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Houghton Mifflin Go Math! K-2 Program Summary

Section 1. Texas Essential Knowledge and Skills (TEKS) and English Language Proficiency Standards (ELPS) Alignment

Grade	TEKS Student %	TEKS Teacher %	ELPS Student %	ELPS Teacher %
Kindergarten	100%	100%	N/A	100%
Grade 1	100%	100%	N/A	100%
Grade 2	100%	100%	N/A	100%

Section 2. Concept Development and Rigor

- Materials concentrate on the development of the primary focal areas outlined in the TEKS.
- Concepts sequence from concrete to representational to abstract (CRA), and materials provide some support to teachers in understanding and developing students' progression along the CRA continuum.
- Materials support coherence and connections between and within content at the grade-level and across grade levels; resources build vertical content knowledge by accessing prior knowledge and understanding of concept progression.
- Tasks are of high-quality and engage students in the appropriate level of rigor and complexity as identified in the TEKS.
- Students have opportunities to apply mathematical knowledge and skills to solve problems in new contexts, including those arising in everyday life and society.

Section 3. Integration of Process Skills

- Materials develop students' abilities to use and apply a problem-solving model that is transferable across problem types and grounded in the TEKS.
- Students have opportunities to develop their self efficacy and mathematical identity by sharing strategies and approaches to tasks and selecting appropriate tools for the work, concept development, and grade (e.g., calculator, graphing program, virtual tools).
- Materials prompt students to effectively communicate and justify mathematical ideas, reasoning, and their implications in multiple representations.

Section 4. Progress Monitoring

- Materials include developmentally appropriate diagnostic tools and guidance for teachers and students to monitor progress.
- Guidance is provided for teachers and administrators to analyze and respond to data, however, administrators are not provided with the guidance or tools needed to support teachers.
- Materials include frequent, integrated formative assessment opportunities and routine progress monitoring opportunities.

Section 5. Supports for All Learners

- Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential; targeted instruction and activities are provided for students who struggle with content mastery.
- Instructional methods appeal to a variety of learning interests and needs.
- Materials include supports for English Learners (ELs) with sequenced and scaffolded linguistic accommodations commensurate with various levels of English language proficiency.

Section 6. Implementation

- Materials include a cohesive, year-long plan with practice and review opportunities that support instruction.
- Materials are designed in a way that allows Local Education Agenciesthe ability to incorporate the curriculum into the district, campus, and teacher design and considerations. However, there is no specific guidance for implementation that ensures the sequence of content is taught in an order that is consistent with the developmental progression of mathematical concepts and skills.
- The visual design of student and teacher materials is neither distracting nor chaotic.

Section 7. Additional Information

- The publisher submits the technology, cost, and professional learning support worksheets.

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2.1 Materials concentrate on the development of the primary focal area(s) for the grade-level.

- Materials spend the majority of concept development of the primary focal areas for the grade-level as outlined in the TEKS.
- Materials strategically and systematically develop students' content knowledge as appropriate for the concept and grade-level as outlined in the TEKS.
- Materials provide practice opportunities for students to master the content.

Meets 4/4

The provided materials concentrate on the development of the primary focal areas for the grade level. The materials spend the majority of concept development on the focal areas as outlined in the Texas Essential Knowledge and Skills (TEKS), and they strategically and systematically develop students' content knowledge. There are practice opportunities for students to master the content.

Evidence includes but is not limited to:

Throughout all modules, the primary focus of 15 of the 20 modules is on place value, solving problems with addition and subtraction, identifying and creating two-dimensional shapes and three-dimensional solids, and principles of length measurement. These key focal areas are also spiraled in all of the modules after they are taught and also through the "Every Day Counts Calendar Math." The materials contain planning documents such as unit plans and the TEKS for Mathematics Correlations that clearly state the focal areas of the unit; these focal areas align with the grade-level TEKS. The materials clearly and consistently showcase focal areas of the curriculum that are aligned to the grade-level TEKS; the Process Standards are combined with the content strands in the majority of the modules. For example, in the Teacher Edition, at the beginning of each unit, there is an outline that shows teachers a broad scope and sequence as well as all of the modules that fall under that focal area. The "Engage, Explore, Explain,

Elaborate, Evaluate" (5E) lesson plan design in the materials informs the teaching and learning of math concepts.

The progression of the lessons begins with activating prior knowledge and progresses to higher-order critical thinking and problem solving throughout the units, ensuring students master the full concept. The materials include inserts that outline the primary focal areas for instructional emphasis with a narrative and a graphic depicting vertical alignment. The lesson design permits instruction in each grade to focus on skills in greater depth while simultaneously building a foundation for the next grade, establishing an effective learning progression. In addition, the materials provide various practice opportunities through the use of additional resources such as "RtI Tiered Lessons," "Enrich" lessons, STEM activities, and the "Grab-and-Go" activities found in the digital resources. The materials explain that students will be able to apply mathematical skills in a variety of ways in order to be mathematicians. The introduction explains that through using manipulatives, models, and rigorous questions, students are able to move beyond a basic level of learning to develop deep conceptual understanding and then practice, apply, and discuss what they know.

Across many modules, students gradually develop flexibility in solving addition and subtraction problems throughout the year. They begin by adding ones and then add tens, building upon their foundation of previously learned place value concepts in Module 3. Then they practice a variety of strategies to solve addition and subtraction problems within 20, which helps them generate and solve word problems. They end the year by adding up to three digits as well as using related addition facts and solving equations with unknowns in Module 13.

Modules 1 and 3 focus on place value; Modules 4 and 5 focus on solving problems with addition and subtraction; Modules 6–8 and Modules 11–13 focus on solving problems with addition and subtraction; Modules 14, 15, and 17 focus on identifying and creating two-dimensional shapes and three-dimensional solids and on principles of length measurement.

In Module 6, during a lesson on using "make a ten" to add, students are given the opportunity to practice the skill using yellow and red counters (that are provided in the individual manipulatives kits) and ten-frames. The "learning at home" activities in each module provide students with further practice with the focal areas outside of school.

In Module 11, the center activity "Problem Solving" requires students to choose the correct operation to solve the problem. This was introduced in early lessons in the module; additionally, lessons within each module contain a lesson opener and an essential question aligned to grade-level TEKS.

In Module 13, students use a related fact to find an unknown number and explain their selections using evidence-based justifications. In the "Explain" portion of a lesson within the module, students model and draw related addition and subtraction facts; students use models

to find the unknown addends in addition sentences and differences in the related subtraction sentences. The “Elaborate and Evaluate” portion of each lesson illustrates how students utilize tools and communicate mathematical ideas within whole group and small group discussions, center activities, and independent practice. Students justify their responses by completing tasks in models and in the workbooks. Teachers are guided to lead the lessons with questions to check for understanding and sample student responses that correlate with each question. The probing questions are scaffolded so that students are asked “what” and then justify with “how.” For example, students first determine what related addition and subtraction facts are shown and then justify how addition can be used to solve the subtraction fact.

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2.2 Materials sequence concepts from concrete to representational to abstract (CRA) as is appropriate for the grade-level and content.

- Materials include a variety of types of concrete models and manipulatives, pictorial representations, and abstract representations, as appropriate for the content and grade level.
- Materials support teachers in understanding and appropriately developing students' progression along the CRA continuum.

Partially Meets 2/4

The provided materials include concepts sequenced from concrete to representational to abstract (CRA), as is grade-level appropriate. Materials include a variety of appropriate content and grade-level types of concrete models and manipulatives, pictorial representations, and abstract representations. However, materials do not clearly support teachers in understanding and developing students' progression along the CRA continuum.

Evidence includes but is not limited to:

Throughout all modules, many lessons begin with hands-on experiences using concrete materials and move on to use pictorial models in conjunction with concrete materials. Some modules utilize auditory stories and prompt students to discuss, making the end goal more abstract than just counting manipulatives. In order to understand place value, Modules 1 and 2 include connecting cubes, MathBoards, real-world examples, ten-frames to represent models, drawing with crayons, base-ten blocks, and included "work mats" that correspond to the focal point. Another example of concrete models and manipulatives for solving addition and subtraction, for another focal point, includes connecting cubes, MathBoards, two-color counters, assorted school supplies, adhesive notes, index cards, subtraction fact cards, and ten-frames. Students practice place value within Modules 1 and 2 using base-ten blocks and connecting cubes. Students then transition to using the base-ten blocks in Modules 3–8, when they begin adding and subtracting double-digit numbers. Since students have already had practice with base-ten blocks, students have prior knowledge of this format when transitioning to addition and subtraction in Module 3. The materials utilize new manipulatives for application after students have had opportunities to familiarize themselves with the models. Module 9 uses

play coins; Module 14 uses two-dimensional shapes; Module 19 uses bar graphs, picture graphs, and tally charts as part of Data Analysis. Additionally, students have access to pictorial representations as part of each lesson, within each module, as depicted in the practice workbook.

Across the modules, the materials do sequence concepts from concrete to representational to abstract (CRA), as is appropriate for the grade level and content; however, materials lack explicit directions for teachers to assess when and if a child is ready to move forward (or backward) along the continuum. The materials provide cues and recommendations to support students' progression through the lessons with the use of "Quick Checks" and guidance questions through the lessons, but they do not directly provide guidance for teachers to help students move through the phases of the CRA continuum.

Module 1, on place value, gives the following guidance: "In the previous lesson, children made the transition from connecting cubes to using base-ten blocks. For this lesson and the lessons that follow, continue to have connecting cubes available for children to use if they need to." Students draw tens and ones to show their work; teachers ask students about the ways to show tens and ones. Teachers prompt students to respond in a variety of ways, which can include pictures or cubes. After they describe a model of a number, students define "ten and one" using their own words. Materials give no further guidance as far as when to take away the counting cubes or when to move into the abstract, paper-pencil, or drawing their own base-ten blocks.

In Module 7, under the "Explain" section of "Try Another Problem," there are step-by-step instructions for teachers to walk students through a subtraction problem. The teacher can prompt the students to use counters to act out the problem. Materials give specific instructions for what the students can do with their cubes to act out the story.

