeper thinking of the content by asking questions such as, "What might we do to differentiate students who are having difficulty mastering the concepts throughout the unit?"

Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

- The materials guide teachers, instructional coaches, and administrators in implementing the materials as designed through specific guidance included in the Program Overview. The materials explain each piece of the units in detail: "Every unit begins with a Learning Progression document. The Learning Progression Content Map graphically displays the progression of standards within the unit and how they build upon previously taught standards. The Learning Progression Activity Map displays how the content is addressed within the unit through lessons, tasks, games, and workstations."
- The Implementation Support Guide provides guiding questions and a “Lesson Internalization Overview” section to help instructional coaches and teachers understand the materials and lesson components. This guide also includes an “Instructional Look Fors” document to guide teachers, instructional coaches, and administrators in implementing the lessons as designed. This document outlines six big “look fors” regarding instruction for administrators and instructional coaches: “1. What is the role of the teacher and students? 2. How is the teacher promoting student discourse? 3. How is the teacher differentiating for all learners? 4. How are students engaged in the lesson? 5. How does the teacher check for understanding? 6. How is the teacher structuring the lesson?” The materials provide an “Instructional Look Fors Observation Form” to help teachers, coaches, and administrators set an area of focus for teacher growth in the program’s implementation.

Intentional Instructional Design

1.2	Unit-Level Design	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.	**2/2**
1.2b	Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.	**2/2**

The materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to teach the concepts in the unit effectively. Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

Evidence includes, but is not limited to:

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

- The materials include a comprehensive overview of each unit. The grade K, Unit 1: Number Sense Overview contains a section titled “Content Summary” that lists primary learning targets for the unit. Each topic is clearly defined, correlating with student expectations. This section informs the teacher about which skills build upon one another, where students may struggle, and which skills will be expanded on in future units.
- Each unit overview contains a section titled “Common Misconceptions.” Grade K, Unit 1: Number Sense Overview states, “students may count a set of objects but not be able to tell the number of objects in the set without recounting." This section helps build background content knowledge.
- Each unit overview contains a section titled “Vocabulary/Academic Language.” This section lists terms to be used during instruction. Teachers are advised to "create a word wall."
- The materials connect previously learned concepts and strategies in each unit to current content. Each unit contains a content map that provides the background content knowledge and skills in the “Scaffold-Back” section necessary for success in the “Concept Development” section. The Content Map in grade K, Unit 6: Money and Personal Financial Literacy explains the progression. Unit 6 introduces students to the four main U.S. coins. In kindergarten, students only need to identify these coins. In first grade, they will build on this knowledge by exploring the relationships and values of the coins. Students also learn about the purpose of earning an income and how to achieve it. In first grade, they will expand this understanding to explain how income can be divided between spending, saving, and giving.

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

- The “Family/Caregiver Support” section of the materials provides family letters for each unit and some math games to be played at home. All support information provided is in English and Spanish. Each letter contains a section titled “In this unit, your Kindergartener will...,” “Things that make you go hmmm...,” and “Math Outside the Classroom.”
- The grade K, Unit 2: Addition and Subtraction family letter informs families that in class their kindergartner will “solve joining and separating problems within ten, solve part-part-whole problems within ten, and represent solution strategies with concrete objects, pictures, and number sentences." The family letter for this unit also provides examples of the word problems grade K students are expected to solve, including joining, separating, and part-part-whole.
- The “Things that make you go hmmm...” section of the grade K, Unit 5: Measurement family letter reminds families that “larger objects are not always heavier, which may be a difficult concept for students to grasp.”
- The “Math Outside the Classroom” section provides families with ideas to practice concepts outside the classroom. Grade K, Unit 5: Measurement family letter suggests that families "look for objects with your kindergartener that are heavier or lighter than another object or longer or shorter than another and compare them. Find different containers and ask your kindergartener to predict which one has a higher capacity. Then, test their prediction by filling the containers with water or small items such as beans or rice."
- Grade K, Unit 3: Geometry family letter provides a “Two-Dimensional Shape Bump” game board for students and families to practice at home. This provides families with authentic ideas to extend math outside the classroom through literature connection and by using common household items to create hands-on experiences.

Intentional Instructional Design

1.3	Lesson-Level Design	34/34
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.	**30/30**
1.3b	Materials include a lesson overview outlining the suggested timing for each lesson component.	**1/1**
1.3c	Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.	**2/2**
1.3d	Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).	**1/1**

The materials include comprehensive, structured, and detailed lesson plans that offer daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson. Materials include a lesson overview outlining the suggested timing for each lesson component. Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson. Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, and enrichment).

Evidence includes, but is not limited to:

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.

- The grade K materials include a comprehensive list of all materials, supplies, and preparation required to support instructional activities for each lesson. Each lesson includes a section for materials needed and preparation containing detailed information such as book titles, math manipulatives, tools, and other necessary materials required to meet the lesson's content and language standards. The grade K, Unit 1: Number Sense “Materials Needed” section from the lesson titled “Crocodile Encounter” informs teachers that they will need to supply one Crocodile Encounter game and one number cube for each pair of students, as well as one monkey counter for each student,
- The grade K materials include structured, detailed, step-by-step lesson plans that are easy to follow. These lesson plans are comprehensive and cover the span of expectations for the school year. In grade K, Unit 3: Geometry lesson called “Clay Shapes,” the content and language objective states that "students will create shapes and explain their process." The lesson facilitation steps provide the teacher with detailed, step-by-step guidance to implement the lesson. Step one tells the teacher to "distribute a piece of molding clay and craft stick to each student. Allow students a few moments to manipulate the clay and create

shapes with it. The craft stick can be used to ‘cut out’ shapes from a layer of flattened clay, or the clay could be molded into the desired shape." The teacher next directs students to use the clay to make a circle. Students use the provided sentence stem "I know my shape is a _____ because..." to justify how they know that the shape they have created is a circle. The teacher directs students to compare their shapes with other students. The lesson continues with students creating a triangle, rectangle, and square.

- The grade K materials provide daily opportunities for formative assessment through teacher observation. For example, at the end of the Unit 3: Geometry lesson called “Clay Shapes,” the teacher informally assesses students by observing their use of clay to make different shapes and listening as students name and describe their shapes. The teacher listens to students to describe their shape using formal geometric vocabularies such as *vertice*, providing guidance when students fail to do so.
- The grade K materials provide opportunities for students to demonstrate proficiency more formally through exit tickets. In grade K, Unit 5: Measurement lesson “Shorter or Longer,” students measure various stuffed animals against a precut length of string to determine which animals are shorter or longer than the string. At the end of the activity, the students are given an exit ticket in which they circle the teddy bears that are shorter than the string.
- The grade K materials include opportunities for students to practice language objectives in each lesson. For example, in Unit 5: Measurement lesson “Shorter or Longer,” students use their language skills by explaining how they know a stuffed animal is shorter than a string.

Materials include a lesson overview outlining the suggested timing for each lesson component.

- The materials include the Implementation Support Guide. This guide includes suggested lesson component timing for different instructional situations. For example, if the teacher introduces new content, a new workstation, or a new partner activity, the teacher will need to adjust their timing. For new or continued content, the daily energizer will take five minutes, the mini lesson will take fifteen minutes, lesson closure will take five minutes, and workstations and small group instruction will take thirty-five to fifty-five minutes.
- The Implementation Support Guide provides a different lesson component timing If the lesson facilitation introduces a new workstation. When a new workstation is introduced, the daily energizer will take five minutes, the mini lesson (introduce a new workstation) will take fifteen minutes, practicing the new workstation will take twenty minutes, workstations and small group instruction will take fifteen to thirty-five minutes, and the lesson closure will take five minutes.

Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.

- The grade K materials provide two lists for each unit that include all the materials needed to teach the lessons in the unit. One list includes the required materials provided in the kit and is broken down into reusable print, reusable materials, and consumable materials. An additional

list includes manipulatives, classroom supplies, consumable print, and trade books not included in the kit.

- All lessons include a “Materials Needed” section with a list of items needed for the lesson. Each material list at the lesson level states how many of the required materials are necessary. For example, the grade K, Unit 2 lesson “Counting Collections” states that each pair of students needs one bag of ten or fewer everyday objects, one five-framework mat, and one Counting Collections recording sheet.
  Each lesson plan includes a “Preparation” section that informs teachers of any work that needs to be completed before the start of the lesson to deliver it effectively. For example, in the grade K, Unit 7: Data Analysis lesson titled “Sort It,” the materials instruct the teacher to “prepare collections so that each pair of students has one of the three collections to sort. For twenty-four students, prepare four sets each of buttons, attribute blocks, and Sorting Figures cards.”

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

- All of grade K lesson plans include a section titled “Lesson Suggestions,” which provides suggestions for scaffolding and extension. For example, in grade K, Unit 2: Addition and Subtraction lesson “Fruit Tagging,” teachers can extend student learning by asking questions such as, "If there were five monkeys, how many bananas would we need?"
- The materials provide family letters for each unit that contain opportunities to review, apply new knowledge, and connect student learning to experiences beyond school. For example, the grade K, Unit 1: Number Sense family letter suggests families play board games together: "Games such as Hi Ho Cherry-O, Chutes and Ladders, and Candyland help develop one-to-one correspondence." Another suggestion includes, "Grab five to ten coins. Discuss the head side and tail side and drop them. Discuss how many coins landed with heads face up and how many landed with tails face up. Repeat the process and discuss that the number of coins with heads and tails face up changed each time, but the total number of coins remained the same.” A further example suggests that families “read counting books such as Ten Little Monkeys by Tina Freeman, Ten Apples Up on Top by Dr. Suess, or The Very Hungry Caterpillar by Eric Carle. While reading, count the items on each book page and then restate the total each time."
- The materials provide opportunities for families to reinforce and review classroom learning. Unit 2: Addition & Subtraction family letter gives three examples of grade K problems that could be solved at home using crayons as manipulatives. An example of a “Separating” problem asks, "Jack has nine crayons. He gives his friend three crayons. How many crayons does Jack have now?"
- Family letters also provide opportunities for families to help their students make connections between the math that they are learning in the classroom and math in the real world. For example, Unit 2: Addition and Subtraction family letter suggests several counting activities that can be performed while at the grocery store.

Progress Monitoring

2.1	Instructional Assessments	24/24
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.	**12/12**
2.1b	Materials include the definition and intended purpose for the types of instructional assessments included.	**2/2**
2.1c	Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.	**2/2**
2.1d	Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.	**6/6**
2.1e	Instructional assessments include standards-aligned items at varying levels of complexity.	**2/2**

The materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative assessments) that vary in types of tasks and questions. Materials include the definition and intended purpose for the types of instructional assessments included. Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit or lesson. Instructional assessments include standards-aligned items at varying levels of complexity.

Evidence includes, but is not limited to:

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 materials include a variety of assessment tools for measuring understanding of mathematical concepts and skills, such as diagnostic (unit pre-assessments), formative assessments (teacher observation and lesson exit tickets), and summative assessments (unit assessments) at the unit and lesson level.
- Each unit includes a pre-assessment, exit tickets, and at least one unit assessment. Longer units include more than one unit assessment that assesses student progress. For example, grade K, Unit 1: Number Sense includes two-unit assessments. In the first unit assessment, students are asked to count a set of 10 objects, while in the second assessment, they are expected to compose and decompose a number.
- The assessments vary in types of tasks. Throughout each lesson and in each unit, students are asked to identify, illustrate, explain, model, and solve problems in multiple ways. The questions vary in format, such as illustrations, word problems, models, fill-in-the-blanks, generating equations, and matching. For example, the grade K, Unit 3: Geometry lesson called "String Shapes" provides an exit ticket directing students to draw two different rectangles and two different triangles. Grade K, Unit 5: Measurement includes five exit tickets. The "Mystery

Weight" exit ticket asks students to complete the following sentence frame: "Box ___ was heavier than box ____." Students then complete the sentence stem, "I know this because...."

- The assessments vary in types of tasks, such as exit tickets, pre-assessments, and performance-based assessments. For example, in grade K, Unit 1: Number Sense second assessment, students are asked to perform different tasks and answer questions. The first prompt instructs the teacher to place six cubes on the table and ask the student to build an equal set, then to build a set with one more, and finally to ask the student to explain how they know it is one more. In Unit 4: Numbers to 20 pre-assessments, there are seven prompts for teachers to complete with students. The fourth prompt instructs students to write a number that is one more than nine. Another task asks the student to write a number that is one less than nine.
- The grade K materials include questions that vary in format, such as open-ended questions and sentence stems for students to complete at the lesson level. For example, in the "Lesson Teen Bingo" section of Unit 4, students are asked to reflect on the previous lessons in a think-pair-share routine using the following sentence stems: "I know the teen numbers have _____ and ____."; "We have been learning _____."