In Module 8, the "Lesson Opener" in the "Engage" portion, "Choose An Operation," has students review what they know about addition and subtraction, as previously covered in prior modules in a whole group setting. This is the first lesson within the module that has students access prior knowledge about both addition and subtraction so that students can accurately choose the correct operation based upon the given scenarios. Materials then ask students to individually put groups together and take them apart, thus helping them to make the connection to addition and subtraction. The "Differentiated Instruction" component gives students opportunities to revisit concepts taught previously and provides the teacher with explicit instructions and tasks to implement. The materials have certain items checked within the "Explain" portion of the lesson. Materials direct the teacher to focus on these checked items and, in an "If … then …" statement, give directions for the teacher to follow should a student respond incorrectly to a checked item. The statement directs the teacher to a resource and page number to use for support, but there is no explicit direction or reference to a student's "place" on the CRA continuum or how to determine when or how to move students along it.

In Module 11, students learn about addition and subtraction strategies. The first lesson recommends students can use connecting cubes if needed, but the strategy is “Modeling Addition” using pictorial models. There are differentiation strategies using concrete models for students who are not ready to move on to pictorial models; there are also opportunities, through additional resources and practices, for students who are ready to move on to the abstract; however, this does not contain suggestions on assessing the CRA placement. The practices and lessons begin on a knowledge level and slowly build rigor as the lesson progresses.

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2.3 Materials support coherence and connections between and within content at the grade-level and across grade levels.

- Materials include supports for students to build their vertical content knowledge by accessing prior knowledge and understanding of concept progression.
- Materials include tasks and problems that intentionally connect two or more concepts as appropriate for the grade-level.
- Materials provide opportunities for students to explore relationships and patterns within and across concepts.
- Materials support teachers in understanding the horizontal and vertical alignment guiding the development of concepts.

Meets 4/4

The materials support coherence and connections between and within content at the grade level and across grade levels. The resources include supports for students to build vertical content knowledge by accessing prior knowledge and understanding of concept progression. The included tasks connect two or more concepts and provide opportunities for students to explore relationships and patterns within and across concepts. To some extent, the materials support teachers in understanding horizontal and vertical alignment; however, there are not enough explicit details or directions to indicate why the materials build, especially for teachers less familiar with the TEKS for the grade level or grades above or below.

Evidence includes but is not limited to:

Throughout all modules, materials contain tasks that direct teachers to build on students' prior knowledge before presenting a new concept or problem aligned to a grade-level focal area. Each lesson in each module begins with an "Essential Question" and a "Making Connections" piece that links the new skill or concept to previously learned material or student prior knowledge. All lessons within the curriculum have an "Are You Ready?" section that guides teachers to assess children's understanding of the prerequisite skills for each lesson; it is located in the "Assessment Guide," which instructs the teachers on where to go in the guide. Each lesson contains a "Go Digital" resources section, where a "Digital Management Center," specifically designed for the teacher's use, organizes program resources by TEKS, Tier 1

intervention lessons (provided in the "RtI Guide"), and "Soar to Success Math" online lessons that teachers can use to help build those skills. At the beginning of each unit, there is a "Vocabulary Reader." At the very bottom of every page in the Teacher Edition, the "Vocabulary Builder" section explains to teachers the prior knowledge students should be coming in with. Materials in first grade build students' vertical content knowledge through task familiarity; materials utilize common manipulatives and models from previous units as students progress into subsequent grade levels. The materials are organized so that skills and concepts build in rigor throughout the year and over consecutive years. The materials follow the same format in all grade levels and utilize the same models; for example, materials use five-frames for representing numbers, counting, adding, subtracting in kindergarten and then in first grade. The same is true of learning place value; in first grade, students start using base-ten blocks and place value charts to develop place value knowledge; in second grade, students use the same place value chart to add thousands. The materials teach the same or similar strategies to scaffold in higher grade levels, such as using number lines, counting on, modeling, and acting out to solve problems. The problem-solving model is the same through all grade levels; the content changes, but the format remains the same. While the first grade materials build upon concepts and materials used throughout kindergarten, there is little evidence that shows a direct connection to what students will learn in the second grade. Also, the materials don't explicitly state how to apply concepts outside of the mathematical classroom; students are provided with real-world examples and problems to explore and solve throughout each module. The only indication that shows students will use these skills in the future is found in the "Math Tutor on the Spot" section, which provides students with help in solving the HOTS (higher-order thinking skills) question included in each lesson. This section, included in every lesson across the grade levels, states: "With these videos and the HOTS problems, children will build skills needed in the TEXAS assessment." Materials give no further guidance or direction.

In Module 1, materials prompt students to use classroom objects to count from 1 to 20. The number of objects is more than 10 to demonstrate the place value focal point: tens and ones. The teacher then asks students to explain in their own words how they show a number as tens and ones. This draws upon the kindergarten skill of having 10 plus a one-digit number.

In Modules 1–5, on each page, there is an explanation that allows teachers to review prerequisite skills prior to beginning the lessons. The materials contain tasks that include familiar models and strategies. For example, of the nine modules in the "Addition and Subtraction" unit, three modules ask students to use ten-frames and two-color counters; six modules ask students to use connecting cubes to model addition and subtraction problems. Students used these materials in kindergarten, as they began to represent numbers and represent adding and subtracting within 10.

In Module 3, a lesson on adding tens and ones asks students to use their knowledge of place value to add multiples of ten to a one-digit number, up to 99. In the middle of the year, in Module 9, students again connect their addition/subtraction and place value knowledge when they are counting coins. At the end of the year, in Module 19, they once again connect these

addition, subtraction, and place value skills as they answer questions about a graph; students write an addition or subtraction word problem based on the information in the graph and solve it.

In Module 7, the "Try Another Problem" section gives students a word problem. Students can act out the problem to figure out the answer. They can use counting on, subtraction, concrete model manipulation, and abstract thinking to demonstrate their understanding. This word problem alone ties in many concepts, so students can make connections among mathematical ideas. In each lesson, as part of the "Lesson Opener," there is a "Literacy and Mathematics" section. In Module 7, Lesson 6, students write a story about having a number of toys and giving some of them away. They draw counters to show the subtraction story. Students then write directions on how to model the subtraction in the story. By applying math to everyday, real-life experiences, students are able to recognize and apply mathematics in contexts outside of mathematics.

In Module 8, in the "Generate Addition Word Problems" lesson, the Essential Question is, "How can an addition sentence help you write a story problem?" In prior modules, students found sums or missing addends and used information to solve addition sentences. Also in this module, during the "Making Connections" part of the Lesson Opener, students tell the teacher what they know about addition sentences from lessons within Modules 3, 4, 6, and 7. Students also describe the different components of an addition number sentence. In previous Lesson Openers, in Module 4, students used pictures to add to, model adding to, model putting together, and add in any order. Students utilize addition as part of the "Explore," "Explain," or "Evaluate" portions in the Module 8 lesson just as they did in prior addition lessons throughout Units 1 and 2.

In Module 14, a shape task asks students to use prior knowledge about two-dimensional shapes to create new shapes. The Essential Question of the lesson is, "How can acting it out help you make new shapes from combined shapes?" Students combined manipulatives and numerals to create sums as part of Modules 3, 4, 6, 8, 11, 12, and 13. The lesson relevantly connects the concept of "combining" with creating two-dimensional shapes, challenging students to use the mathematical processes of using a problem-solving model, communicating mathematical ideas and reasoning, creating and using representations, and analyzing mathematical relationships. Students reason when answering the Lesson Opener question, "Why could you not combine a circle with another shape to make a rectangle?" Students continue to combine two-dimensional shapes to create new two-dimensional shapes throughout the Explore, Explain, Elaborate, and Evaluate portions of the lesson. Students analyze the given information and then form a plan or strategy as indicative of problem-solving.

In Module 17, students solve the following problem: "Jimmy sees that his boat is about six color tiles long. Draw Jimmy's boat. Draw the color tiles to show how you measured." This is an example of a real-world problem where students learn that they can apply problem-solving strategies to measure real-world objects that they may find in their home or life.

In Module 19, “Graphing,” students collect their own data by asking their friends and family a specific question, such as “What is your favorite snack?” Students create a graph using that data. In another practice activity in the same module, students first predict whether there are more students with blue eyes or brown eyes in the class. They then collect data, create a bar graph using that data, and determine if their predictions were true.

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2.4 Materials are built around quality tasks that address content at the appropriate level of rigor and complexity.

- Tasks are designed to engage students in the appropriate level of rigor (conceptual understanding, procedural fluency, or application) as identified in the TEKS and as appropriate for the development of the content and skill.
- Materials clearly outline for the teacher the mathematical concepts and goals behind each task.
- Materials integrate contextualized problems throughout, providing students the opportunity to apply math knowledge and skills to new and varied situations.
- Materials provide teacher guidance on anticipating student responses and strategies.
- Materials provide teacher guidance on preparing for and facilitating strong student discourse grounded in the quality tasks and concepts.

Meets 4/4

The provided materials are built around quality tasks that address content at the appropriate level of rigor and complexity. Tasks are designed to engage students in the appropriate level of rigor as identified in the Texas Essential Knowledge and Skills (TEKS), as appropriate for the development of the content and skills. Materials clearly outline for the teacher the mathematical concepts and goals behind each task. Materials integrate contextualized problems throughout, providing students chances to apply knowledge and skills in varied situations. The resources provide teachers guidance on anticipating student responses and strategies; however, the materials do not support teacher guidance on ways to revise content to be relevant to their specific students, their backgrounds, and their interests. In addition, there are embedded opportunities for discourse, but there are no rubrics for teachers to evaluate the quality of the discussions.