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

- The materials include the intended purpose for the types of instructional assessments included. The materials define diagnostic assessments by explaining that "diagnostic assessments are conducted prior to instruction to determine students' existing knowledge, skills, and abilities." The grade K Program Overview explains that the intended purpose behind these unit pre-assessments is to "pre-assess prior knowledge before beginning each unit." The materials also state that the pre-assessments are "designed to reveal knowledge gaps that should be addressed before beginning activities within the content progression." Unit 4: Numbers to 20-unit pre-assessment instructs teachers to "use this assessment as a chance to measure growth since Unit 1 and student readiness for working with numbers within 20." Grade K, Unit 6 pre-assessment states, "No prior standards align to the kindergarten standards for money and personal financial literacy. This pre-assessment can be used to preview what students already know about the following standards based on real-life experiences: K.4(A) and K.9(C)."
- The materials provide exit tickets and recording sheets during lessons as formative assessments. The materials define formative assessments by stating that "formative assessments are conducted throughout the instructional process to monitor student learning [and] provide ongoing feedback." The materials explain that exit tickets "can be used at the end of class or the end of the mini lesson" and state that their intended purpose is to "check for understanding of the content that was just taught." The grade K Program Overview states that exit tickets are "designed to inform instruction by determining whether students are ready to move on or if more time is needed to master a concept."
- The materials include recording sheets that "are provided for certain activities and can be used to check for understanding, record students' ideas, or take notes."

- The materials state that the purpose of the unit assessments is to "assess students' understanding of concepts explored throughout each unit." The materials also include an end-of-year fluency assessment that is "provided to evaluate student progress within these fluency targets." The materials provide a definition for summative assessments by stating that "summative assessments are conducted at the end of an instructional period to evaluate overall student learning and measure the effectiveness of instruction."

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

- The materials include clear guidance for teachers to efficiently and consistently administer the assessments. All pre-assessments and unit assessments have a guidance document that includes the materials needed to give the assessment, any preparations needing to be done ahead of time, the standards that are assessed, and explicit administration instructions for each prompt. The materials offer guidance for the teacher, providing explicit administration instructions for each prompt. The unit assessment for grade K: Number Sense gives the teacher explicit administration instructions for each prompt. For example, in the unit assessment for grade K, Unit 1: Number Sense, Prompt 2: Counting & Cardinality - K.2(A), K.2(C) directs the teacher to "place eight to ten linking cubes on the table in a pile and ask the student how many cubes there are. Once the student counts the cubes, prompt them to restate the total. If a student struggles to count correctly, prompt them to consider organizing the objects." Prompt 2: Create a Graph K.8(B) from the grade K, Unit 7: Data Analysis unit assessment directs teachers to "ask the student to use the 'Grid Work' mat and a dry-erase marker to create a graph that displays the data."
- The materials include teacher guidance to ensure the accurate administration and recording of data observed during the administration of the instructional assessments. All pre-assessments and unit assessments include a rubric to score student responses as proficient, developing, or emergent. The statements on the rubric clearly explain how each student should be scored according to their response to the assessment prompt. For example, Prompt Two: Counting & Cardinality - K.2(A), K.2(C) in the grade K, Unit 1: Number Sense unit assessment asks students to count a set of objects and restate the total. If a student "accurately states one count per object by organizing the objects to help count" and "the student accurately restates the total," they score as proficient. If a student "states one count per object but makes an error or does not arrange the objects to help count" and "the student requires additional prompting in order to restate the total," they score as developing. If a student "does not state one count per object for the entire set" and "must re-count when prompted to state the total," they score as emergent. Grade K, Unit 6: Money and Personal Financial Literacy pre-assessment instructs teachers to "read prompt one" and allow students time to respond. Record student performance and take notes as needed." The rubric/recording sheet for this assessment informs the teachers that a "student who can only identify one coin or fewer" should score as emergent.

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

- The materials include exit tickets, which can be considered both formative and diagnostic assessments at the lesson level. The exit tickets are aligned to the TEKS. For example, the grade K, Unit 2: Addition and Subtraction lesson called "Monkeys on the Bed" covers K.2(A), K.2(E), and K.2(F). The exit ticket asks, "How many monkeys will there be if one falls off the bed?" The materials include a picture of six monkeys. Students fill in the following sentence frame: "There will be ___ monkeys left on the bed." As written, this exit ticket only assesses K.2(A) and K.2(F). Another example can be found in the exit ticket for grade K, Unit 7: Data Analysis lesson titled "The Change in My Pocket." This lesson assesses one of the four TEKS taught in the lesson. The exit ticket directs students to look at the graph and complete the following sentence frame: "There are more _____ than _____." This exit ticket assesses K.8(C) by drawing conclusions from real-object and picture graphs. K.8(B) and K.8(A) are both assessed on the recording sheet in a future lesson titled "My Survey Project." K.4(A) was assessed in Unit 6: Money & Financial Literacy during the lesson titled "What's in My Piggy Bank?" using an exit ticket.
- Formative assessments align with the content objectives from each lesson. For example, on the exit ticket for grade K, Unit 2: Addition and Subtraction lesson called "Missing Cupcakes," students are asked to draw a model and solve the word problem. This task aligns with the content objective for the lesson, which instructs students to "use concrete objects and pictorial representations to solve joining and separating problems within 10 and use spoken words to describe the process for solving."
- The materials include pre-assessments and unit assessments at the unit level. These assessments are aligned with the Texas Prekindergarten Guidelines and grade K TEKS. For example, the grade K, Unit 5: Measurement pre-assessment is aligned with the Texas Prekindergarten Guidelines and asks students to compare length, recognize capacity, and compare weight. Prompt 3: Compare Weight - V.D.3 instructs the teacher to "place the cup and stapler on the table. Ask the student which item weighs more and how [they] know." This task aligns with Texas Prekindergarten Guidelines V.D.3: The child recognizes and compares the weights of objects. Grade K, Unit 6: Money and Personal Financial Literacy includes an exit ticket for the lesson titled "What's in my Piggy Bank?" This exit ticket asks students to label each coin name. This assessment aligns with K.4(A), which requires students to identify U.S. coins by name.
- These assessments test all the student expectations for the unit as outlined in the unit overview. For example, grade K, Unit 4: Numbers to 20, Unit Assessment 1 assesses K.2A, K.2B, K.2C, K.2E, and K.2F while grade K, Unit 4: Numbers to 20, Unit Assessment 2 tests K.2G, K.2H, and K.5A, which constitute all the TEKS taught in Unit 4.
- The front matter states that "recording sheets can be used to evaluate student progress" or to record their thinking and take notes about concepts. A blackline master can be found following the corresponding lesson." An example is when students use the "My Survey Project" recording sheet in the lesson titled "My Survey Project." This recording sheet assesses K.8(A) (collecting data) and K.8(B) (creating real-object and picture graphs). The third standard in that lesson, K.8(C), is assessed on the exit ticket in the lesson titled "The Change in My Pocket."

Instructional assessments include standards-aligned items at varying levels of complexity.

- The instructional assessments included in the grade K materials include more than two levels of complexity. In the grade K, Unit 1: Number Sense unit assessment, the teacher places nine cubes on the table and prompts the student to find four different ways to decompose the number and verbalize each combination using the sentence frame " ____ and ___ equals ____." Finding four different ways to decompose the number nine requires the student to use problem-solving skills to break down the number nine into different combinations—an analyze-level task. Asking the student to verbalize their thinking is an understanding-level task.
- The exit ticket from the grade K, Unit 2: Addition and Subtraction lesson "Missing Cupcakes" requires students to draw models and solve problems. Step 10 of the "Lesson Facilitations" section instructs teachers to "encourage students to use their exit ticket to justify their process for solving." Justifying students' processes is an evaluate-level task.
- In grade K, Unit 5: Measurement "Mystery Weight" exit ticket, students analyze three boxes of varying weights from the lesson and use the information to compare which box was heavier. Students are expected to evaluate the information and justify their answer by completing the following sentence stem: "I know this because _____."

Progress Monitoring

2.2	Data Analysis and Progress Monitoring	4/4
2.2a	Instructional assessments and scoring information provide guidance for interpreting and responding to student performance.	**2/2**
2.2b	Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.	**1/1**
2.2c	Materials include tools for students to track their own progress and growth.	**1/1**

The instructional assessments and scoring information provide guidance for interpreting and responding to student performance. Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments. Materials include tools for students to track their own progress and growth.

Evidence includes, but is not limited to:

Instructional assessments and scoring information provide guidance for interpreting and responding to student performance.

- The materials guide teachers in interpreting student performance on formative assessments, such as exit tickets. Guidance is given during the lesson titled "Just a Minute" from Unit 1: Number Sense. The lesson instructs teachers to "distribute a 'Just a Minute' exit ticket to each student. Students should count and record there are eight cats. If students struggle to count the cats, they may need to circle each one as they count. If students are still unsuccessful, it may be helpful to practice with linking cubes so that students can practice moving the cubes as they count. Have students count smaller quantities if needed to work their way up to larger quantities." Another example of the materials providing guidance occurs during the lesson titled "Shorter or Longer" in Unit 5: Measurement. The lesson facilitation states, "Distribute a 'Shorter or Longer?' exit ticket to each student. Students should circle which teddies are shorter than the string. If students struggle, allow them to continue working with the string and stuffed animals to gain more experience before attempting the exit ticket again."
- The materials guide teachers on how to interpret student performance on summative assessments. Unit assessments provide a rubric for scoring student performance as proficient, developing, and emergent for each prompt on the assessment. The rubric provides specific guidance on strengths, gaps and common misconceptions that led to the score received. For example, in prompt one in grade K, Unit 1: Number Sense, Unit Assessment 2 states that if a student "accurately builds sets that are more, less, and equal to the given set and can explain why certain sets are more, less, or equal" the student is scored as proficient in that task. In the same task, if a student "builds sets that are more, less, or equal to a given set, but cannot explain why they are more or less" or "the student makes an error building one of the sets" the student will be scored as developing. If a student "makes two or more errors

while building the sets," they are scored as emergent. The materials also provide a "Class Tracker" resource for each assessment that correlates with each prompt on the assessment. This tracker allows teachers to place student names into their corresponding ratings. For example, in prompt one for grade K, Unit 3: Geometry's unit assessment, students are required to identify shapes. A student who identifies all four shapes would receive a proficient rating and their name would be recorded in the "Proficient" column on the tracker. A student who accurately identifies three shapes would receive a developing rating and their name would be recorded in the "Developing" column on the tracker. A student who is unable to identify at least two shapes would receive an emerging rating and their name would be recorded in the "Emerging" column on the tracker.

- In each unit assessment, a section called "Responding to Student Performance" provides activities for each prompt students struggled with, to provide additional practice. For example, the "Responding to Student Performance" section of the Grade K, Unit 2: Addition and Subtraction Unit Assessment states the following: "If students struggle with Prompt 1, provide them with opportunities to engage with the lessons titled 'Penguin Fun,' 'Apples Up on Top,' and 'Missing Cupcakes,' focusing on joining problems." If students do not struggle with these prompts, teachers are given "Scaffold-Forward" lessons as an option for extension. The "Scaffold-Forward" lessons are additional to and different from the "Concept Development" lessons.

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

- The materials include guidance on activities that can support students who need more support. Unit assessments include a rubric that provides guidance on creating small groups, including suggested tasks for students who struggle with assessment tasks. In each unit assessment, a section called "Responding to Student Performance" provides activities for each prompt student struggled with, providing additional practice. For example, the "Responding to Student Performance" section of grade K, Unit 3: Geometry, Unit Assessment 2 advises teachers that students who struggle with the second prompt should be provided opportunities to "engage with the lessons titled 'Shape Sorting, Part 2' and 'Mystery Bags.'"
- In grade K, Unit 5: Measurement Unit Assessment, the materials advise teachers that "if students struggle with Prompt 1, provide them with opportunities to engage with the lesson titled 'Shorter or Longer?'" These lessons are not specifically intervention lessons in which students are provided another tool or strategy to try to master the content. Rather, they are lessons that have already been taught.
- Guidance is also given for teachers to respond to student data in which the students mastered the content of the assessment and need an extension. For example, in grade K, Unit 7: Data Analysis Unit Assessment, the materials suggest that students who are proficient with prompts 1-3 should engage in the scaffold-forward lesson titled "Read All About It!"