Evidence includes but is not limited to:

Throughout all modules, the materials begin with concrete models, allowing students to use tools and manipulatives to represent numbers. The materials guide students through CRA (concrete to representational to abstract) tools, models, and understandings, with increasing depth and complexity; materials provide increasing rigor throughout a given unit and across units over the course of the year. Each unit (which includes multiple modules) includes an

introduction called “Introduce the Unit;” it describes and explains the overall concepts and the goals of the unit. This is exemplified in the “TEKS for Mathematics” section in the Teacher Edition (TE) as well as in the teacher professional development videos; the student edition lists the TEKS for each lesson in the top right-hand corner of the first page. Materials note multiple goals behind a task, emphasizing that the process is just as important for student learning as the product; they guide teachers to facilitate discussion on how differences in strategy relate to efficiency and how well strategies work for the problem type. The unit page explains each component of the lesson; unit pages also include “Essential Questions” that teachers should be focusing on throughout each unit. Lessons follow a “5E” format (“Engage, Explore, Explain, Elaborate, and Evaluate”). Each lesson starts out with accessing prior knowledge and a “Making Connections” section; in the Explore section, the lesson dives into the on-level material. During the Explain portion, materials encourage moving students to Elaborate only if they master the previous teaching. There are enrichment questions in the higher-order thinking (HOT) problems, “Go Deeper,” and in independent practice, labeled “Homework and Practice.” The unit page also informs teachers that the “Diagnostic Interview Task” may be used for intervention on prerequisite skills. For each grade level, several sections throughout the TE unit pages direct teachers to students’ prerequisite skills, such as “Show What You Know,” “Quick Checks,” and the “Vocabulary Builder.” Each lesson includes TEKS and learning objectives to address; the “Common Errors” section lists possible misconceptions for each lesson in the TE.

In Module 4, after students read an addition problem, discussion questions ask, “How many do we have all together?” “How do you know?” “How might you add two groups of counters?” Further in Module 4, “Add in Any Order,” the Essential Question is, “Why can you add addends in any order?” Students are asked to talk about adding two groups of counters. In the “Literacy and Mathematics” section, there are two activities: One activity asks students to act out the scene from a previous word problem using their own words as dialogue. The other activity has students write a story where groups of objects change places. In both activities, students can create and apply real-world scenarios.

In Module 6, the teacher asks, “How do you make the doubles fact 6 + 6?” A possible answer is, “One 6 is an addend, and the other 6 comes from breaking 7 into 6 + 1.” The teacher asks, “Why do you find the sum of 12 + 1?” A possible answer is, “After adding 6 + 6 = 12, there is still 1 cube leftover. I can count on 1 from 12 to find the sum of 13. So, 6 + 7 = 13.”

In Module 9, a lesson titled “Equal Amounts” includes a discussion question embedded within the Explore section: “Blake has 10 pennies. He counts the pennies by twos. What is the total value of the coins?” Students work through the “Problem Solving” graphic organizer to answer the questions, “What information are you given?” “What is your plan or strategy?” Teachers ask follow-up questions: “How did you use pennies to act out the problem?” “How did you record your solution strategy?” “How did you draw a different way to show the value of ten pennies?” In the TE, “Go Deeper” guides the teacher on how to proceed should a student exhibit mastery; “Differentiated Instruction” guides the teacher on how to proceed should a student experience difficulty. Also in Module 9, in the “Springboard for Learning” section, the

materials remind teachers that children need to see that five nickels have a different value than five dimes. In the Elaborate portion of the lesson, children are encouraged to use the “act it out” strategy to solve the problem; they then draw and label the coins used, thus leading to further application in problem-solving requiring money.

In Module 14, a lesson on composing two-dimensional shapes notes a common error: “Children may not understand that they need to turn smaller shapes to get the new shape.” Springboard for Learning then guides teachers to provide students with two quarter-circle cutouts to combine from “Two-Dimensional Shapes” (provided in the “eTeacher Resources”). Students model the new shape, two quarter-circles put together, to make a leaf shape. Students then turn the quarter-circles so that they match the two quarter-circles in the answer choices.

In Module 17, in a lesson titled “Make a Nonstandard Measuring Tool,” students share what they know about measuring length and ways to determine the length of objects. This helps students connect to what they already know about measurement and tools. Lessons are linked to STEM activities; these correlated activities reinforce the mathematical skill or concept of study within other content areas such as science. Students infer, use various scientific tools, and write a descriptive caption about measuring an object. The lesson is also linked to an “Enrichment Guide” activity that has students order objects by length.

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2.5 Materials include cohesive, year-long plan for students to develop fluency in an integrated way.

- Materials include teacher guidance and support for conducting fluency practice as appropriate for the concept development and grade.
- Materials include a year-long plan for building fluency as appropriate for the concept development and grade.
- Materials integrate fluency at appropriate times and with purpose as students progress in conceptual understanding.
- Materials include scaffolds and supports for teachers to differentiate fluency development for all learners.

Partially Meets 2/4

The provided materials develop fluency in an integrated way. There is guidance and support for conducting fluency practice and integrating fluency at appropriate times as students progress in their conceptual understanding. There is not a cohesive year-long plan that is explicitly laid out for fluency practice, and there is little scaffolding or support for teachers to differentiate fluency development for all learners.

Evidence includes but is not limited to:

Throughout all modules, the materials include some guidance for teachers on the structure and design of fluency practice; this guidance is found in the "Strategies and Practice for Skills and Facts Fluency – Primary, GK-3," in the "Digital Resources." This resource lists the lessons in kindergarten, 1st grade, 2nd grade, and 3rd grade, and how they match "Basic Facts" workshops and "Basic Facts Practice" worksheets. The workshops and worksheets are connected to concept development and expectations for the grade level. This is evidenced through the lessons listed in the "Math Expressions Correlation" section, which also provides opportunities to choose appropriate strategies for grade-level tasks. Students have opportunities to efficiently and accurately solve grade-level tasks by applying their conceptual understanding of number relationships and strategies; students do this in the scaffolded workshops from "Introduce It!" "Develop It!" and "Make it!" Materials provide support for conducting fluency practice with students; in the introduction, materials explain that basic facts workshops use number patterns, visual models, and prior knowledge to introduce and to

develop the strategy for learning a specific group of facts. Materials provide further directions for children on how to create manipulatives to practice those basic facts independently or with a partner.

Throughout the year, the materials direct teachers to use the "Strategies and Practice for Skills and Facts Fluency" resource for additional practice to promote automaticity. While this resource makes connections to the development of conceptual understanding within the overview, materials do not explicitly embed these connections within the units or modules. Other than the correlation sheet, materials give no clear direction on how and when to conduct these fluency activities. The materials do not provide a year-long overview or scope and sequence for building fluency connected to the concept development and grade-level expectations that increase in complexity; however, the materials do contain elements that provide routines, complexity skill progression, and tracking of fluency progress. The materials provide some guidance for determining if students need differentiated supports for fluency activities. Teachers receive fluency support for English Learners. Fluency expectations for the grade level are not stated, and there is no explicit link or instruction in the Teacher Edition (TE) for fact fluency support. The "Practice for Skills and Fact Fluency – Primary, GK-3" resource has leveled lessons to support fluency, but the TE does not refer to this resource, and it is not correlated with specific lessons within modules. The workshop instructions are broken into three steps: "Introduce It!" "Develop It!" and "Make It!" The idea is for teachers to scaffold the lesson as the students develop the concept; however, the materials lack guidance for the teacher on how or when to move on and what to do for students who are struggling, even with the included "Tips." The workshops are the same for all grade levels; they are not specifically assigned to each grade level. So, a first-grade and second-grade teacher could duplicate the teaching. Fact fluency practice is not scaffolded; the only modules that include practice are the addition and subtraction modules.

In Modules 1–8, materials cover Level 2 and portions of Level 3 of "Basic Facts Workshops." The materials contain worksheets to help reinforce fact fluency practice. As depicted in this resource, the levels and worksheets are connected to specific lessons within the TE. Within the overview of the "Strategies and Practice for Skills and Facts Fluency – GK-3" resource, materials make connections to the development of conceptual understanding. However, materials do not explicitly embed these connections within the units or modules.

The Level 2 Basic Facts Workshop 4, "Counting Up," teaches students to use what they know of counting on to add in order to count up to subtract. In this strategy, students use what they know about "Part-Part-Whole" and "Counting On," introduced in Level 2 Basic Facts Workshop 2. The teacher shows seven counters and asks students, "How many counters do you see?" The teacher moves the seven counters and writes the number 7 in the *whole* section of the "Part-Part-Whole" mat. The teacher moves five counters to one part and asks, "How many counters did we start with?" "How many counters are in the part we know?" "How many counters are in the missing part?" The teacher then models her thinking out loud, saying, "One way to find out is to count up. Start with five and count up to seven. Think six, seven. How many do you count

up?" The teacher writes the number sentence "7 - 5 = 2." The teacher repeats this procedure several times before moving to the next section, "Develop It!"

In Module 6, "Doubles Plus One" and "Doubles Minus One" guide students to use what they know about doubles to find other sums. The lesson begins with a review of doubles facts and strategies as learned in prior lessons as well as the concept of "one more, one less" to help students understand how they can apply what they already know about doubles to determine other sums. The lesson includes questions such as "What doubles fact do the yellow towers show?" "How can you change the towers to show one more?" "What addition sentence describes this picture?" "How do you know the sum for 4 + 5 without adding?" These questions show how the progression of prior learning can impact the progression of the new learning in supporting the students' understanding of the concept behind the strategic fluency practice. If students are fluent in doubles facts, then this application becomes relevant and displays the purpose of the doubles fact practice. Additionally, in Module 6, during a lesson where students are practicing addition strategies, the materials prompt teachers to have English Learners define new terms by matching visuals to definitions. The materials direct teachers to show children some addition facts and have them find each sum; materials direct teachers to use the phrase *count on 2* to describe a strategy to add. The children point to the addition fact for which they can use *count on 2* (6 + 2). This activity is repeated with other strategies: doubles, doubles plus 1, doubles minus 1, count on 1, count on 2, and count on 3.

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2.6 Materials support students in the development and use of mathematical language.

- Materials include embedded opportunities to develop and strengthen mathematical vocabulary.
- Materials include guidance for teachers on how to scaffold and support students' development and use of academic mathematical vocabulary in context.

Partially Meets 2/4

The materials support students in the development and use of mathematical language. The materials include embedded opportunities to develop and strengthen mathematical vocabulary and allow students to use vocabulary in context. However, there is little evidence that includes guidance for teachers to scaffold and support students' vocabulary development and use. The supports are noted to be utilized for English Learners (ELs), and there are many opportunities for teachers to extend or scaffold; however, these are not explicitly stated in the Teacher's Edition (TE).