Materials include tools for students to track their own progress and growth.

- The materials include a student-friendly data sheet that can be used for each assessment that allows students to track their scores on assessments. The instructions for the student trackers direct teachers to "prompt students to shade the number of rectangles that equals the number of points they scored...." The tracker includes bar models for the unit pre-assessment and end-of-unit assessments. For example, grade K, Unit 4: Numbers to 20 includes a student tracker for the pre-assessment and each of the two-unit assessments.
- The student tracker for grade K, Unit 3: Geometry assessments include three bar graphs to be filled out according to student performance. There are nine bars for the first bar graph (the pre-assessment), twelve bars for the second bar graph (Unit Assessment 1), and nine bars for the third bar graph (Unit Assessment 2). The bars for each assessment are the same size, partitioned into different quantities to match the corresponding assessment. Students can compare the heights of the shaded regions for each bar to track their growth.
- Several grade K pre-assessments assess guidelines from prekindergarten that are vertically aligned to the grade-level standards taught in the unit. For example, the grade K, Unit 5: Measurement pre-assessment covers TEKS V.D.1, V.D.2, and V.D.3. Grade K, Unit 5: Measurement unit assessment covers TEKS K.7(A) and K.7(B). The bar models measure different standards and, therefore, comparing them side-by-side is misleading.

Supports for All Learners

3.1	Differentiation and Scaffolds	8/8
3.1a	Materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.	**3/3**
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)	**2/2**
3.1c	Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.	**3/3**

The materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills. Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.

Evidence includes, but is not limited to:

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

- The materials include differentiated lessons for students who have not demonstrated proficiency in grade-level content on the pre-assessment and unit assessment(s). The grade K "Scaffold Back" lessons are aligned to the Texas Prekindergarten Guidelines. If students do not demonstrate proficiency in the unit pre-assessment, the materials guide teachers to a set of "Scaffold Back" lessons. These lessons correspond to each prompt students were unsuccessful with in the pre-assessment. For example, the grade K, Unit 1: Number Sense pre-assessment states, "If students struggle with Prompt 1, provide them with opportunities to engage with the lessons titled 'Numerals in the Sand' and 'Tracing Numbers, Part 1.'"
- The "Lesson Suggestions" section provides scaffolded support embedded in each lesson. This section contains a bulleted list of suggestions for teachers, including scaffolding tips, suggested questioning, and ways to enhance or change the lesson. For example, in the grade K, Unit 1: Number Sense lesson titled "Counting Collections," the materials state, "Some students may be seeing a five or ten frame for the first time. Allow time for students to share their observations and discuss how it can be used to organize objects and count them." The materials advise teachers to "encourage students to discuss the reasoning behind their selected tools."
- Each unit overview includes a "Spiral & Interleaved Practice Opportunities" section. This section contains recommendations for spiral review and extra practice. For example, the overview for grade K, Unit 2: Addition and Subtraction states, "Students may complete the

Addition and Subtraction Unit Interleaved Practice found at the end of this unit. The Daily Energizers serve as spiral review or spaced retrieval opportunities throughout the program."

- The materials provide guidance to teachers in using a variety of instructional modalities to support students who have not yet reached mastery. For example, in grade K, Unit 4: Numbers to 20 lesson "Comparison War," the materials suggest that "if students need support, provide Double Ten Framework Mats and two-color counters for [students] to represent the quantity shown on each card." In the grade K, Unit 7: Data Analysis lesson titled "The Change in My Pocket," the materials provide the following guidance for students who are not proficient: "If students are unsuccessful, it may be helpful to build the graph with objects or count each sticker type together."

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

- The materials include embedded supports for unfamiliar vocabulary. For example, in the "Shape Sorting, Part 1" section, students sort various shapes. Teachers then facilitate a conversation about students' observations. This lesson is a precursor to the following lessons in which students explore specific classifications of shapes. Another example can be found in the lesson titled "What's in My Piggy Bank?" In this lesson, students explore coins. Students create an anchor chart as a class before formalizing their knowledge of coins throughout the rest of the unit.
- The materials contain a "Content Summary" section in each unit that provides an overview of what students will learn during the unit. This section explains terms so that teachers can understand what to expect of their students. For example, in the overview for grade K, Unit 1: Number Sense, the "Content Summary" section explains cardinality by noting, "Students are able to tell how many objects are in a set after counting. This is confirmed by having students state the total number of objects again after they are done counting."
- The grade K, Unit 3: Geometry "Content Summary" section contains a list of vocabulary and definitions. This is the only unit for which definitions are provided. The "Content Summary" section reminds teachers that "instruction should involve attaching formal vocabulary to the informal descriptions students create. Students may explain [that] they notice corners or 'pointy parts.' Use this opportunity to introduce the terms *vertex* or *vertices*."
- The Unit Overview provides a bulleted vocabulary list for each unit. For example, in grade K, Unit 4: Numbers to 20, the "Vocabulary/Academic Language" section of the overview includes a bulleted list of nineteen words. Teachers are instructed to "use the terms below during instruction. They may be used interchangeably with students' basic academic language. The terms can also be used to create a word wall throughout the *Progressions* by Alba Math program. Connect them to students' experiences in order to authentically introduce students to academic vocabulary."
- In the Lesson Internalization Overview, the materials encourage teachers to reflect on the academic vocabulary embedded in each lesson. The materials also encourage teachers to connect academic vocabulary to basic vocabulary. Step 5 of the "Lesson Internalization"

process prompts teachers to consider the following question: "What academic vocabulary is embedded in the lesson? How will we connect academic vocabulary to basic vocabulary?"

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

- Some of the lessons contain a "Scaffold Forward" section to enrich and extend learning for students who have demonstrated proficiency in grade-level content and skills. For example, the grade K, Unit 2 lesson "Penguin Fun" includes a "Scaffold Forward" section that suggests, "Once students are comfortable with two-step problems, distribute the Penguin Fun Extension Task Cards to each pair of students. Prompt them to work together to solve each problem. Some students may be ready to solve problems using mental math. Support these students by naming this technique and encouraging them to share their thinking." The grade K, Unit 5: Measurement lesson titled "Comparing Capacity" includes the following suggestion from the "Scaffold Forward" section: "As an added challenge, ask students to place a set of containers in order of capacity from greatest to least."
- The materials include extension and enrichment lessons for students who demonstrate proficiency in grade-level content on the unit assessment(s). If students demonstrate proficiency in the unit assessment(s), the materials direct teachers to a set of lessons that include a special "Scaffold Forward" section. This section extends content for students who are ready. For example, as Unit Assessment 1 in grade K, Unit 1: Number Sense suggests, "If students are proficient with Prompts 1 and 2, engage them in the lesson titled 'Counting Collections Scaffold Forward.'" The "Scaffold Forward" section of this lesson reminds teachers that "the lesson can be extended by creating larger collections for students to count." The "Scaffold Forward" lesson in grade K, Unit 6: Money Sort suggests that "if students easily identify and sort the coins, allow them to graph the quantities on a grid and compare the quantities of each coin. See the lesson plan for 'The Change in My Pocket' in Unit 6 for further instructions." Students may have already completed the "Scaffold Forward" suggested activities when the teacher was initially teaching the lesson.
- The materials provide opportunities for enrichment through cross-curricular activities for students who have demonstrated proficiency in grade-level content. For example, in Unit Assessment 2 for grade K, Unit 3: Geometry, the materials state that "if students are proficient with Prompts 1 and 2, engage them in the lesson titled 'Art Through Shapes.'" This lesson is an example of a cross-curricular culminating activity because it combines identifying shapes with art that students create. In the unit assessment for grade K, Unit 7: Data Analysis, the materials state that "if students are proficient with Prompts 1-3, engage them in the lesson titled 'Read All About It!'" This lesson is an example of a cross-curricular activity because it combines writing, drawing conclusions using data and graphs, and data analysis.

Supports for All Learners

3.2	Instructional Methods	13/13
3.2a	Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).	**6/6**
3.2b	Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.	**4/4**
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.	**3/3**

The materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly). Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. 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.

Evidence includes, but is not limited to:

Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).

- Materials include step-by-step instructions in each lesson plan to support the teacher in modeling the concepts to be learned directly and explicitly. In grade K, Unit 3: Geometry lesson titled “Funny Faces,” the “Lesson Facilitation” section lists eight steps that explicitly guide the teacher in modeling how students are to complete the funny face. For example, step four states directions on how to draw part of the funny face, stating, "Eyes: Do you have brothers and/or sisters? a. If you have a brother, draw a square b. If you have a sister, draw triangle eyes c. If you have no brothers or sisters, draw circle eyes d. If you have both brothers and sisters, draw rectangle eyes." When the masks are done, the materials direct the teacher to allow students to tell a partner about themselves. The materials recommend that teachers walk around and listen to check for understanding. In grade K, Unit 4: Numbers to 20 lesson titled “Baking Cookies,” step seven of the lesson facilitation states, "After allowing a few students to share, show the number using the Tens and Ones Cards and add it to the Number Path. For example: lay the "5" over the "0" in the corresponding "10" on the number path to make the connection that 10+5=15." This explicit teacher guidance offers teachers direction on teaching the concept.
- The materials include step-by-step instructions in each lesson plan to support the teacher in explaining the concepts to be learned directly and explicitly. For example, in grade K, Unit 1: Number Sense, the lesson titled “Why Swallow a Fly?” includes a “Lesson Facilitation” section that directs the teacher to gather students into a circle and read *There Was an Old Lady Who Swallowed a Fly* aloud. Next, the materials direct the teacher to pause on each page

"to count the number of animals the lady has swallowed. Emphasize how the animals are inside of each other." The lesson includes questions such as, "The old lady just swallowed a bird. How many animals are inside of her now?" and "How many animals are inside of the bird?" The teacher continues to read the story and pauses to ask questions. The lesson facilitation reminds the teacher that "the goal is to help students see how numbers nest inside of each other: for example, how the quantity of two is inside the quantity of three." The last step in the lesson gives examples of questions and instructs the teacher to "use these questions as an informal way to evaluate students' understanding." In the grade K, Unit 2: Addition and Subtraction lesson titled “Three Little Pigs,” steps three and four of the “Lesson Facilitation” section give two word problems for the teacher to use to model joining and separating problems. Step six states: "As students are working, walk around and observe their work to check for understanding. Students' models and actions should mimic the context of the given problem. Ask students to explain their model to you. Students can use the sentence stems below to explain their thinking. I placed ___ pigs in the house. Then, I _____ to show what happened. Now, there are ___ pigs in the house."

- The materials include step-by-step instructions in each lesson plan to support the teacher in communicating the concepts to be learned directly and explicitly. The materials provide questions and examples of student answers to help the teacher when communicating the concept students are learning. For example, the grade K, Unit 6: Money and Personal Financial Literacy lesson titled “Money Sort” includes a “Lesson Facilitation” section that states, "Ask each group the following questions as they complete their sorting: How did you know what coin this was? *I know this is a dime because it is the smallest coin, and I know this is a quarter because it is the largest coin*. Are there some coins that you get mixed up sometimes? Why do you think that is? What did you do to count each collection of coins? *I made piles of ten. Once I had ten, I could see how many more there were and figure out the total*." The materials provide sample student responses in italics.

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

- The materials include teacher guidance and recommendations for effective lesson delivery using a variety of instructional approaches, including think-pair-share routines, sentence stems, partner games and activities, anchor charts, and read-alouds. For example, the grade K, Unit 1: Number Sense lesson titled “Stacking Cats” includes the trade book *Stack the Cats*, partner work, and manipulatives. The class counts the number of cats on each page, and partners build a tower of linking cubes to represent the number of cats. The teacher shows the number represented using a chain of red links and prompts the students to make connections between their number tower and the chain. The grade K, Unit 5: Measurement lesson titled “Lemonade for Lunch” includes the read-aloud *Maisy Makes Lemonade*. The teacher shows the students two empty pitchers of different sizes and asks them to notice and wonder. The teacher then asks students how to test which pitcher holds more using a think-pair-share routine. The teacher explains and models the pitchers’ capacity, asking the students questions to check for understanding. In the grade K, Unit 3: Geometry lesson titled “Solid Stamps,” the “Lesson Facilitation” section guides teachers on how to deliver the lesson with

various tasks for the students. The materials direct teachers to read the book *Math Fair Blues (Math Matters)*. Using 3D solid shapes and playdough, the teacher will have students stamp the shapes into the playdough, seeing what 2D shapes they can form. Students can repeat this hands-on activity with multiple shapes. The materials guide teachers to use a think-pair-share to facilitate student conversations about the 2D shapes they made from stamping the 3D solids. The lesson will conclude with an exit ticket.