Evidence includes but is not limited to:

Throughout all modules, the unit overviews highlight the mathematical vocabulary developed within the unit and the vocabulary revisited from prior modules and prior grades. Every page includes a "Vocabulary Builder" and "Vocabulary Reader" section. Vocabulary Builder includes review words on a yellow stick-on note and "preview words" in the margin of the TE; in the student edition, the vocabulary words are highlighted. Each module within the unit also includes a vocabulary section, which can be accessed through the multimedia "eGlossary" in the "Go Digit" resources. There is also a "Learning Task" section in the TE that guides teachers in facilitating discussions about mathematical vocabulary students will be using in the lesson. Every module begins with a "Lesson Opener," which is a short video introducing students to the concept and the "Essential Question" of the lesson. The Opener provides students the opportunity to listen to math vocabulary in context. The materials include or encourage classroom routines to support language development and the use of academic vocabulary. The "Texas Math ELL Activity Guide TE Grade K-2," although designed particularly for ELs, contains guidance and activities to implement for vocabulary development. The resource activities are designed to help children acquire math vocabulary and the language and writing skills necessary to communicate and understand math concepts. The instructional strategies include

drawing, describing, identifying of relationships, exploring content, defining, rephrasing, and language modeling. Within the guide, the "Vocabulary Chart" is designed to help students understand math terms related to numbers and operations. The terms are organized by grade level, so teachers can find vocabulary that applies to their children. Materials instruct teachers to use kindergarten vocabulary for first grade, and kindergarten and first grade vocabulary for second grade. The guide also provides teacher tips; for example, in the kindergarten section, materials remind teachers that the terms *tens* and *ones* as place value can be confusing, and that children can also confuse *one* and *won* when these words are spoken.

Throughout all modules, within the lessons, there is no evidence of classroom routines to support language development and use of academic vocabulary; however, the materials do build from student informal language to formal language by making explicit connections. The section "Supporting Mathematical Processes Through Questioning" included in the "Mathematical Process Standards" component of the TE has sample sentence frames and questions that directly correlate with the process standards of the TEKS. Every module includes a "Literacy and Mathematics" section that encourages students to write about math concepts; however, it does not explicitly direct students to include academic vocabulary. The materials provide some repeated opportunities for students to listen, speak, read, and write using mathematical vocabulary within and across lessons. These opportunities are mainly found in the unit introductions; they also can be found in the "ELL Differentiated Instruction" through the modules and lessons. However, there is no specific scaffolding for all learners.

In Module 2, in the "Greater Than" lesson, the vocabulary is *is greater than* >. Materials strategically match the vocabulary to the lessons in order to develop students' mathematical vocabulary. In the EL section, students demonstrate their understanding by rephrasing what they have heard; they then rephrase the steps to find the greater number in their own words. In the general lesson, in the "Model and Draw" section, students read the expression together with the teacher ("2 tens are more than 1 ten. 25 is greater than 17, 25 > 17"). Throughout the student edition in this lesson, "... is greater than ..." is written above "... > ..." so the students have opportunities to write it and read it as well. There are other instances further on in the lesson where they write and repeat the new vocabulary word. Materials use the vocabulary within the context of the mathematical tasks throughout the lessons and require students to communicate mathematical ideas.

In Modules 6–9, during the "Unit Overview," the students complete the vocabulary activities on the page by working alone or with partners. Also in the overview, through the "Visualize It" section of the lesson, the teacher is to discuss the headings in the chart and help children understand how to mark their answers. Children decide which words they know, which words they may have heard but do not fully understand, and which words are new and they need to learn. After they complete this section of the page, "Understand Vocabulary" discusses the concepts of subtraction with students. "Vocabulary Preview" previews with children the words that will be used in this unit: *count back*, *count on*, *doubles*, *doubles plus one*, *doubles minus one*, *make a ten*, *cent*, *penny*, *nickel*, *dime*, and *quarter*. Students try to give the meaning on

their own; if they have difficulty, the teacher helps them determine the meaning by giving them a sentence with the word used in context.

In Module 7, the "Math Reader," *Miss Bumble's Garden* focuses on subtraction strategies. The essential vocabulary words are *how many left* and *count back*. Students have the opportunity to discuss and write their answers to the questions included at the end of each reader.

In Module 8, the "Math Talk" question is "How did you solve this problem? Explain your strategy." In the margins of the TE, materials direct teachers to remind students to speak in complete sentences and include mathematical vocabulary in their responses. Students also have the opportunity to speak using math vocabulary in the Math Talk section included in each module.

Early in Module 18, materials introduce the vocabulary words *hour hand* and *minute hand*; they are revisited in subsequent lessons. The words are used in the "Engage" portion, in the Lesson Opener, and in "Making Connections;" students share what they know about time to the hour and half hour. Questions include "What does it mean when the longer hand is on the 6?" "Do you know any other ways to say half-past nine? What are they?" Students proceed to identify and manipulate an hour hand and read time to the hour and half hour to help solidify understanding.

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2.7 Materials provide opportunities for students to apply mathematical knowledge and skills to solve problems in new and varied contexts, including problems arising in everyday life, society, and the workplace.

- Materials include opportunities for students to integrate knowledge and skills together to successfully problem solve and use mathematics efficiently in real-world problems.
- Materials provide students opportunities to analyze data through real-world contexts.

Meets 4/4

The materials provide opportunities for students to apply mathematical knowledge and skills to solve problems in new and varied contexts, including those arising in everyday life and society. Resources include options for students to integrate knowledge and skills together to problem solve and use mathematics efficiently in real-world problems; students have opportunities to analyze data through real-world contexts.

Evidence includes but is not limited to:

Throughout all modules, the materials provide opportunities for students to solve real-world problems in a variety of contexts. Students also have opportunities to apply their knowledge and skills from multiple units and previous grade levels in problem-solving tasks. The materials provide performance tasks that require students to integrate knowledge and skills from multiple focal areas of mathematics to successfully find a solution. The “Explore” section, which begins each student edition lesson, is usually a real-world word problem; the teacher introduces it, and the students listen and act on the information. The materials provide opportunities for students to analyze data using real-world contexts; lessons require students to compare and contrast as well as expose them to graphing data.

In Module 1, a story problem asks how many cubes a student has and how she could arrange them to show one set of ten. This is something students can connect with; the problem on the student edition page also shows spaces for cubes to practice solving. In another problem in this lesson, students solve how many flowers are in a garden; this could also be a familiar topic, given that a plant's life cycle is part of the first grade TEKS. These real-world contexts are developmentally appropriate; they are based on what students are learning in class.

In Module 5, students solve the following problem: “There are 9 brown dogs. There are 5 water bowls. How many more dogs need a bowl?” In this real-world problem, students compare the number of dogs to the number of water bowls to find how many more they need.

In Module 9, students draw and count coins to show how much school supplies cost at a store. Later in the module, students have the opportunity to create and explore money in their own school store through the “Grab-and-Go” center activities. In Module 20, students solve real-world financial literacy problems; they determine whether to save money or spend money, and needs versus wants when given pictures of food and toys. Students are asked about ways they can earn money. The lesson then progresses to show monetary amounts in various ways, discuss ways to generate income within the society, and discuss how to estimate potential income and expenses as beginning steps to budgeting. The STEM resource contains curricular connections to other subjects and activities that are of interest and relevance to students in solving real-world problems.

In Module 11, students model addition through algebraic reasoning. In order to be able to solve addition word problems by making a model, students must understand the basics of addition. Modules 4, 6, and 8 cover addition and addition strategies.

In Module 19, students complete and interpret “favorite color” graphs and “favorite activity” graphs. Later in the module, students make a graph using real objects, read a book to learn how to gather and compare data by making tally tables and graphs, and make a picture graph using the ready-made “Grab-and-Go” differentiated centers kit. In this module, students are asked questions such as “What information does the picture graph show?” and “What is one thing you learned from this graph?”

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2.8 Materials are supported by research on how students develop mathematical understandings.

- Materials include cited research throughout the curriculum that supports the design of teacher and student resources.
- Materials provide research-based guidance for instruction that enriches educator understanding of mathematical concepts and the validity of the recommended approach.
- Cited research is current, academic, relevant to skill development in mathematics, and applicable to Texas-specific context and demographics.
- A bibliography is present.

Partially Meets 2/4

The materials are supported by research on how students develop mathematical understanding. Materials include cited research throughout the curriculum that supports the design of teacher and student resources; however, materials do not provide research-based guidance for instruction that enriches educators' understanding of mathematical concepts and the validity of the recommended approach. The research is not cited throughout the materials; it only appears in the introduction or "Professional Development" section of the Teacher Edition (TE). Best practices, as articulated in the research, are implemented within lessons through the lesson design, questions, inclusion of process standards, etc. Cited research is current, academic, and relevant to skill development in mathematics. Cited research is not specific to Texas context or demographics. A list of resources is referenced on the TEKS correlation pages, but there is not a formal bibliography.

Evidence includes but is not limited to:

Throughout the year, every module follows the 5E lesson plan model ("Engage, Explore, Explain, Elaborate, Evaluate"); however, cited research does not mention this lesson plan model or the effectiveness of its use. Cited research does mention other components of the materials, specifically those focusing on the problem-solving standards: "Students engage in these problem-solving activities when they use a structured plan such as the 'Problem-Solving MathBoard' to solve problems. This offers a consistent approach to unlocking problems that builds success. This is important because understanding is a result of solving problems and

reflecting on the thinking done to solve the problems" (Lambdin, 2003). The "Math Talk" and "Go Deeper" features provide opportunities for students to communicate their mathematical ideas. Research indicates: "Teachers should promote discourse among students and have students make conjectures and explain their work" (Kline 2008). The materials reference seven research studies; this research is only referenced on two pages of the TE (in the front): the "Texas Essential Knowledge and Skills for Mathematics" page and the "Mathematical Process Standards" page. Additionally, the materials do not provide research-based guidance for instruction that enriches an educator's understanding of the concepts. The materials provide some research-based guidance for instruction that enriches educator understanding of the validity of the publisher's recommended approach with sufficient references. The Professional Development component of the TE includes research to support the approach to the integration of mathematical process standards. There is a lack of guidance throughout the materials to enrich teacher understanding of the "why," and the vertical alignment piece is missing.