- The materials include teacher guidance for effective lesson delivery using a variety of instructional strategies including number sense routines and discourse. In the grade K daily energizers, routines such as “What Do You See” and “Reveal the Relationship” ask students to talk with a partner about the mathematical relationships they see in the images. For example, in week three of the daily energizers, students are shown an image of two turtles and three crabs and asked to share what they see. The materials guide the teacher to encourage mathematical relationships in student responses such as, “There are more crabs than turtles.”
- The materials include teacher guidance and recommendations for effective lesson facilitation using a variety of instructional strategies such as retelling, partner talk, concrete and visual representations, and hands-on exploration. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Filling Apple Crates,” step one of the “Lesson Facilitation” section states, “Arrange the class in a circle on the floor, and revisit the book *Ten Apples Up on Top* by asking students to retell the story to their elbow partner. Then, ask them to share aloud their discussions. Reread, if needed.” The materials then direct students to work with a partner to discover the different ways to fill a ten-frame with red and yellow counters. After students have time to work with a partner, the teacher leads a debrief in which students share the combinations they have found, while the teacher creates an anchor chart.
- The materials include teacher guidance and recommendations for effective lesson facilitation using sentence stems to guide mathematical discourse. For example, in the grade K, Unit 4: Numbers to 20 lesson titled “Three Corner Comparisons,” step five of the “Lesson Facilitation” section instructs the teacher to engage the students in mathematical discourse, which checks for student understanding during a greater than, less than, or equal activity. The materials provide sentence stems to help guide student discourse such as, "My card is __ than the number shown. I know this because ..."

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 materials provide a variety of options and resources for students to practice and apply the concepts learned (whole group, partner work, individual). In grade K, Unit 2: Addition and Subtraction, the lesson titled “Filling Apple Crates” includes a “Lesson Facilitation” section that offers guidance for whole group instruction. The materials provide multiple opportunities for partner exploration and guided practice in steps two through four. The materials provide teacher guidance to support effective collaboration in steps five and six as students complete the anchor chart. In step seven, the materials include directions for independent practice.

- The grade K, Unit 7: Data Analysis lesson titled “My Survey Project” provides guidance for students to work in a whole-group setting, cooperatively, and independently. The lesson guides teachers to begin the lesson as a whole group. The teacher explains directions and distributes a My Survey Project Recording Sheet to each student. In a smaller cooperative group, students brainstorm possible questions to use for their survey. The students then write their questions and three possible responses. The students next walk around surveying each other. Independently, the students write down a conclusion about their data using a sticky note. Finally, the students share their graphs with the class.
- The materials provide guided instructions for teachers to teach the routines necessary to effectively implement different types of practice, as well as design a learning environment that helps students focus on the content to be learned. The materials include an Implementation Support Guide that explains the lesson components. Each day begins with a daily energizer that "can be used to keep students thinking creatively about the math concepts they are learning and as a method of spiraling back or using spaced retrieval for previously learned concepts.” The components also offer a whole-group mini-lesson, including a “Lesson Facilitation” section with step-by-step directions for each lesson. The components additionally include a lesson closure that "can be found in the last step or last few steps in the ‘Lesson Facilitation’ section. The closure may consist of a debrief question/conversation or an exit ticket." The guide also provides time for workstations that may include activities and games that have been introduced in the current unit or prior units, as well as small group instruction. According to the materials, the small group instruction "allows the teacher to use information from the closure activity to address any misconceptions students may have about the lesson content.”

Supports for All Learners

3.3	Supports for Emergent Bilingual Students	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.	2/2
3.3b	Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.	1/1
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.	8/8
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.	Not scored

The 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. Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs. Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, or making cross-linguistic connections through oral and written discourse.

Evidence includes, but is not limited to:

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.

- Linguistic accommodations are designed to engage students in using increasingly more academic language. Each unit overview includes a list of the ELPS covered, a section called "Sentence Stems For Language Development," and a section called "ELPS Connections," which includes guidance for linguistic accommodations. For example, grade K, Unit 5: Measurement includes sentence stems and frames as well as an "ELPS Connection" section that explains, "Students participate in pre-reading and shared reading activities during this unit to provide context and promote understanding of measurement concepts. They also engage in shared writing activities, and for the first time, they use summarization frames to share their understanding of math concepts."
- The materials provide guidance at the lesson level for some lessons to provide accommodations for multiple levels of language proficiency. For example, the "*Progressions* by Alba Grade K Multilingual Supports" document states the following: "Selecting beginner

students to participate in acting out the book and the mathematics in 'Monster Musical Chairs' will support [students'] increased understanding of the mathematical concepts. Advanced students may describe what is happening each time a chair is removed or a student has to sit down. Or [they may describe] the relationship between the number of players and number of chairs while beginner students are playing the game."

- Each lesson in the materials includes a "Content and Language Objectives" resource, a "Language Standards" section with ELPS listed, and guidance for teachers to utilize sentence stems to help students explain their thinking. For example, in the grade K, Unit 5: Measurement lesson titled "Measurement Sort," teachers are provided with the following sentence stems: "I can measure the capacity of _____ because..."; "I can measure the length of _____ because..."; "I can measure the weight of _____ because...."

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

- The grade K Program Overview includes an ELPS Map with a list of recurring opportunities for language development throughout the materials. These opportunities include "Think-Pair-Share" routines, sentence stems, partner games, anchor charts, and vocabulary. This ELPS Progression gives an overview of the skills practiced in each unit. For example, the grade K, Unit 4: Numbers to 20 "ELPS Progression" section states, "Students use their prior knowledge from Unit 1 to engage with the concepts in this unit. They participate in shared reading opportunities using many of the same picture books from Unit 1. This allows [students] to use prior knowledge and provides contexts to aid in understanding the complex math concepts found in this unit."
- The Unit ELPS Overview located in the "*Progressions* by Alba Grade K Multilingual Supports" document lists the ELPS by identifying numbers for each unit. The next section, "Engaging Multilingual Learners," suggests specific strategies to support emergent bilingual students, such as honoring students' native language by allowing them to share first in their preferred language. The guidance also suggests pairing students at different levels of proficiency to support their English language development.
- Grade K, Unit 3: Geometry includes a lesson plan titled "Stacking Blocks." The section titled "Language Standards" lists the ELPS for the lesson. The ELPS for this lesson include: "1(F): Use academic language and learn new and essential language in the process" and "3(E): Share information in cooperative learning interactions." In the "Lesson Facilitation" section, the teacher is given guidance on getting students to use their academic language with a wordless book titled *Changes, Changes*. Students will work cooperatively in small groups building towers using 3D solids. They will explain their reasoning behind why they chose a particular block. The ELPS Map of the grade K Program Overview includes a list of seven opportunities for students to practice their language development. For example, the third bullet states, "Partner games and activities allow students to use peer support while practicing listening and speaking using basic and academic language."

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.

- The materials include embedded guidance for teachers to support EB students in developing academic vocabulary through oral and written discourse. For example, in the "*Progressions* by Alba Multilingual Supports" document, the "Pre-teaching Vocabulary" section includes multiple strategies to support students. To develop academic vocabulary through oral discourse, the materials suggest students engage in describing each word in the language of their choice. To develop academic vocabulary through written discourse, the materials prompt students to represent each word by drawing a picture.
- The materials include guidance for increasing comprehension through oral and written discourse. For example, the "Multilingual Supports" document suggests honoring students' native language by allowing them to speak in their preferred language when discussing math topics. The materials also suggest using shared writing to build anchor charts with students and adding their native language to them.
- The materials include embedded guidance for teachers to support emergent bilingual students in building background knowledge through oral discourse with shared reading activities. For example, the grade K, Unit 2: Addition and Subtraction lesson called "Three Little Pigs" utilizes the story "The Three Little Pigs" that most students are familiar with as a way to introduce "joining" math problems for the entire class. Unit 7's "Multilingual Supports" section provides the following guidance to teachers: "Sorting school supplies in 'Sort My Supplies' and money in 'The Change in My Pocket' provides a familiar context for students while introducing new math concepts. Making an explicit connection to students' background knowledge and experiences removes unnecessary language demands."
- In the grade K, Unit 4: Numbers to 20 lesson "Cookie Comparisons," the lesson suggestions inform the teacher that the context of baking cookies aids students in developing background knowledge needed for the lesson. The lesson suggestion encourages the teacher to have students share their experiences baking cookies to help build background knowledge for those who have never baked before.
- Guidance for teachers supports emergent bilingual students in making cross-linguistic connections through oral and written discourse. For example, Unit 5's "Multi Linguistic Supports" section states the following: "The tools used in this Unit to compare weight, length, and capacity also provide support for visualizing both the mathematical concepts and the associated vocabulary. Reuse these tools with beginner students as needed to help them attain an understanding of mathematics." Providing visuals supports students in connecting languages. To make cross-linguistic connections with vocabulary through written discourse, the "Multi Linguistic Supports" section for Unit 5 suggests the following: "Check for understanding by prompting students to represent each word by drawing a picture, using hand gestures, or describing each word in the language of their choice."

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.

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- The materials include guidance for increasing comprehension through oral and written discourse. For example, the "Multilingual Supports" document suggests honoring students' native language by allowing them to speak in their preferred language when discussing math topics. The materials suggest using shared writing for the building of anchor charts with students. The materials also suggest adding students' native language to anchor charts.
- The materials include embedded guidance for teachers to support emergent bilingual students in building background knowledge through oral discourse with shared reading activities. For example, the grade K, Unit 2: Addition and Subtraction lesson called "Three Little Pigs" utilizes the story "The Three Little Pigs" that most students are familiar with to introduce "joining" math problems for the entire class. Unit 7's "Multilingual Supports" section provides the following guidance to teachers: "Sorting school supplies in 'Sort My Supplies' and money in 'The Change in My Pocket' provides a familiar context for students while introducing new math concepts. Making an explicit connection to students' background knowledge and experiences removes unnecessary language demands."
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If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

- The materials are not designed for dual language immersion (DLI) programs, so this is not scored.

Depth and Coherence of Key Concepts

4.1	Depth of Key Concepts	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.	**1/1**
4.1b	Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.	**2/2**

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. Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

Evidence includes, but is not limited to:

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 materials include practice opportunities that engage students in the appropriate level of rigor aligned to the TEKS. For example, in the grade K, Unit 1: Numbers Sense lesson titled "Decomposing Baggies," the students work to understand how to decompose numbers within ten using objects and pictures. Before the lesson, the teacher prepares clear zip-top bags of pom-poms with a line down the center for each student. The teacher distributes the bags and a recording sheet to each student and challenges students to find different ways to separate their pom-poms on either side of the line in the bag. Students draw each method they see on their recording sheet and label their drawings to indicate the number. Students explain their model. The teacher asks student volunteers to share some of their combinations and how they came up with new ones. At the end of the lesson, students should understand that the total number of pom-poms stays the same, even as students can separate the pom-poms in several ways.
- The materials include practice opportunities in workstations that recur throughout the year. Students develop more complex and efficient strategies as time goes on. For example, in the grade K, Unit 4: Numbers to 20 lesson titled "One More or Less," students work with a partner to draw a linking cube card that has a linking cube representation of a number between one and twenty. Then, students use a spinner to determine if they are looking for a number that is one more or one less than the given number. Students build the new number with their linking cubes and use sentence stems to justify how they know the new number is one more or one less than the given number. The "Building Fluency" section of this lesson suggests that teachers incorporate this workstation throughout the year. As students gain fluency, they may determine a number that is one more or one less without needing to build the number using concrete models, or relying on pictorial representations.

- The materials identify concepts as well as provide relevant, real-world tasks and problem-solving situations aligned to the TEKS. For example, in the grade K, Unit 6: Money and Personal Financial Literacy lesson titled “Where Can Money Come From?” students identify ways to earn income. Additionally, they differentiate between money as income and money as gifts. Exit tickets provide various relevant scenarios that allow students to determine whether a scenario represents an example of income or a gift.
- The grade K, Unit 7: Data Analysis lesson titled “My Survey Project” requires students to demonstrate depth of understanding aligned to the TEKS. In this lesson, students collect data, create a picture graph, and analyze the results. Students use the “My Survey Project Recording Sheet” to record their questions and three response options. Students survey twelve of their classmates. Each student writes their name in a corresponding column to respond to the survey. The teacher prompts the students to create a graph with their data collection. Students discuss a conclusion they can make about their data and share their graph and conclusion with the class.

Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

- Questions and tasks in the materials progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards. In grade K, Unit 1: Number Sense, Unit Assessment One, the teacher places 8-10 linking cubes on the table in a pile. The student counts how many cubes there are and restates the total. As the unit progresses, the level of complexity for student tasks increases. In grade K, Unit 1: Number Sense, Unit Assessment Two, students are given a number and build an equal set, then a set of one more and one less.
- Questions and tasks in the materials increase in rigor and complexity. Student learning progression evolves from concrete understanding to pictorial representations as students draw pictures. Their learning progression evolves to abstract thinking as students write the number sentences that represent each problem. For example, in grade K, Unit 2: Addition and Subtraction, students respond to questions and tasks that initially require them to join and separate objects up to five. Numbers increase as the unit progresses. In the grade K, Unit 2: Addition and Subtraction lesson titled “Missing Cupcakes,” students use spoken words, concrete and pictorial models, and number sentences to explain strategies for solving problems involving addition and subtraction.
- In grade K, Unit 5: Measurement, students begin the unit by learning about measurable attributes such as length, weight, and capacity. Then, students compare measurable attributes in lessons such as “Mystery Weight,” where students discuss which box is heavier and which is lighter. The teacher asks students, "How did you know which box was heavier?" At this point in the unit, students learn to compare attributes, so students focus on one attribute per lesson. As the unit progresses, students combine their knowledge about measurable attributes. In the lesson titled “Brunch with the Bears,” the teacher asks students to name measurable objects from Goldilocks and the Three Bears and give examples of measurable attributes for that object, including length, capacity, and weight. In the lesson

suggestions, the teacher asks the students how they can “prove one object is longer, heavier, or has a greater capacity than another."

- The grade K, Unit 7: Data Analysis lesson titled “Shoe Sort” includes questions that progressively increase in rigor and complexity, leading to grade-level proficiency. In this lesson, students collect data, create a picture graph, and analyze the results. The class creates a graph using their shoes. Each student takes off one shoe, and the class names three ways to sort the shoes. Then, students write their name on a Post-it note and place it on the chart paper in the correct category. Students use the graph to answer the following questions: "a. What title would you give the graph? b. What does the column represent? c. How many students have shoes in the ____ category? d. How does the object shoe graph relate to the sticky note picture graph? e. What can you learn from this graph? f. How many students participated in the survey? g. Which shoe type was the most popular?"

Depth and Coherence of Key Concepts

4.2	Coherence of Key Concepts	12/12
4.2a	Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.	**2/2**
4.2b	Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.	**3/3**
4.2c	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.	**3/3**
4.2d	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.	**4/4**

The materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence. Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts. 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. 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.

Evidence includes, but is not limited to:

Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.

- The grade K Program Overview explains the learning progression of the materials: "*Progressions* by Alba Math is thoughtfully sequenced based on the most up-to-date research about how students learn mathematical concepts…while students are engaged in the Concept Development phase of learning, some students need prior concepts reinforced, and others are ready for extensions." A section within the overview titled "The Mathematics Concepts are Intertwined" explains that "the mathematics concepts found at each grade level are connected, rather than teaching isolated concepts and skills." The Implementation Support Guide includes guidance and a template for creating these documents to fit the needs of the district or campus.
- The lessons within each unit increase in depth and complexity through a logical sequence. For example, grade K, Unit 2: Addition and Subtraction begins with students solving joining and separating problems within 5 and then extends student solving to include numbers to 10. As students master these skills, they solve part-part-whole problems within 10. By the end of the unit, students solve various problem types within 10 and begin to explore solving multi-step problems using concrete objects and pictorial representations.

- The materials suggest tools, representations, and scaffolds to build coherence across grade levels. For example, in the Content Summary section of the grade K, Unit 4: Numbers to 20 Unit Overview, the materials note that the skills of counting, subitizing, and comparing build upon one another to develop a conceptual understanding of numbers, which leads to students' procedural fluency when adding and subtracting numbers to 20 in grade 1.
- The materials demonstrate a vertical alignment of mathematical concepts through a logically organized scope and sequence. For example, in grade K, Unit 5: Measurement, students learn different ways objects can be measured via length, weight, and capacity. Students compare two objects using these measurable attributes to identify which object is longer/shorter, etc. The Unit Overview describes how measurement instruction will build in grade 1: "Students will begin measuring the length of objects using measuring tools and discuss the relationships between the size of the units and the number of units needed to measure an object."

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

- The materials provide guidance for how a student's understanding of a unit concept relates to other concepts the student will learn later in the course (or another course in the grade K Program Overview). For example, the goal of Unit 1: Number Sense is to build a foundation of number sense within ten, giving students a foundation for working with quantities up to twenty in future kindergarten units. Students continue to see these concepts in the daily energizers, workstations, interleaved practice, and in small groups.
- In grade K, Unit 2: Addition and Subtraction, the goal of the Kindergarten Content Map is to expose students to different problem types, preparing students for adding and subtracting within twenty as well as solving problem types in grade 1.
- The materials follow a logical flow of development, providing structure in the progression and/or scope and sequence of mathematical concepts. For example, in grade K, Unit 5: Measurement, the Unit Overview includes a Measurement Progression Kindergarten Content Map explaining that students will measure objects by length, weight, and capacity. In first grade, students will begin measuring the length of objects using measuring tools. The map includes scaffold-back information citing the "Concept Development" section of the Texas Prekindergarten Guidelines, which explains that "students explore different ways objects and substances can be measured and use their reasoning skills to compare which has more or less of a given attribute." The map also includes scaffold-forward opportunities for students needing an extension: "Students extend their ability to compare measurable attributes to ordering objects by a given attribute."
- The materials guide how student understanding of a concept in a unit relates to other concepts students will learn later in the course. For example, in grade K, Unit 6: Money and Personal Financial Literacy, the Content Map states that the unit introduces the four primary U.S coins. Kindergarten TEKS requires students to identify pennies, nickels, and dimes. The map further explains that students will build upon this concept as they explore the relationships and values of the coins in grade 1. The Content Map provides big ideas within each unit. For example, it states, "Students work to understand the purpose of earning an

income and how to do so. In first grade, students will extend this knowledge to explain how income can be allocated between spending, saving, and giving."

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 materials demonstrate coherence across units by connecting the content students learned in previous grade levels to the content students will learn in the current grade level. For example, in grade K, Unit 1: Number Sense, the Kindergarten Content Map includes scaffold-back information that aligns the Texas Prekindergarten Guidelines to the kindergarten TEKS. In pre-K, students instantly recognize the quantity of up to six objects without counting. In grade K, students build on this foundation to instantly recognize the quantity of a small group of objects in both organized and random arrangements.
- The materials connect current mathematical content to student learning in future grade levels. For example, in the grade K, Unit 2: Addition and Subtraction Overview, the “Content Summary” section describes the three problem types featured in kindergarten (joining and separating with result unknown, as well as part-part-whole). Students will build on these problem structures as they move into grade 1, where they will strengthen their understanding of these problem types by solving joining and separating problems with change and start unknown.
- In grade K, Unit 7: Data Analysis, students collect data, organize it into a graph, and interpret the results. According to the materials, "Students are working to create real-object and picture graphs that directly represent the data. Students will go on to use T-charts and tally marks to collect data and represent it using bar-type graphs in first grade."
- The materials vertically connect language to previous student learning as well as connect to language in the current grade-level course. The lessons In the grade K, Unit 3: Geometry “Scaffold Back” section require students to review the pre-K guideline V.C.1 by naming and describing common two-dimensional shapes (rectangles, triangles, circles, and squares). Students name at least one solid three-dimensional shape using formal geometric vocabulary. Students will build on the concepts and language from their previous grade level in the Concept Development lessons. In these lessons, students identify two-dimensional shapes, including circles, triangles, rectangles, and squares as a special rectangle. Students also identify three-dimensional solids, including cylinders, cones, spheres, and cubes in the real world.

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 materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts from the current grade level to new mathematical knowledge and skills. For example, in the grade K, Unit 1: Number Sense lesson titled “Counting Collections,” students count collections of four to ten objects and increase the number of items over time. If students need additional support, teachers can provide them access to a ten-frame workmat to help students organize as they count. As students gain proficiency, they move from the concrete to the representational stage when the teacher prompts them to "represent their collections by drawing them and labeling the total using the Counting Collections Recording Sheet."
- In the grade K, Unit 5: Measurement lesson titled “Brunch with the Bears,” the teacher’s guide students to reflect on their measurement of objects in previous lessons. Students may answer that they can measure the weight, length, or capacity of these objects. After reading Goldilocks and the Three Bears, students identify items from the story that are measurable, as well as these items’ measurable attributes. The teacher emphasizes students’ ability to measure each object in multiple ways. The teacher also encourages students to explain how they can compare the measurements of similar objects from the story.
- At the lesson level, materials scaffold concepts and procedures for students, building on students’ prior understanding from previous grade levels. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Penguin Fun,” students use their prior knowledge of joining and separating within 5 to extend to numbers within 10. In this lesson, the students solve joining and separating problems within 10 using spoken words and pictorial representations to describe their process for solving the problems.

Depth and Coherence of Key Concepts

4.3	Spaced and Interleaved Practice	8/8
4.3a	Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.	**4/4**
4.3b	Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.	**4/4**

Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units. Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.

Evidence includes, but is not limited to:

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

- Each unit overview includes a “Spiral and Interleaved Practice Opportunities” section. The grade K, Unit 1: Number Sense Unit Overview includes workstations that teachers can utilize as spiral reviews throughout upcoming units. Teachers can find and prioritize a list of fluency-building activities in the Program Overview. Additionally, students can complete the “Number Sense Interleaved Practice” section at the unit’s end. The daily energizers serve as spiral review or spaced retrieval opportunities throughout the program.
- The materials provide daily energizers that "encourage students to think deeply, share their reasoning, learn from each other, and make connections to the world around them." The “Topic Alignment” section shows the alignment of the daily energizers to the units. For example, Week Five's grade K daily energizers review and/or activate students’ prior knowledge to prepare them for the following grade K units: Counting and Number Sense Within 10, Joining and Separating Within 10, Geometry, Number Concepts Within 20, Data Analysis, and Measurement.
- Each week of the daily energizers covers a variety of units and topics, connecting previously learned skills and concepts students are currently working on, or activating students’ prior knowledge for current learning. For example, the daily energizers for grade K, Week 35 include one activity on data analysis, one activity on measurement, one activity on geometry, and two activities on number concepts within 20.
- The daily energizers include tasks to activate students' prior knowledge before the start of a lesson or closing activity. For example, in the daily energizers for grade K, Week 3, K.015, students view quick images of a ten frame with only the top row complete. The teacher asks students to respond with what they see and to explain their thinking. Some students may say they saw three and counted two more or counted the dots quickly. This warm-up activity reviews the “Unit Counting” and “Numbers Sense within 10” sections.
- The daily energizer for grade K, Week 6, K.027 includes a spiral review task for joining and separating within 10. The energizer slide shows an image of two apples and a basket. The

teacher then asks, "If I pick two more apples, how many will I have?" Students are encouraged to explain their thought strategies along with their solutions. This activity reviews previous student learning from pre-K.

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

- The materials include opportunities to revisit concepts in different contexts throughout a unit via the “Interleaved Practice” activities. The grade K, Unit 1: Number Sense Interleaved Practice includes two pages of practice opportunities with previously learned skills that teachers can use at their discretion. This practice includes counting, one more and one less, decomposing numbers, and counting forward and backward.
- In the grade K, Unit 2: Addition and Subtraction Interleaved Practice, students use a variety of pictorial representations to solve addition and subtraction problems. The various types of problems address concepts and skills students learn throughout the unit, including adding, subtracting, and counting.
- The interleaved practice opportunities review previously learned skills and strategies as students solve problems. Students must choose a strategy from their previous learning that works best for them. For example, the grade K, Unit 4: Numbers to 20 Interleaved Practice includes a problem in which students find the solution to a joining word problem. Students may solve this problem by adding with objects, making a pictorial model, counting on, using a ten frame, etc.
- The grade K, Unit 7: Data Analysis Interleaved Practice includes a review of coin identification, equal groups, joining and separating word problems, counting by 10s and 1s, data, and shapes.