In Module 7, the higher-order thinking skills (HOTS) question is: "Ten frogs are in the tree. Three more frogs jump into the tree. Then four frogs jump out of the tree. How many frogs are in the tree now?" The TE explains that students will be guided through an interactive solution of this type of HOTS problem in the "Math on the Spot" video tutor; the TE also states that, with these videos and the HOTS problems, children will build skills needed in the Texas assessment. The Mathematical Process Standards page also references the "Math on the Spot" videos, which develop and reinforce problem-solving skills and techniques by demonstrating the solution to a HOTS problem for each lesson.

In Module 8 (and all modules), "Communication" is embedded in the lessons. Research cited in the materials states that representing problems in different ways is a useful tool for building understanding and communicating mathematical ideas (NCTM, 2000). Students use manipulatives, drawings, diagrams, graphs, and the number line; these tools help students unpack problems and make sense of the mathematics. One lesson has students use a MathBoard and two-color counters to model and draw, showing "ways to solve multi-step problems;" this is a precursor to solving more complex multi-step problems involving mixed operations. As part of a problem-solving strategy, students communicate and describe how the information in the model would change if the problem changed.

In Module 19, during lessons, students respond to questions on the steps necessary to solve a real-world problem and to create a bar graph to represent the information. Materials encourage teachers to have students explain their understanding of how to represent and interpret the data. Research by the National Council of Teachers of Mathematics (2000), in "Principles and Standards for School Mathematics," states the importance of teachers promoting mathematical discourse to promote a deeper understanding of content.

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3.A.1 Materials develop student ability to use and apply a problem-solving model.

- Materials guide students in developing and practicing the use of a problem-solving model that is transferable across problem types and grounded in the TEKS.
- Materials prompt students to apply a transferrable problem-solving model.
- Materials provide guidance to prompt students to reflect on their approach to problem solving.
- Materials provide guidance for teachers to support student reflection of approach to problem solving.

Meets 4/4

The materials develop students' ability to use and apply a problem-solving model. Materials guide students in developing and practicing the use of a model that is transferable across problem types and grounded in the TEKS; the materials prompt students to apply the model and provide guidance to prompt students to reflect on their approach to problem-solving. The materials guide teachers to support students in their reflection on their approach to problem-solving. The problem-solving model does not include a section for students to reflect on their approach; materials mostly guide students to solve the problems in one way. Materials guide students to reflect on their problem-solving process through teacher questioning and prompts.

Evidence includes but is not limited to:

Throughout all modules, "Math on the Spot" videos found for each lesson support the development and practice of a consistent problem-solving model across topics and problem-types. Each video models think-aloud processes for problem-solving in every lesson. Early in the year, the materials introduce a problem-solving model that is used throughout every module and with various concepts in first grade, such as number and operations, addition and subtraction, algebraic reasoning, geometry and measurement, data analysis, and financial literacy. Students begin making connections early, as they "unlock" the problem (analyze given information), "try another problem" (formulate a plan or strategy), "share and show" (determine and justify a solution), and are finally evaluated on the problem to determine reasonableness. This is the format used in kindergarten "Problem Solving" lessons, so students

are familiar with it. Each module throughout first grade contains at least one lesson geared towards problem-solving. The materials include a problem-solving model grounded in the Mathematical Process Standards of the TEKS. The problem-solving model includes a "Read" section, where students analyze given information; a "Plan" section, where students formulate a plan or strategy; and a "Solve" section, where students determine a solution; students finally justify the solution via teacher prompting. The materials help students engage with the TEKS; they begin with context-based situations and build to more abstract problems. Students use models, manipulatives, quick pictures, and symbols to build mathematical understandings. The materials provide prompts within the Teacher Edition (TE) to support student reflection on their approach to problem-solving.

In Module 1, a lesson begins with students brainstorming different ways to show numbers. The teacher models the digital lesson to the whole group; students use counters or blocks to model the number of trucks in the sandbox and explain what they think about the way the trucks are grouped. Students state if they would change the way the trucks are grouped and explain their answers. Then the students are directed back to the "Learning Task," where they show numbers in different ways. Teachers guide students to explain how they show numbers in different ways; the teacher asks questions such as "Is there more than one correct way to show a number? Explain your thinking." "Are there more ways to show some numbers than other numbers? Why?" Students then try another problem and use a graphic organizer and base-ten blocks to model how to solve it. Students share their process with their peers. Materials encourage the teacher to use "Math Talk" to focus on student understanding of why different representations can still show the same number. Finally, students are evaluated in the problem-solving process and answer the "Essential Question:" "How can making a model help you show a number in different ways?

In Module 2, "Model and Draw," in the "Explain" section of the TE, states: "Work through the two parts of the model with children. Have children show the numbers with base-ten blocks. Review the terms greater than and less than. If 24 is greater than an unknown number, the unknown number is less than 24." Materials show the base-ten blocks to be used as a tool in the student edition, where students can follow along and solve their work. The student edition prompts students to use the specific problem-solving tools that they receive in their lessons. For example, in the homework section, materials direct students to use base-ten blocks to solve the problem since this was the tool used in earlier parts of the lesson with support from the teacher.

In Module 3, students receive the following problem: "Kelly gets six new toy cars. He already has twenty toy cars. How many does he have now?" The materials provide a problem-solving graphic organizer broken into three sections. The first section, "Read," asks the students to list "What information am I given?" with the following sentences to complete: "Kelly has ... cars. He gets ... more cars." The next section, "Plan," asks students, "What is my plan or strategy?" Students complete the sentence stem "I can ..." while writing their strategy to solve this problem. The third and final section, "Solve," asks students, "Show how to solve the problem;"

students must use the strategy or plan they listed in “Plan.” Students then receive another problem, and the materials provide guiding questions to guide students through solving it. Materials use the same model in Module 9, with the following problem: “Blake has 10 pennies. He counts the pennies by twos. What is the total value of the coins?” The Read section asks, “What information am I given?” Sentences to fill in are “Blake has ... pennies. Blake counts the pennies by ….” The Plan section asks, “What is my plan or strategy?” The sentence stem is “I can ... the problem.” The Solve section asks students, “Show how you solve the problem.” Pennies are already drawn with lines for the students to fill in as they count by twos to ten. The materials guide the teacher as the students work through the problem; materials suggest students should use pennies to act out the problem and arrange the pennies into groups of twos. The materials also state: “To focus on the solution process, ask volunteers to count a larger group of pennies by twos,” allowing students to practice the strategy of counting by twos to a variety of numbers using pennies.

In Module 7, the teacher asks, “How did you use counters and ten-frames to act out the problem, and how did you record your solution strategy?” This problem-solving model lacks the “evaluating the problem-solving process and the reasonableness of the solution” component of the TEKS problem-solving process. The words *evaluate* and *justify* are not mentioned anywhere in the student materials, only in the TE on the “Mathematical Process Standards” page. This page states that “‘Math Talk’ and ‘Go Deeper’ features in the materials provide opportunities for students to communicate their mathematical ideas. When students explain and justify their conjectures and ideas, they apply TEKS Process Skills that require students to, ‘display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.’” However, not all modules or lessons contain this “Go Deeper” section. The materials include a “math board” with the same problem-solving components (Read, Plan, Solve) to use when solving any story problem throughout each module. The TE reminds teachers, “Children should use their math boards to show their solutions to these problems.” These math boards do not include a “justify” or “evaluate” section.

In Module 11, modeling subtraction, the characters in a video walk through a problem with a part-part-whole model; the teacher guides students to come up with their own story for the given problem. These videos are consistently present in each lesson, which provides students the opportunity to build problem-solving proficiency and confidence. At the end of each lesson in the interactive student edition, students have problem-solving opportunities with the “Personal Math Trainer,” which allows them to solve problems as a class and independently. If students get stuck, there is a button to press that gives the students the option to see a step-by-step process for solving the problem.

In Module 15, students are given the following problem: “Emma wants to draw an object for this riddle. I am a toy. I have only a curved surface.” The problem-solving graphic organizer and the teacher guidance ask, “What information am I given?” In the Read section, materials give a sentence stem: “The object is a ... with only a ... surface.” In the Plan section, students must answer the question “What is my plan or strategy?” using the sentence stem “I can ….” In the

Solve section, students are prompted: “Show how you solve the problem.” The prompts found in the problem-solving graphic organizer can be found throughout most modules.

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3.A.2 Materials provide opportunities for students to select appropriate tools for the task, concept development, and grade.

- Materials provide opportunities for students to select and use real objects, manipulatives, representations, and algorithms as appropriate for the stage of concept development, grade, and task.
- Materials provide opportunities for students to select and use technology (e.g., calculator, graphing program, virtual tools) as appropriate for the concept development and grade.
- Materials provide teacher guidance on tools that are appropriate and efficient for the task.

Meets 4/4

The materials provide opportunities for students to select appropriate tools for the task, concept development, and grade. Materials provide opportunities for students to select real objects, manipulatives, representations, and algorithms as appropriate for the state of concept development, grade, and task. Students have the opportunity to select and use grade-appropriate technology; materials guide teachers to use tools that are appropriate and efficient for designated tasks. However, the materials do not provide a "tutorial" or "how-to" in teaching students how to use the iTools.

Evidence includes but is not limited to:

Throughout the materials, materials introduce students to a variety of tools and strategies that are age-appropriate; children have opportunities to choose and explore these tools. In first grade, students may have experience with manipulatives in a learning environment; therefore, many of the lessons expand the scope of the uses of the manipulatives. At the beginning of every unit, a "Materials" section informs teachers about the tool students will use in each lesson. The "Professional Development" portion of the Teacher Edition (TE) states that students need to use tools to be effective problem solvers, as addressed by the third Process Standard (C), which states that students must "select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems." The program also encourages drawing

throughout. The materials state that teachers should be sure tools are available during problem-solving activities. Students need to participate in discussions about the tools they use and how they use them (Jacobs & Kusiak, 2006). This should include talking to each other about how the tools are similar and different; when students engage in these discussions, they learn to select tools that lead to more efficient problem-solving. On the resource page, materials provide "Live Links," which make connections between TEKS and correlating lesson examples within the modules. The "Interactive Student Edition" (ISE) guides students through number concepts and skills that directly correlate with the lessons in each module. In these interactive lessons, students manipulate iTools through a guided video scenario. The videos, called "Math on the Spot," help solve more difficult problems online for every lesson. The iTools do have a quick tutorial in the "Help" section for each virtual manipulative. Math on the Spot and ISE videos are easy to follow, but students will require teacher or parent guidance and assistance to use them.

Throughout the modules, first grade lessons are focused on transitioning along the "Concrete, Pictorial, Abstract" (CPA) continuum; as the modules progress, materials guide students from concrete manipulatives to abstract representations and algorithms. Materials introduce place value through connecting cubes, then transition to base-ten blocks, and then to pictures of base-ten blocks. In the first lesson of Module 1, the materials reintroduce tools from kindergarten: base-ten blocks, connecting cubes, and a "MathBoard." As students explore greater quantities, compare numbers, and add and subtract numbers, they continue to use base-ten blocks, connecting cubes, and the MathBoard, but they may also use other manipulatives, such as two-color counters and ten-frame work mats. Then, as they progress through the lessons in the modules, students transition to drawing pictures and making their own models for solving problems. Students have opportunities to use iTools such as counters, number lines, number charts, and place value drawings to help them understand the concepts of addition and subtraction. In the modules focused on solving addition and subtraction problems, Modules 3–8 and 11–13, the materials show evidence of using two manipulative types: red and yellow counters and connecting cubes. Six out of the nine modules focused on addition and subtraction use connecting cubes, and three out of the nine use the red and yellow counters.

In Module 2, the TE states: "You can use the digital lesson opener as a whole-class activity. You can pause at any point to have a discussion. How do children use cubes to model the numbers shown in the problem? Discuss the models with the children. How do they compare? Children will have the opportunity to return to the opening scenario and answer the question in the Daily Assessment Task."

In Module 3, in a lesson on addition to 10, students first represent problems using two-color tiles and ten-frames; then, they are guided to use the ten-frames with number sentences and draw their own pictures to represent the problem. By the end of the module, students work with number sentences only, no models or picture representations. However, materials still provide the opportunity to use the representations as a scaffold and support, as needed.

In Module 4, a lesson utilizes connecting cubes in helping a student to understand and model "adding to." Questions and teacher guidance embedded within this lesson portray why the connecting cubes are effective for the task. The question "How can you use connecting cubes to model the problem?" helps emphasize the purpose of the tool. The "Math Talk" component of the lesson has students focus on how manipulatives can be used to show one group of objects added to another. Volunteers tell how they solved the problem. The "Elaborate" portion of the lesson has students draw a picture illustrating their own addition stories. Students take turns displaying their pictures and telling the story, while the rest of the class uses cubes or counters to model the problem. Children may draw on their MathBoards to show the addition and display their solution to the class. This use of tools helps students model adding to, or joining to, a group.

In Module 6, students choose two methods to solve a problem and record each way in the workspace on the page. Teachers encourage students to use words or pictures to communicate their ideas. Volunteers then share the strategies they used. After, teachers ask students what strategies they used to solve "4 + 3." Included possible answers are to model with cubes or counters, count on, doubles minus 1, and doubles plus 1. At the beginning of this module, the tools used are MathBoards, connecting cubes or two-color counters, blue and red connecting cubes, and crayons.

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3.A.3 Materials provide opportunities for students to select appropriate strategies for the work, concept development, and grade.

- Materials prompt students to select a technique (mental math, estimation, number sense, generalization, or abstraction) as appropriate for the grade-level and the given task.
- Materials support teachers in understanding the appropriate strategies that could be applied and how to guide students to more efficient strategies.
- Materials provide opportunities for students to solve problems using multiple appropriate strategies.

Meets 4/4

The materials include opportunities for students to select appropriate strategies for the work, concept development, and grade. Materials prompt students to select a technique and provide opportunities for them to solve problems using multiple strategies. The resources support teachers in understanding the strategies that could be applied and guide students to utilize more efficient choices.

Evidence includes but is not limited to:

Throughout all modules, the materials include prompts that require students to select a technique for solving a task; a majority of the strategies taught in first grade are the use of manipulatives, acting out, and drawing. “Share and Show” in the “Explain” portion of lessons also gives students opportunities to select their method of problem-solving with teacher guidance and support appropriate to the grade level. The prerequisite skills that students need to know before learning each particular lesson are available in each unit’s “Vocabulary Ready” section. By understanding these prerequisite skills, teachers can understand which strategies are appropriate for solving a task. In the Teacher Edition (TE), many prompts throughout the lessons guide teachers to distribute information. These prompts also help explain to teachers why a strategy might be more useful than another. Each lesson within each first grade module has sample “acceptable” student responses to questions and directions embedded throughout the lesson cycle; these help the teacher understand appropriate strategies. Although the materials provide scripted lessons and suggested activities, the materials do not provide

detailed or specific explanations to help teachers guide students to use more efficient strategies.

On the "Mathematical Process Standards" page, at the front of the TE, there are teacher prompts to guide students to reflect on their strategies. Some prompts include, "What can you do if you don't know how to solve a problem? Have you solved a problem similar to this one? How do you know your answer makes sense? Why did you decide to use…? How do you know your answer is reasonable? Will that method always work? How do you know? What do you think will happen if…?" These types of questions are also included further in the TE; for example, in Module 7, teachers ask students, "How can acting out a problem help you solve the problem?"

In Module 1, a "Think" bubble in the Student Edition prompts students to understand that 10 ones and 3 ones is the same as 1 ten and 3 ones. This is to aid students in their mental math, number sense, and abstraction. As they solve the problems in the lesson, students use manipulatives, but they are also working on understanding how 10 ones is the same as 1 ten.

In Modules 3–8 and 11–13, the addition and subtraction modules, students solve problems using multiple appropriate strategies; for example, they model problems with counters or two-color tiles, use ten-frames to represent and solve problems, and/or draw pictures to represent and solve the problems. Students solve problems using different strategies and explain their thinking. For example, in Module 8 in the "Math Talk" section, students are encouraged to explain the strategy they used to solve the multi-step problem and discuss another way to solve the problem.

In Module 4, "Addition Concepts," students learn multiple strategies for addition, such as to use pictures, model, add zero, add in any order, and make 10. In Module 6, "Addition Strategies," students learn strategies to count on, add doubles, use doubles to add, doubles plus/minus 1, and make 10. Students then use these strategies when problem-solving. For example, in a Module 6 lesson, a problem states: "Think of different addition strategies. How can you show two ways to solve 4 + 3?" Students choose two different strategies to solve. The materials guide teachers to ask students to discuss how and why they choose those strategies to solve the problem.

In Module 6, students use counters or a ten-frame and select a method (make a 10 to add, model, and/or draw) to work through problems involving adding. Students have had experiences with these manipulatives and techniques (make a model and draw) in previous lessons. The materials explain that students may benefit from modeling the problem with counters on the ten-frame before drawing on the page. Students can add in any order and have the option to use crayons to draw their model on the top ten-frame on the page. Students have the option to model the problem with counters and a ten-frame and/or use their "MathBoards" to show their solutions in determining sums greater than ten. Students practice this skill again

in the “Go Deeper” section within the “Elaborate” portion of the lesson, but they also have the option to make a ten without using counters or a ten-frame (a form of mental math). Students reflect on the process, answering questions such as “When you are making ten to add, what kinds of facts do you need to use?” and “How can you make a ten to help you add?“ Student answers may vary since students had choices in their materials and techniques.

In Module 9, the teacher asks, “How did you use the pennies to act out the problem?” A provided possible answer is “I put ten pennies into groups of twos then counted the value of each group of pennies by twos. There are five groups of two pennies.” The teacher also asks, “How did you record your solution strategy?” A potential reply is, “ I wrote the value of the pennies as I counted by twos until I got to 10¢.” The teacher asks, “How did you draw a different way to show the value of ten pennies?” A possible answer is, “I know the value of ten pennies is 10¢. I can draw a dime because it has the same value as ten pennies.” The culminating question in this lesson is, “How can acting out a problem help you solve the problem?” A possible answer: “I can use coins to act out a problem to show the value of coins in a different way.”

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3.A.4 Materials develop students' self-efficacy and mathematical identity by providing opportunities to share strategies and approach to tasks.

- Materials support students to see themselves as mathematical thinkers who can learn from solving problems, make sense of mathematics, and productively struggle.
- Materials support students in understanding that there can be multiple ways to solve problems and complete tasks.
- Materials support and guide teachers in facilitating the sharing of students' approaches to problem solving.

Meets 4/4

The provided materials develop students' self-efficacy and mathematical identity by providing opportunities to share strategies and approaches to tasks. Materials support students to see themselves and mathematical thinkers who can learn from solving problems, making sense of mathematics, and productively struggling; the resources support students in understanding that there can be multiple ways to solve problems and complete tasks. The materials support and guide teachers in facilitating the sharing of students' approaches to problem solving.

Evidence includes but is not limited to:

Throughout all modules, the materials present mathematics as a field of study focused on developing efficient and generalizable ways for solving problems, not as a set of procedures to memorize; students are at the center of problem-solving. The "Professional Development" portion of the Teacher Edition (TE) maintains that to engage in problem-solving, students must be provided with problems for which a pathway toward a solution is not immediately evident. When students need to find a pathway, they may refer back to the context of the problem to make sense of how to solve it. Through the lesson structure in each lesson, teachers are able to guide students through higher-order thinking processes. When students get questions wrong, the TE prompts the teacher to ask additional questions or provide additional support in a different way to help students engage and grow by making sense of mathematics. The "Essential Questions" posed in each lesson foster a community of thinkers and support the

engagement of mathematical thinking as many of the questions are open-ended. The materials scaffold learning from simple- to higher-rigor problems as the lesson progresses, allowing students to feel success as they develop their critical thinking skills. The materials provide supports for all learners to participate and engage as mathematical thinkers; there are supports for English Learners (ELs) in each module and in the "ELL Activity Guide;" supports for below-level learners in the "RTI Tier 1, 2, and 3 Guides;" and supports for above-level learners in the "Enrich" section of each module as well as in the "Enrich Guide." There is also a "Common Errors" section in every lesson, which helps the teacher guide students who may be struggling, get them back on track, and help them solve problems. Materials provide tasks that allow for multiple pathways to a solution. Students are able to see these pathways through whole group and small group discussion as prompted in the TE.