Balance of Conceptual and Procedural Understanding

5.1	Development of Conceptual Understanding	18/18
5.1a	Questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations.	**12/12**
5.1b	Questions and tasks require students to create a variety of models to represent mathematical situations.	**2/2**
5.1c	Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.	**4/4**

The materials include questions and tasks that require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations. Questions and tasks require students to create a variety of models to represent mathematical situations. Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Evidence includes, but is not limited to:

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

- The materials include tasks that require students to interpret and analyze a variety of models for mathematical concepts and situations. For example, in the grade K, Unit 1: Number Sense lesson titled “Counting Collections,” students work on counting and sharing ideas for organizing with the class. The teacher prepares bags with ten or fewer objects–including beans, erasers, and cotton balls–for students to count. Students work in pairs to count objects and explain their strategy for counting. The teacher monitors students and provides a five or ten-framework mat for students needing extra support. When students are ready, they represent their collections by drawing and labeling them on the Counting Collections Recording Sheet.
- The materials provide tasks that prompt students to engage with a variety of models and representations to interpret, analyze, and evaluate various concepts. For example, in grade K, Unit 4: Numbers to 20, students develop a strong conceptual understanding of pre-place value concepts by building and manipulating numbers using red/blue chain links, two-color counters on a ten-frame or double-ten frame, linking cubes, and everyday objects such as paper clips, popsicle sticks, etc.
- The materials include questions and tasks that require students to interpret, analyze, and evaluate a variety of representations for mathematical concepts and situations. For example, the first prompt in the grade K, Unit 7: Data Analysis Unit Assessment requires students to sort and organize data about the class's favorite sport. In the second prompt, students create a graph using a grid work mat, labeling its title and categories. In the third prompt, students

answer the following questions: "1. Which sport was chosen the most? 2. Which sport was chosen the least? 3. How many students answered the survey?"

Questions and tasks require students to create a variety of models to represent mathematical situations.

- The materials prompt students to create various models representing their understanding of concepts. For example, the grade K, Unit 1: Number Sense lesson titled “Decomposing Baggies” introduces students to decomposing numbers. Before the lesson, the teacher draws a line down the center of clear zip-top bags and fills them with four to ten pom-poms for each student. The teacher challenges students to find ways to separate their pom-poms on either side of the line. Students use a recording sheet to draw the different ways that they decompose their pom-poms.
- The questions and tasks in the materials prompt students to create a variety of models to represent their understanding of concepts. For example, in the grade K, Unit 3: Geometry lesson titled “Solid Scavenger Hunt,” students look for real-life examples of spheres, cones, cylinders, and cubes in their classroom or school. Students draw their example on the Solid Scavenger Hunt Recording Sheet. Students debrief as a class about which shapes they found and explain how they knew it was a particular shape.
- The questions and tasks in the materials prompt students to create a variety of models to represent their understanding of concepts. In the grade K, Unit 4: Numbers to 20 lesson titled “Baking Cookies,” students solidify their understanding of teen numbers as having a value of ten and some more by building models using double-ten frames and two-color counters. Students continue to practice modeling teen numbers using concrete models in other lessons.

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

- The materials include questions and tasks that prompt students to apply conceptual understanding to new situations. For example, the grade K, Unit 1: Number Sense lesson titled “Cup of Counters” allows students to compose and decompose numbers within ten using concrete objects. Students explain what remains the same and what changes each time the objects are rearranged. Students are given plastic cups containing red and yellow counters that they shake and pour onto their workspace. Students record the number of red and yellow counters on their recording sheets. Students learn that the number of counters stays the same, but the number of red and yellow can change.
- The materials include questions and tasks that prompt students to apply conceptual understanding to new situations. For example, in the grade K, Unit 1: Number Sense lesson titled “Tens & Ones on the Beach,” students compose numbers using pictorial models and generate sets that are one more and one less. The teacher reads One Is a Snail, Ten is a Crab: A Counting Feet Book, stopping on each page to count the number of feet. Students use a number path that they have engaged with in previous lessons, discussing each number on the

number path and how to use the least number of animals to compose each number. When students decide, the teacher tapes pre-printed pictures of each animal above each number.

- The materials include questions and tasks that prompt students to apply conceptual understanding to new situations. For example, in the grade K, Unit 2: Addition and Subtraction lesson “Filling Apple Crates,” students use a ten-frame to solve addition problems. The students first use the ten-frame to fill red and yellow apples (two color counters) in various ways and record their solutions. Students apply their understanding of the apple crates to different ways of composing 10.
- The materials include questions and tasks that prompt students to apply conceptual understanding to new situations. In the grade K, Unit 4: Numbers to 20 lesson titled “Baking Cookies,” students use double-ten frames and two-color counters to explore the teen numbers as “ten and some more.” Later in Unit 4, the lesson titled “Cookie Comparisons” tasks students to use double-ten frames and two-color counters to build numbers that are equal, more, and less to a given set. For example, the teacher builds a set of 12 on their double-ten frames. The teacher then asks students to build a number that is equal to their set and to justify how they know it is equal to 12. Students answer with a justification such as, "Our set of cookies (two color counters) is equal to your set of cookies because we have one full cookie sheet (ten frames) and two more."

Balance of Conceptual and Procedural Understanding

5.2	Development of Fluency	12/12
5.2a	Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks.	**2/2**
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.	**3/3**
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.	**6/6**
5.2d	Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.	**1/1**

Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks. Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit. Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit. Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.

Evidence includes, but is not limited to:

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

- The materials include daily exercises that target specific skills or concepts that build student automaticity and fluency. For example, in the grade K Program Overview, the materials identify fluency targets for each unit. The materials provide an End-Of-Year Fluency Assessment to evaluate student progress within the fluency targets. The materials label lessons addressing these targets with a large “F” in the top left-hand corner. The lessons function as workstations to be used incrementally throughout the year, building students' fluency and allowing their spaced retrieval of the primary focal points. In grade K, the fluency targets include counting and cardinality, joining and separating, and comparing objects' measurable attributes.
- The materials include daily exercises that target specific skills or concepts that build student automaticity and fluency. The materials identify counting and cardinality, joining and separating, and comparing objects' measurable attributes as the primary focal points of grade K. “Daily energizers” are daily prompts that can be used to "keep students thinking creatively about the math concepts they are learning." The Topic Alignment Guide shows which weeks are aligned to the following topics: Counting and Numbers Sense Within 10, Joining and Separating Within 10, Geometry, Number Concepts Within 20, Data Analysis, and Measurement. For example, the daily energizer exercises for Week 16 help to build student

fluency with counting. The materials present students with a prompt that asks them to count by ones. Students start at 26 and stop at 45.

- The materials align fluency activities with grade-level content being taught. For example, in grade 1, Unit 4: Numbers to 20, the materials provide students with several opportunities to count collections with increasingly larger sizes. Students use grouping tools such as ten frames and double-ten frames, rubber bands, etc. Students use recording sheets to explain how they counted the objects. Students also use mathematical pictures to show their collections.
- The materials provide several opportunities for students to practice counting and organizing collections of objects to achieve automaticity when subitizing. In the grade K, Unit 4: Numbers to 20 “Content Summary” section, the materials state that "students may struggle with subitizing if they have not had adequate experience counting and organizing collections of objects." For example, in the lesson titled “Numerals in the Sand, Part 2,” teachers show students a teen number card and the corresponding choral count to the number. Students then place two-color counters on the double-ten frame.

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 mathematical procedures throughout the unit. For example, the daily energizers for grade K, Week 9, K.044 prompt students to determine how many counters are shown using an image of a ten frame with yellow and red counters. Students share their solutions and the strategies they used with the class.
- The materials include activities that require manipulatives for hands-on exploration of mathematical concepts to develop procedural skills and fluency through practical application. Each unit includes fluency lessons designed to transition into workstations that provide hands-on exploration and repeated practice throughout the year. For example, the grade K, Unit 1: Number Sense lesson titled “Domino Parking Lot” transitions into a workstation for students to practice recognizing quantities in a variety of arrangements. The workstation also allows students to practice justifying why quantities are the same or not. The workstation requires a set of dominoes and the Domino Parking Lot Work Mat. Students lay dominos facedown on a table and take turns turning over a domino, working together to determine the total number of dots on the domino and where they should place it on the work mat.
- The materials include tasks that offer multiple entry points. Students are able to choose different strategies to solve problems. This promotes students’ conceptual understanding and practice, thereby refining their procedural skills for fluency. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Frosting Cupcakes,” students choose how they want to solve the problem by selecting the Cupcake Window Work Mat or the ten frame. As students solve joining and separating problems, they discuss with their partners the reason behind their solutions.

- The materials include activities that require manipulatives for students' hands-on exploration of mathematical concepts, allowing students to develop procedural skills and fluency through practical application. For example, the grade K, Unit 3: Geometry lesson titled "Solid Stamps" includes TEKS K.6(C): Identify two-dimensional components of three-dimensional shapes. Students will choose a solid figure and stamp it into the dough. Students will identify what two-dimensional shape they see in the dough. They will conclude the lesson with an exit ticket. Students are able to show their background knowledge of shapes, thereby connecting to new mathematical knowledge of skills involving three-dimensional shapes.

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

- The materials include strategic questions for teachers to use during instruction. Questions prompt students to consider alternative strategies, as well as to think critically about finding the most efficient approach, finding an alternate solution, and/or applying a procedure to all situations. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled "Missing Cupcakes," the teacher reads *Pete the Cat and the Missing Cupcakes*. Students then use Cupcake Work Mats and two-colored counters to solve word problems. The teacher reads a word problem to the class, and students work independently to solve the problem. After students have time to solve the problem, the teacher guides students to turn and talk to a partner to explain how they solved each problem.
- The materials intentionally include tasks that ask students to solve problems using multiple appropriate strategies. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled "Merry-Go-Round Mix-Up," students act out word problems as a class. The lesson suggestions ask teachers to look for strategies such as counting onward when adding or counting backward when subtracting.
- The materials include strategic questions for teachers to use during instruction. Questions prompt students to consider alternative strategies, as well as to think critically about their approach and to find alternate solutions. For example: in the grade K, Unit 2: Addition and Subtraction lesson titled "Penguin Fun," the materials prompt the teacher to facilitate discussion between student partners. Students utilize phrases such as, " I placed ___ penguins on the ___. Then, I _____ to show what happened. Now, there are ___ penguins on the ___." Teachers encourage students to verbalize their process and solution to their partners as they complete various task cards. Teachers then ask students to compare their problem-solving process with their partner.

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

- The materials include support for teachers in understanding strategies developed within the materials, as well as understanding the trajectory of learning from less efficient to more efficient strategies. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled "Apples Up on Top," the "Lesson Suggestions" section explains how to look for strategies

such as counting all the apples or counting onward when adding. Students are encouraged to analyze the differences between the strategies, pushing them toward efficiency.

- The materials include explicit modeling of efficient strategies. For example, in the grade K, Unit 2 Addition and Subtraction lesson titled “Ten Fireflies,” the teacher uses two-color counters to model fireflies inside and outside the jar. As the teacher models different combinations of fireflies, students focus on how the total remains the same (10) as they discover various ways to compose 10. The materials offer explicit directions for the anchor chart in the “Lesson Facilitation” section.
- The materials include explicit modeling of efficient strategies. For example, in the grade K, Unit 5: Measurement lesson titled “Comparing Capacity,” the teacher shows students a collection of various containers and explains that they will be comparing the capacities of the different containers. The teacher chooses a student to select two containers and another to demonstrate the action of scooping cups of rice into each. The teacher guides the conversation as the class analyzes the results and discusses how they know which container holds more. After this lesson, the students explore capacity using the materials in a workstation for recursive review.

Balance of Conceptual and Procedural Understanding

5.3	Balance of Conceptual Understanding and Procedural Fluency	16/16
5.3a	Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.	**2/2**
5.3b	Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.	**6/6**
5.3c	Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.	**8/8**

Materials explicitly state how the conceptual or procedural emphasis of the TEKS are addressed. Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations as appropriate for the content and grade level. Materials include support for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.

Evidence includes, but is not limited to:

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

- The lessons in the materials intentionally target the emphasis of the standards being addressed. The lessons include explicit learning objectives highlighting key conceptual and procedural skills and concepts to be covered. For example, in grade K, Unit 1: Number Sense lesson titled “Counting Collections” includes a Content and Language Objective stating, "Students will count objects and share ideas for organizing their objects with the class."
- The lessons in the materials intentionally target the conceptual understanding and problem-solving skills of the standards being addressed. The lessons include explicit learning objectives that highlight key conceptual and procedural skills and concepts to be covered. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Merry-Go-Round Mix-Up,” students create scenarios where children leave or join the group on the merry-go-round, acting out each scenario. Students use strategies such as counting onward and counting backward when adding or subtracting. Students also illustrate the various types of problems on paper. They use counters and linking cubes to represent the same types of problems after having the opportunity to act them out. The materials offer multiple opportunities for students to explain and share their strategies throughout the lesson.
- The materials clearly explain mathematical concepts to describe the “why” behind mathematical procedures. The materials for grade K, Unit 2: Addition and Subtraction include a Kindergarten Content Map of the progression within the entire unit. The materials demonstrate the connections between the joining, separating, and part-part-whole problems. The materials incorporate a variety of objects in the lesson to ensure students have the

opportunity to use concrete objects and pictorial representations as they solve multi-step problems.

Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.

- The lessons include hands-on activities with models or manipulatives that represent mathematical concepts. For example, in the grade K, Unit 1: Number Sense lesson titled “Monkeys on the Bed,” each student is given a Monkeys on the Bed Work Mat and ten linking cubes. The teacher reads *Ten Little Monkeys,* while students use the work mats and cubes to act out the story to generate a set of objects that is one less than before.
- The lesson materials incorporate visual representations, manipulatives, and pictorial representations to illustrate concepts. For example, in the grade K, Unit 1: Number Sense lesson titled “Ladybug Dots,” students work to compose and decompose numbers within 10 using concrete objects. The teacher gives each student a Ladybug Dots Work Mat and set of black bingo chips. The teacher then explains that students will find different ways to arrange the dots on the ladybug's two wings. Students practice decomposing numbers in different ways. After the lesson, students complete an exit ticket, which includes six dots that they must circle to create two groups. Students complete the sentence frame, "There are ___ dots. I made a group of ___ and a group of ____."
- The lessons include hands-on activities with models or manipulatives that represent mathematical concepts. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Five Silly Monkeys,” students use two-color counters and a five-frame to solve joining and separating problems within five. As students solve joining and separating problems, the teacher prompts students to compare the similarities and differences between the two types of problems.
- The lesson materials incorporate concrete objects, visual representations, and numeric expressions to illustrate concepts. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Ten Fireflies,” students use two-color counters and the Glass Jar Work Mat to solve joining and separating problems within 10. As students solve joining and separating problems, the teacher models how to turn their actions and solutions into number sentences.

Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.

- The materials include opportunities for students to build automaticity with the fluency skills necessary to complete grade-level tasks. For example, in the grade K, Unit 1: Number Sense lesson titled “Choral Counting,” students practice automaticity with rote counting. The teacher gathers students and guides the class to practice counting aloud from one to ten. The teacher records the numbers on a chart as students count. After counting, the teacher asks students to share what they notice about the numbers they just counted. Teachers continue

this routine throughout the year by varying the starting number, ending number, and what students are counting by.

- The materials include opportunities for students to articulate their emerging understanding of mathematical concepts and procedures through modeling, discussion, and practice. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Filling Apple Crates,” students explore different ways to fill the apple crates (ten frame) using apples (two-color counters). As the students find various ways to fill the apple crates, they also illustrate, write the number sentences, and discuss their observations of the pattern frames.
- The materials include scaffolded tasks that guide students in creating their own models. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled “Frosting Cupcakes,” students use two-color counters (cupcakes) and the Ten Framework Mat to represent part-part-whole problems. Students have multiple opportunities to review previous joining/separating problem types and then solve part-part-whole problems. The teacher embeds opportunities for students to discuss and share their thinking as they compare different problem types.
- The lesson materials provide students with multiple practice opportunities consisting of standard-aligned tasks, allowing students to work towards mastery of grade-level content. The materials include lessons that function as workstations for recursive review, allowing students to work towards mastery of grade-level content. For example, the grade K, Unit 5: Measurement lesson “Heavier or Lighter?” becomes a workstation that allows for students’ continued practice towards mastery. Students compare the relative weight of objects and record the comparisons. During the workstation, students work with partners to compare the weight of objects using a bucket balance.

Balance of Conceptual and Procedural Understanding

5.4	Development of Academic Mathematical Language	14/14
5.4a	Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies.	**3/3**
5.4b	Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.	**2/2**
5.4c	Materials include embedded guidance for the teacher 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.	**9/9**

Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and other language development strategies. Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context. Materials include embedded guidance for the teacher 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.

Evidence includes, but is not limited to:

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

- The materials provide opportunities for students to develop their academic mathematical language using other language development strategies. Each unit's overview includes sections titled "Vocabulary/Academic Language" and "Sentence Stems for Language Development." An example of the "Sentence Stems for Language Development" section can be found in grade K, Unit 1: Number Sense, which states that "using Sentence Stems allows students to use routine language for classroom communication in an effort to expand and internalize vocabulary associated with math concepts." The sentence stems included in this unit include the following: "I see..."; "I know there are ____ _____ because..."; "The number I see is..."; I know ___ is one more/less because..."; "To build a number that is one more/less, I...."
- The materials describe the development of mathematical vocabulary by first creating a need for the language through carefully designed tasks, visuals, and manipulatives. The materials provide opportunities for students to read and listen to new words in context. Students then apply those words to their spoken communication. For example, in grade K, Unit 1: Number Sense, the lesson "Tens and Ones on the Beach" directs students to compose the numbers 1-

10 using pictorial models. Students generate sets that are one more and one less in a contextual situation. Students then justify their work. Teachers gather students to the carpet and display one set of tens and ones on the Beach Number Path Cards. Teachers then ask students to make observations. Teachers read *One is a Snail, Ten is a Crab: A Counting Feet Book* aloud, allowing students to learn which animal represents each number. Teachers engage students in a discussion about each number on the number path, explaining how students can use the least amount of animals to compose each number. Teachers tape these pictures above the appropriate number on a number path displayed on the wall. Teachers and students began this number path in a previous lesson, which required them to add red chain links beneath each number as well as a set of blue chain links under the tens place on the number ten. The class continues this number path throughout the school year.

- The materials describe the development of mathematical vocabulary by first creating a need for the language through carefully designed tasks, visuals, and manipulatives. These tasks, visuals, and manipulatives provide opportunities for students to listen to new words in context and then apply those words to their spoken communication. For example, in the grade K, Unit 2: Addition and Subtraction lesson titled "Apples Up on Top," students use two-color counters to model joining and separating problems. The materials provide guiding questions for teachers, such as: "How many apples did your animal start with?...Then, what happened? How can we show that? How many apples are on top now?" Bullet eight of the "Lesson Suggestions" section provides the following guidance to teachers: "Each time a student shares a strategy, prompt a different student to retell the strategy in their own words. If students struggle to use spoken words for describing their strategy, the teacher may model the process."
- The materials describe the development of mathematical vocabulary by first creating a need for the language through carefully designed tasks, visuals, and manipulatives. These tasks, visuals, and manipulatives provide opportunities for students to listen to new words in context and then apply those words in their spoken and written language. For example, in the grade K, Unit 6: Money and Personal Financial Literacy lesson titled "What's in My Piggy Bank?" teachers create an anchor chart with coin names (penny, nickel, dime, quarter) and visuals. Students observe real coins and learn about their physical characteristics. The materials provide the following debriefing questions: "How are the coins similar to each other? How are they different? How can you identify the different coins?" The exit ticket allows students to identify and label each coin.

Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.

- The materials provide teacher guidance to address academic mathematical vocabulary. For example, the overview for grade K, Unit 2: Addition and Subtraction lists nine words under the "Vocabulary / Academy Language" section. The materials provide a general recommendation for using the terms to create a word wall during instruction. The "Content Summary" section for this unit provides examples of joining and separating problems for teachers. The materials state that students do not need to know this terminology. In the "Penguin Fun"" lesson for Unit

2: Addition and Subtraction, teachers say the vocabulary word *equation* each time they write the corresponding equation, allowing students to hear the precise academic language in context. This provides opportunities for students to listen to new academic vocabulary. This lesson also provides sentence stems for students to use as scaffolds as they develop and use academic vocabulary. The materials include the following sentence stem: "I placed __ penguins on the ___. Then, I ___ to show what happened. Now, there are ___ penguins on the ___." Students also use a workmat and manipulatives to make connections to the equation.

- Grade K, Unit 5: Measurement includes the words *attribute, capacity, compare, greater, heavier, length, less, lighter, longer, measure, shorter,* and *weight*. For example, in the lesson "Lemonade for Lunch" in grade K, Unit 5: Measurement, the materials provide teachers with guidance on introducing the term *capacity*. This lesson provides students with opportunities to learn about capacity in a contextual situation. The materials also provide teachers with suggested debriefing questions to deepen students' understanding of the vocabulary word *capacity*. The following lesson, "Comparing Capacity," further deepens students' understanding of capacity by providing students with opportunities to compare the capacity of two containers. The "Lesson Suggestion" section provides the following guidance for teachers: "Continue to model using the word 'capacity' when referring to the amount a container can hold." The materials further advise teachers to do the following: "Model phrases that can help students describe the differences between the objects: 'has greater capacity,' 'has less capacity,' 'holds more than,' or 'holds less than.'
- The Unit 5 Overview also includes a "Sentence Stems" section that supports students' use of routine language, allowing students to expand and internalize vocabulary associated with math concepts. The sentence stems for grade K Unit 5: Measurement include the following: "I know __ is longer/shorter than __ because..."; "I could measure the ___ (length, capacity, and/or weight) of ___ (object)."
- The materials include scaffolds teachers can use for students as they develop and use academic vocabulary. For example, grade K, Unit 6: Money and Personal Financial Literacy includes a lesson titled "Money Sorting." The "Lesson Facilitation" section provides questions and discussion starters to scaffold the use of vocabulary when students are sorting the coins. Bullets one and two of the "Lesson Suggestions" section includes guidance for teachers to support the pronunciation of coins and common errors.
- In the "Lesson Internalization Overview" section, teachers are encouraged to reflect on what academic vocabulary is embedded in each lesson and how to connect academic vocabulary to basic vocabulary.

Materials include embedded guidance for the teacher 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 materials provide a set of sentence stems that can be used to facilitate discourse without limiting student responses. This resource guides students to exemplar responses to questions

and tasks using their developed mathematical language. For example, in the overview for grade K, Unit 2: Addition and Subtraction, the "Sentence Stems for Language Development" section provides four sentence stems: "I solved it by ..."; "I put___. Then, I ____ to show what happened. Now there are __"; "There are ____."; "My strategy is similar / different because...."

- The materials include embedded teacher guidance on preparing for and facilitating strong student discourse grounded in quality tasks and concepts appropriate to academic vocabulary. For example, grade K, Unit 3: Geometry includes a lesson titled "What is a Circle?" In this lesson, students analyze a variety of shapes and use their observations to define a circle. Students discuss what a circle is using a think-pair-share routine. Students use the Two-Dimensional Shape Cutouts to sort the shapes into two groups. The teacher creates an anchor chart titled "Circle." This anchor chart includes drawings of examples and non-examples of circles. The lesson closes with students answering how they know if a shape is a circle.
- The materials provide a set of discussion questions that can be used to facilitate discourse without limiting student responses. This resource guides students to exemplar responses to questions and tasks using their developed mathematical language. For example, the grade K, Unit 4: Numbers to 20 lesson "Ten Frame Talk" provides opportunities for discourse. Teachers ask students what they notice about the number eleven represented on a ten frame. The materials provide suggested answers. Teachers encourage students to engage in a think-pair-share routine to discuss how the number thirteen represents the models.
- The materials include embedded teacher guidance on preparing for and facilitating strong student discourse grounded in quality tasks and concepts that use appropriate academic vocabulary. The materials provide teachers various types of questions that open student discussion using routines such as a think-pair-share. For example, in the grade K, Unit 6: Money and Personal Financial Literacy lesson "Where Can Money Come From," steps 3-4 of the "Lesson Facilitation" section directs teachers to do the following: "Engage students in a think-pair-share routine by asking them why the bears wanted to earn more money or income. Ask students to describe the different ways the bears earned money. "

Balance of Conceptual and Procedural Understanding

5.5	Process Standards Connections	6/6
5.5a	Process standards are integrated appropriately into the materials.	**1/1**
5.5b	Materials include a description of how process standards are incorporated and connected throughout the course.	**2/2**
5.5c	Materials include a description for each unit of how process standards are incorporated and connected throughout the unit.	**2/2**
5.5d	Materials include an overview of the process standards incorporated into each lesson.	**1/1**

Process standards are integrated appropriately into the materials. Materials include a description of how process standards are incorporated and connected throughout the course. Materials include a description for each unit of how process standards are incorporated and connected throughout the unit. Materials include an overview of the process standards incorporated into each lesson.