In Module 1, teachers ask students to think about different ways that they can show numbers: "How can you show the number 10 using base-ten blocks? Is there another way to show 10? How many ways are there?" Then in "Using the Digital Lesson," materials prompt: "Have children use counters or blocks to model the number of trucks in the sandbox. Ask children what they think about the way the trucks are grouped. Ask them if they would change the way the trucks are grouped. Have them explain their answers." In the "Learning Task," materials prompt: "Ask children questions such as the following to help them show numbers in different ways. Is there more than one correct way to show a number? (Yes) Explain your thinking. (Sometimes, you can group a number in different ways.) Are there more ways to show some numbers than other numbers? Why? (Yes. There are more ways to make groups with greater numbers.)" Through this sequence of questioning, discussion guidance, and teacher facilitation, students are able to talk about different ways to solve a problem and different solutions to a given problem with teacher support.

In a Module 4 lesson, a "Math Talk" bubble asks students, "How do you know you showed all the ways?" after they complete the first problem in that lesson. In the same lesson, materials suggest the "Describe" strategy for ELs: Students can "practice their comprehension by describing in words what they have seen" as they solve or model the problems, allowing for math discourse to take place.

In Modules 6 and 19, "Math on the Spot" videos show characters of both genders who are successful in mathematics. In Module 6, Mrs. Sandoval teaches Jeannie how to solve a subtraction problem. In Module 19, Prof. Berger teaches Jeannie to make bar graphs.

In Module 10, one of the Essential Questions is, "How can you identify numbers that are 10 less or 10 more than a number?" Students explain how they would apply strategies or techniques in their own way. Also in this lesson, students are challenged to determine solutions using varied methods (base-ten blocks, drawing, models, mental math) and then share/justify their answers with the class.

In Module 11, materials show students a bar model (part-part-whole model) to help them model and solve subtraction problems. A Common Error is that students may incorrectly write the whole. Materials direct teachers to “Springboard to Learning” by reading the problem again. They state: “Identify the two parts in the model. Explain that the two parts equal the whole. Have them write the whole in the model and in the number sentence.”

STEM activities and extensions show the connection between mathematical skills and the real world. Students can “see” themselves as “doers” and “thinkers” when solving problems and completing related activities included in the STEM resources. For example, a first grade STEM lesson connects math skills to the concept of “Lunar Calendar/Moon Phases” through leveled activities entailing calendar analysis and interpretation, shadow puppets (Social Studies/Art), night sky scratchboard pictures (Art), and shadow tag (Physical Education).

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3.B.1 Materials prompt students to effectively communicate mathematical ideas, reasoning, and their implications using multiple representations.

- Materials provide students opportunity to communicate mathematical ideas and solve problems using multiple representations, as appropriate for the task.
- Materials guide teachers in prompting students to communicate mathematical ideas and reasoning in multiple representations, including writing and the use of mathematical vocabulary, as appropriate for the task.

Meets 4/4

The materials include prompts for students to effectively communicate mathematical ideas, reasoning, and their implications using multiple representations. The opportunities are task appropriate for students. Materials guide teachers in prompting students to communicate in multiple modalities, including writing and using mathematical vocabulary.

Evidence includes but is not limited to:

The “Professional Development” component of the Teacher Edition (TE) states that, throughout all modules, students need to engage in productive discussions about representations of problems and to present problems and their solutions. In the TE, the “Supporting Mathematical Processes Through Questioning” section provides question stems that directly correlate with Process Standards: “What operation did you use to represent the situation? Why does that operation represent the situation? What properties did you use to find the answer? How do you know your answer is reasonable?” These embedded questions cue the teacher to help students communicate mathematical ideas. Throughout lessons, prompts and guidance help teachers facilitate discourse in age-appropriate ways. Teachers model and reinforce mathematical language within the lessons; materials also encourage language modeling at home and through the homework assignments. Students can demonstrate their understanding in multiple ways, such as through visual, physical, contextual, verbal, and symbolic representations and within the “5E” lesson model. The unit overviews highlight the mathematical vocabulary developed within the unit and which vocabulary is revisited from prior units and prior grades. Every unit page includes a “Vocabulary Builder” section and a

“Vocabulary Reader” section. Vocabulary Builder includes review words on a yellow sticky note and “preview words” in the margin of the TE.

In Module 1, which involves place value, at the beginning of the unit, students represent numbers by using base-ten blocks and “MathBoards.” As the unit progresses, students are shown pictorial representations of place-value blocks. At the end of the unit, students represent numbers in two different ways by drawing their own base-ten blocks. Throughout the unit, materials provide teacher prompts, such as “Have children use hundreds, tens, and ones to solve the problems and then write or draw on their MathBoards to explain their thinking.”

Throughout Modules 3–8 and 11–13, the addition and subtraction units, students solve problems using multiple appropriate strategies, such as modeling problems with counters or two-color tiles, using ten-frames to represent and solve problems, and/or drawing pictures to represent and solve the problems. Students also explain their thinking. For example, in Module 8, in the “Math Talk” section, students explain the strategy they used to solve the multi-step problem and discuss another way to solve the problem.

In a Module 6 lesson on doubles and doubles plus 1, students use connecting cubes and two-sided counters and draw pictures. The lesson also utilizes mental math strategies, which is another way students can communicate mathematical ideas. Students must have an automaticity with their doubles facts in order to understand doubles plus 1. For example, the Student Edition asks students: “Use connecting cubes to add. Solve the doubles fact. Then use doubles plus one or doubles minus one. Circle + or - to show how you solved each one.” The first problem is 2 + 2. Students create two connecting cubes towers with two cubes each and understand that 2 and 2 is 4. Once they know this, they can connect the abstract mathematical idea of 2 + 3 = 5. Students can use connecting cubes to also show their answers as they solve. The homework listed at the end of this lesson does not instruct students to use connecting cubes, assuming that students have mastered the idea of doubles and have been released to do independent work on their own. In the homework listed at the end of each lesson, each student uses pencil to paper to show that they understand what they have learned.

In Module 10, the “Take Home Activity” encourages family discussions about mathematical reasoning: “Write a two-digit number, such as 25, 40, or 81. Ask your child to identify the numbers that are ten less than and ten more than that number. Repeat with other numbers.” In the same lesson, teacher question prompts ask the class or small groups to share how they can find 10 more or 10 less than a given number. The “Puddle Hopping” game found in the “Grab-and-Go” activities for this lesson requires students to work in small groups to name and discuss 10 more and 10 less than a number.

In Module 14, students share and discuss mathematical ideas and representations using visual, physical, verbal, and symbolic representations. The lesson challenges students to problem solve and use various methods to combine two-dimensional shapes to create new shapes. Students

verbally communicate how shapes are alike and different, manipulate attribute shape blocks, draw shapes, and use symbolic shape representations in determining the constitution of new shapes and the shapes that will “fit.” Students verbally communicate the answers to the following questions and expand upon the concept: “How many different ways can you combine the rectangles to make a new shape? Why are there different ways you can combine two shapes to make a new shape?” Materials prompt the teacher: “Encourage children to use their MathBoards to copy the shapes, combining them in different ways, before circling an answer on the page. They may draw a line showing how the shapes fit. Some children may need to use shapes so that they can physically turn them.” The “Elaborate” component of this lesson has students use visuals in determining what shapes could be used in creating a new figure. Students then visualize how to rotate and slide different shapes to make a new shape and draw lines to show two different ways the new shapes can be made. These tasks illustrate verbal communication within the whole group, with peers, and with the teacher. Students use physical representation when they manipulate pattern blocks to create various combinations of the square, rectangle, and triangle to form new shapes. Students use visual and symbolic representation when they draw shapes in the outline given and visually determine what shapes can be used to comprise a new shape.

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3.B.2 Materials provide opportunities to discuss mathematical ideas to develop and strengthen content knowledge and skills.

- Materials provide opportunities for students to engage in mathematical discourse in a variety of settings (e.g., whole group, small group, peer-to-peer).
- Materials integrate discussion throughout to support students' development of content knowledge and skills as appropriate for the concept and grade-level.
- Materials guide teachers in structuring and facilitating discussions as appropriate for the concept and grade-level.

Meets 4/4

The materials provide opportunities to discuss mathematical ideas to develop and strengthen content knowledge and skills. Students have opportunities to engage in mathematical discourse in a variety of settings; the materials integrate discussions throughout to support students' development as appropriate for concept and grade level. The resources guide teachers in structuring and facilitating discussions as appropriate for the concept and grade level.

Evidence includes but is not limited to:

Throughout all modules, some lessons encourage mathematical discussions within the whole group, small group, partners, and individual instructional settings. This is fostered throughout the "5E" lesson format as well as in center activities, STEM activities, vocabulary activities, English Learner (EL) activities, and "Enrich" activities. The groupings vary in the lessons depending upon the nature of the skill, concept, and activity. The materials offer little to no guidance for teachers on how to structure discussion that is appropriate for the grade level, but the lessons are scripted and contain questions with answers and/or possible student responses. "Lesson Openers" and the "Share and Show" sections embed small group discussions that can be used for remediation and challenge to help struggling students clarify misconceptions and also to deepen and extend thinking for students who are ready to extend the skills and concepts. Every lesson provides "Differentiated Instruction" in a small group setting, allowing for small group discourse. Every lesson provides "Grab-and-Go" activities for partners or small groups.

The “ELL Activity Guide” for all grade levels provides the following guidance for teachers in working with EL students: “Teachers can provide comprehensible input through the use of gestures, appropriate speech rate, dramatization, visuals, realia, and hands-on activities using manipulatives, charts, repetition, and rephrasing.” Teachers are also guided to encourage student interaction because of the social nature of language learning. Materials state that students need continual opportunities for interaction, both child-to-child and teacher-to-child. Materials instruct teachers to provide ELs with frequent opportunities to interact with native English speakers.