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- The process standards are integrated appropriately into the materials. For example, in grade K, Unit 5: Measurement, students describe the measurable attributes of given objects and then use a problem-solving model to compare them. Students make predictions and communicate these ideas using precise mathematical language. During the unit, students must display, explain, and justify their mathematical ideas in written communication. In the lesson titled “Brunch with the Bears,” students reflect on all the measurable attributes they have learned. The teacher reads *Goldilocks and the Three Bears,* pausing throughout the book for students to discuss how things can be measured. For example, students can measure the weight or capacity of the bowls in the story. After the lesson, the students complete an exit ticket that asks them to list ways they can measure a milk carton.
- The process standards are included in all parts of the materials: lessons, student practice, and assessments. For example, in grade K, Unit 6: Money and Personal Financial Literacy, students must orally communicate their mathematical ideas and reasoning (K.1D) when discussing wants, needs, and income.
- The process standards are integrated appropriately into the materials. For example, grade K, Unit 7: Data Analysis includes all process standards. As the “Process Standards Connections” section states, "Students analyze graphs and use language to communicate mathematical ideas by writing true and false statements about the graph...."

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

- The materials include a description of how the process standards are integrated into the materials. The grade K Program Overview includes a Process Standards Map that explains, "The mathematical process skills focus on how students engage with math content. These are embedded and spiraled throughout the year. They help bring cohesiveness to math concepts that otherwise seem disconnected." The materials further explain that the "process skills are embedded throughout each unit to support students in attaining a greater depth of understanding." The Process Standards Map includes a list of ways the process standards are used throughout the program. For example, the materials state that "daily energizers allow students to analyze mathematical relationships, connect and communicate mathematical ideas, and explain and justify using precise mathematical language."
- The materials provide an overview and explanation of how the process standards are embedded throughout the course, including how the process standards connect to the content standards. For example, the grade K, Unit 2: Addition and Subtraction Overview provides process standards connections that explain ways that the materials incorporate process standards.
- The materials show where each process standard is addressed in the course. For example, the grade K, Unit 6: Money and Personal Financial Literacy Overview lists each process standard and the lesson in which that process standard is embedded. In the Program Overview, the materials also include a Process Standards Map, which explains how the materials embed process standards throughout each unit.

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

- In each unit overview, the materials include a description of how process standards are incorporated and connected throughout the unit. For example, each unit overview includes a section titled “Process Standards Connections.” As the “Process Standards Connections” section of grade K, Unit 1: Number Sense states, "During this unit, students begin to learn how to communicate mathematically. Students learn the think-pair-share routine and how to use sentence stems to explain and justify their mathematical opinions and ideas. Students engage with concepts using math manipulatives and often use a recording sheet to record their work. Picture books serve as contexts for students to engage in mathematics in everyday life. Students are given several opportunities to select tools for problem-solving. For example, in ‘Subitizing Flash,’ students may use two-color counters, their fingers, or mental math."
- The materials explain how the process standards are embedded in the unit, including how the process standards connect to the content standards. For example, the “Process Standards Connections” section of the grade K, Unit 2: Addition and Subtraction Overview states that "picture books create contexts that lend themselves to everyday life, society, and the workplace. "

- In each unit overview, the materials include a description of how process standards are incorporated and connected throughout the unit. For example, each unit overview includes a section titled “Process Standards Connections.” The “Process Standards Connections” section of grade K, Unit 5: Measurement expresses that students will describe measurable attributes of given objects and use a problem-solving model to compare them. Students make predictions and communicate these ideas using precise mathematical language. During the unit, students display, explain, and justify their mathematical ideas in written communication.

Materials include an overview of the process standards incorporated into each lesson.

- The materials include an overview of the process standards incorporated into each lesson. Each unit overview features a table that includes the title of each lesson and lists the content standards, process skills, ELPS, and suggested number of days to teach the lesson. This table is an overview and does not include the language or description of the TEKS, process standards, or ELPS. For example, the grade K, Unit 1: Number Sense lesson titled “Monster Games” covers the content standards K.2(E) and K.2(F), the process standard 1(F), and the ELPS 2(B), 4(B), 4(C), and 4(F). On the lesson page, the materials write out the TEKS (Math Standards) and ELPS (Language Standards).
- The materials list the process standards in the “Unit Overview” section for each lesson. For example, the grade K, Unit 2: Addition and Subtraction Overview lists 1(D) and 1(G) as the process standards for the lesson titled “Merry-Go-Round Mix Up.”

Productive Struggle

6.1	Student Self-Efficacy	15/15
6.1a	Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.	**3/3**
6.1b	Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.	**6/6**
6.1c	Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.	**6/6**

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks. Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

Evidence includes, but is not limited to:

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

- Grade K Daily Energizers offer routine practice opportunities. These energizers require students to demonstrate depth of understanding by thinking, persevering through problem-solving, and making sense of mathematical concepts. The daily prompts offer a way to "encourage students to think deeply, share their reasoning, learn from each other, and make connections to the world around them. The most crucial component of the energizers in this resource is exploration through the conversations they generate. We all think differently from one another, and these differences should be examined and shared." For example, in Week 11 of the Daily Energizers, the materials include a picture with seven red fish and five larger blue fish. The materials include a statement that says, "there are more blue fish than red fish." The materials include prompts for students to justify whether the statement is true or false and how they know. In this example, the statement is false. Teachers ask students to explain how someone may have thought that there were more blue fish than red fish.
- The materials include opportunities for students to make sense of math using various strategies and stimuli. In the grade K Unit 4: Numbers to 20 lesson titled "Cookie Comparisons," the materials include open-ended questions that allow students to explore different pathways to a solution. In this lesson, students work in pairs to build a set of cookies on a double ten frame that is equal to 12 cookies. Students justify how they know it is equal to 12. Then, students build a set of cookies that is more than 12. The materials provide an opportunity for each student to build their own set, so there are many possible answers to the question. So, students may come up with a different answer than their partner. Teachers ask

students, "Why does your set look different than your partner's set of cookies? Why is that okay?"

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

- The materials support student understanding, explaining that there can be multiple ways to solve problems and complete tasks. In the grade K Unit 1: Number Sense lesson titled "Cup of Counters," students practice composing and decomposing numbers within 10 using concrete objects. Students then explain what remains the same and what changes. The materials include prompts for students to place red and yellow counters into their cups and dump them onto their work area. Students next notice how many counters are red and yellow. Students repeat this process to see how many different combinations they can make. The Cup of Counters Recording Sheet provides a space for students to record their findings. Students also practice explaining during a think-pair-share. The materials include a "Lesson Suggestions" section, which guides the teacher to provide each students ten-frames and workmats to help students organize their thinking if needed. The "Lesson Suggestions" section also provides the following sentence frame: "I poured ____ counters onto my workspace. There were ____ yellow and ____ red counters which equals _____ counters."
- The materials guide students to understand that there can be multiple ways to complete tasks. For example, in the grade K Unit 2: Addition and Subtraction lesson titled "Closest to Ten or Zero," students roll a number cube and build the quantity rolled using two-color counters and a ten-frame. Students roll the number cube a second time and add that amount to their ten-frames. Then, students write an equation that represents their turn. Once each partner has rolled, students have to decide whose total is closest to ten. The materials provide sentence stems for students to explain their thinking. These include the following stem: "I rolled a ___ and then a ____, so my total is ___. ____ rolled closest to ten. I know because...."
- The materials include lessons and tasks that require students to explain or justify that there are multiple ways to solve a problem. For example, the materials include Daily Energizers, which "encourage students to think deeply, share their reasoning, learn from each other, and make connections to the world around them. The most crucial component of the energizers in this resource is exploration through the conversations they generate. We all think differently from one another, and these differences should be examined and shared." In Week 28, the Daily Energizer K.140 provides students with a picture of 15 counters, which appear in three rows of five. The top and bottom row are red, while the middle row is yellow. The prompt directs teachers to do the following: "Show students the prompt and ask them to share what they notice. Some students may say they see three groups of five counters. Some may say they see fifteen counters. Others may say they see ten red counters and five yellow counters. Encourage students to see the counters in multiple ways and make connections with what other students observed."

Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

- The materials include tasks that require students to make sense of mathematics by doing math with peers and teachers. In the grade K Unit 3: Geometry lesson titled "Solid Stamps," students explore the two-dimensional components of three-dimensional solids. The materials prompt students to analyze the relationship between the 2D shapes that make up the faces of 3D solids. Students use a set of 3D solids and modeling clay. Students share their observations with their peers and teacher. The materials include a think-pair-share, which prompts students to share the 2D shapes they see on each of the 3D solids.
- The materials require students to make sense of mathematics through discussions with peers and teachers. For example, in the grade K Unit 5: Measurement lesson titled "Comparing Capacity," students compare the capacity of containers and practice explaining how they know which container holds more. Students perform hands-on explorations of different-sized containers that are filled with teacher-selected substances (such as rice, beans, sand, water, etc.).
- The materials require students to make sense of mathematics through writing about math. For example, in the grade K Unit 7: Data Analysis lesson titled "Read All About It!" students draw conclusions from a picture graph. Students write one true conclusion and one false conclusion about the graph. The materials include prompts for students to share their two statements with the class. The class then determines which statement is true and which is false in the think-pair-share routine. The materials suggest repeating the same process with a partner.

Productive Struggle

6.2	Facilitating Productive Struggle	10/10
6.2a	Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.	**6/6**
6.2b	Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.	**4/4**

The materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications. Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

Evidence includes, but is not limited to:

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

- The materials include instructions, questions, and prompts to facilitate student sharing and reflection on problem-solving approaches. The facilitation guidance prompts students to include explanations, arguments, and justifications. For example, the grade K Daily Energizers include daily prompts that facilitate student discussion through the following sentence frames: "My idea makes sense because ____."; "My strategy is similar/different because ____."; "What is one new idea you discovered?"
- The unit pre-assessments and end-of-unit assessments provide prompts for teachers to use when assessing students. These prompts allow students to explain their thinking and justify their answers. For example, the first prompt of the grade K Unit 7: Data Analysis Pre-Assessment directs teachers to "place a handful of button counters on the table. Ask the students to sort them into groups. Prompt the student to explain how the groups are different and how the buttons within a group are similar." In the first prompt of the grade K Unit 4: Numbers to 20 Unit Assessment 2, teachers show students large double ten-frame cards with 12 and 14 dots. Then, teachers ask students to compare the sets and explain their reasoning.
- The materials support teachers in guiding students to justify and explain their math thinking. For example, in the grade K Unit 5: Measurement lesson titled "Tallest Tower," students compare the heights of towers that they build with blocks. Students then explain their reasoning for which one is the tallest or shortest. The materials provide opportunities for students to share their thinking using the following sentence stem: "This tower is _____ than my tower because...." The materials prompt teachers to ask students questions to assess their understanding, such as, "How do you know if your tower is taller than another?"

Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

- The materials include information on common misconceptions students may have, as well as how teachers should address such misconceptions through explanatory feedback. For example, in grade K Unit 1: Number Sense, the lesson titled "Tricky Monkey" states that "some students may struggle to identify that three bananas spread out is less than four bananas close together. Consider lining up the two rows, and then allowing a student to spread the pieces out. Discuss if any bananas were added or taken away to reinforce that the quantity is the same even though the pieces are now farther apart."
- In the grade K Unit 7: Data Analysis lesson titled "Read All About It!" the "Lesson Suggestions" section provides guidance for teachers on how to work with students who struggle. The third suggestion states, "If students struggle to create a false conclusion, have them create one that is true and challenge them to write the opposite of the true conclusion or change something about it to make it false."
- The materials include prompts and reflective questions that guide teachers in giving feedback to students. These include using models through which students can explain their thinking. For example, in the grade K Unit 2: Addition and Subtraction lesson titled "Filling Apple Crates," students explore different ways to fill apple crates using two-color counters. The materials provide guidance on responding to students who are rearranging the different colors of apples but are not changing the quantity of the different colors of apples. The materials instruct teachers to offer the following feedback to such students: "What if I had five red apples? How many yellow apples would I need to fill the crate?"
- Grade K Unit 3: Geometry Overview includes examples of student responses, both correct and incorrect, along with suggested feedback for each kind of response. Sample responses employ academic vocabulary in the responses and feedback. The "Content Summary" section reminds teachers that "instruction should involve formal vocabulary to the informal descriptions students create. Students may explain they notice corners or 'pointy parts.' Use this opportunity to introduce the terms vertex or vertices." The "Common Misconceptions" section informs teachers that, "Students may identify 3D objects, such as a box, by its 2D sides. Address this by correctly stating the students' observation: 'Yes, this box/cube has a square face.'"