In Module 1, teachers encourage children to think about making groups of tens. Teachers ask, “Why do you think we count to ten? What happens when you count more than ten? What is one way to show ten?” The teacher then models the group of ten differently. Teachers guide students to connect ten cubes into a cube train and draw a representation of their work at the bottom of the page or on their “MathBoards.” Children share their drawings. The teacher asks, “How is this way to make ten different from the first way? How can both of your drawings show 1 ten?” Later, in Module 3, teachers invite students to state what they know about tens and ones. Teachers ask, “How many tens are in this number? How many ones? How can you write this number in expanded form? How can you draw to show the tens and ones in this number?” At the end of the module, students describe their models to a partner.

In Module 2, the “Digital Lesson” section provides the teacher with guidance: “You can use the digital lesson opener as a whole-class activity. You can pause at any point to have a discussion. Have children use cubes to model the numbers shown in the problem. Discuss the models with the children. How do they compare? Children will have the opportunity to return to the opening scenario and answer the question in the first Daily Assessment Task.” In the EL “Language Support” section, the TE guides teachers on a small group strategy: “Children demonstrate their understanding by rephrasing what they have heard.”

In Module 8, students have opportunities for discussion in all phases of concept and skill development. Students model three-digit numbers and draw quick pictures of hundreds, tens, and ones to represent their models. Students then discuss how they represented the number and justify how they know using “Math Talk.” Students then predict other ways to write numbers as the concept of expanded form continues to build. Students work in pairs to build and write three-digit numbers, and then share out with the whole group. Finally, students analyze to conclude if the models of the three-digit numbers match the written and expanded forms.

In Module 11, materials present students with the following problem: “Nicole sees 16 turtles on the beach. Some turtles swim away. There are 9 turtles still on the beach. How many turtles swim away?” The TE provides questions the teacher can ask to guide students on how to solve the problem: “What information are you given?” “What is your plan or strategy?” “How does the picture go with the cube model?” “What is your first step when making a model to solve

this problem?" "What is the next step you model?" "How can the model help you solve the problem?" "How do you know that your answer makes sense?" This line of questioning helps the students connect their understanding while developing their problem-solving skills.

In Module 14, Math Talk states: "Use Math Talk to focus on children's descriptions of how they combine two shapes and use that composite shape to make a new shape." This guides teachers to have students think out loud about the process of composing two-dimensional shapes. In the same lesson, in the "Grab-and-Go" game "On the Water," students practice describing the attributes of 2D shapes to win the game. The game provides specific instructions on how to describe the shapes: "Look at the figure. Tell how many corners. Tell how many straight sides."

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3.B.3 Materials provide opportunities for students to justify mathematical ideas using multiple representations and precise mathematical language.

- Materials provide opportunities for students to construct and present arguments that justify mathematical ideas using multiple representations.
- Materials assist teachers in facilitating students to construct arguments using grade-level appropriate mathematical ideas.

Meets 4/4

The materials allow students to justify mathematical ideas using mathematical representations and precise language. Students are able to construct and present arguments that justify mathematical ideas using multiple representations; teachers assist in facilitating the construction of arguments using grade-level-appropriate ideas and mathematical language. First grade materials provide formal "Math Talks" that aid students in justifying their work and answers.

Evidence includes but is not limited to:

Throughout all modules, there is a write-in Student Edition (SE) for every grade. Students record, represent, solve, and explain as they discover and build new understandings. The Teacher Edition (TE) includes routines and structures that teachers can use to facilitate students' construction of arguments. The "Mathematical Process Standards" at the front of every grade-level TE provide the following question prompts for teachers: "Will that method always work? How do you know? What do you think about what she said? What do you think will happen if …? When would that not be true? Why do you agree/disagree with what he said? What do you want to ask her about that method? Why did you decide to use …?"

In Module 1, part of the place value unit, students represent numbers by using base-ten blocks and "MathBoards." Students use connecting cubes in a ten-frame to represent ten ones. Then they represent ten another way, using the cubes or drawing a picture. Students justify their representations by answering the following questions: "How is this way to make ten different from the first way? How can both of your drawings show one ten?"

In Module 4, the teacher facilitates students' construction of arguments. Materials instruct: "Guide children through the model by asking questions and connecting their answers to the number sentences shown." Students then tell a friend how they know there are seven counters. Later in this lesson, the TE directs the teacher to have students show all the ways to compose ten. To extend their thinking, following TE recommendations, the teacher draws a row of ten flowers or other simple objects on the board; the teacher tapes a string in different positions in the row to show the number pairs for ten; students work their way across the board until they have shown every way to make ten; the teacher points out that when they count the number of counters, the last number said tells the number of counters; students then share their answers and discuss their findings with peers.

In Module 5, teachers ask, "'How is finding fewer like finding more?' Possible answer: 'I compare two groups by matching one-to-one. The leftovers are the difference.'" Students can answer this question and justify their reasoning through the pictorial representations in the SE. The "Share and Show" section of this lesson instructs: "Children should use their MathBoards to show their solutions to these problems;" students therefore use another representation. In the "Enrich" section of this lesson, students use numeral cards to create a comparison story problem and then justify their mathematical ideas; the story has to make sense if they are to tell it to the class or post it on the bulletin board. The "Learning Task" in the introduction states: "Guide the children in a discussion about the problem they are going to solve. What are you asked to find? (how many fewer shovels there are) What two objects are you comparing in the picture? (the buckets and the shovels) How many buckets are in the sandbox? (six buckets) How many shovels are there? (four shovels) What are some tools you can use to help you when you are comparing numbers of objects? (counters, cubes, or pictures)."

In Module 13, students use cards, models, drawings, symbols, and MathBoards to justify expressions. This lesson uses "Math Talk" to focus on children's understanding of ways to show the same value and the meaning of the equal sign (teachers elicit the response that it means "is the same as"). A student volunteer chooses two cards that have the same value. As the child tells which two cards they are, the teacher draws one card on each side of an equal sign so that the expressions look like the following example: 6 + 1 = 13 - 6. Teachers ask, "What does this mean?" Students answer and justify using their MathBoards to show their solutions to these problems.

In Module 16, students represent multiple ways to show halves. Students must explain if there is more than one way to show halves on a shape. Teachers ask, "How many halves make one whole? Are the halves larger or smaller than the whole? Is a whole larger or smaller than its halves? Explain." Students justify their answers by visualizing and showing multiple ways to separate a rectangle into halves in their student workbooks.

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4.1 Materials include developmentally appropriate diagnostic tools (e.g., formative and summative progress monitoring) and guidance for teachers and students to monitor progress.

- Materials include a variety of diagnostic tools that are developmentally appropriate (e.g., observational, anecdotal, formal).
- Materials provide guidance to ensure consistent and accurate administration of diagnostic tools.
- Materials include tools for students to track their own progress and growth.
- Materials include diagnostic tools to measure all content and process skills for the grade level, as outlined in the TEKS and Mathematical Process Standards.

Meets 2/2

The materials include developmentally appropriate diagnostic tools and guidance for teachers and students to monitor progress. Materials include various tools such as anecdotal and formal tools and provide teachers with guidance to ensure consistent and accurate administration of the tools. However, there is little evidence of students monitoring their own progress and growth. Diagnostic tools measure all content and process skills as outlined in the TEKS and Mathematical Process Standards.

Evidence includes but is not limited to:

Materials state: “The Prerequisite Skills Inventory in the Assessment Guide should be given at the beginning of the school year or when a new child arrives. The multiple-choice test assesses children’s understanding of prerequisite skills. Test results provide information about the review or intervention that children may need in order to be successful in learning the mathematics related to the TEKS for the grade level. The IRF for the Prerequisite Skills Inventory provides suggestions for intervention based on the child's performance.” Every module across grade levels begins with an “Are You Ready?” pre-assessment that can be found in the “Assessment Guide” for each grade level. The Assessment Guide also includes a “Prerequisite Skills Inventory,” a “Beginning-of-Year Test,” a “Middle-of-Year Test,” an “End-of-Year Test,” and Module and Unit Tests. These Module and Unit Tests are also found in the Teacher Edition (TE) and Student Edition (SE) across grade levels. The materials include an “Online Assessment System,” which offers flexibility to individualize assessment for each child. Teachers can assign entire tests from the Assessment Guide or build customized tests from a bank of items. For

customized tests, teachers can select specific TEKS to test. Multiple-choice and fill-in-the-blank items are automatically scored by the Online Assessment System; this provides immediate feedback. Tests may also be printed and administered as paper-and-pencil tests. The same intervention resources are available in the Online Assessment System, as in the Assessment Guide for each grade level.

In all modules, assessments and activities allow students to demonstrate understanding in a variety of ways and settings. Every module and unit assessment across grade levels indicates the TEKS that each question assesses. The materials provide suggestions for tracking progress in the Assessment Guide, which includes "Individual Record Forms" (IRF) for all tests. The IRF for each test also provides correlations to the TEKS. The Prerequisite Skills Inventory includes correlations to the TEKS from prior grade levels to assist teachers in developing plans for additional support. There are routine and systematic progress monitoring opportunities through the "RtI Quick Check," "Problem Solving," "HOT problems," and "Daily Assessment Task" sections found in the TE of every lesson. The materials include recommendations for assessing students with formal progress monitoring measures at least three times during the school year: at the beginning of the year, in the middle of the year, and at the end of the year. This frequency allows teachers to identify who is and is not demonstrating progress.

In the Beginning-of-Year Test, if a student misses item number twenty-eight, the materials indicate that the student most likely missed this item because he/she may think that every shape with four parts shows fourths. The teacher is directed to "Soar to Success Activity 5.05," which correlates with Lesson 16.3 in Module 16 and Process Standard 1.6H. The materials are scripted so teachers have support in what to say and what to ask when administering assessments. Materials provide direct guidance following assessments; teachers have clear guidance on where to go to find support lessons/activities and enrichment activities depending upon if the student needs intervention or extension. The script helps ensure fidelity and consistency in testing administration.

In the "Strategies and Practice for Skills and Facts Fluency" guide for grades K–3, there is a "Practice Minutes Record," in which students log the number of minutes they practice math facts each night in five-minute increments. There is a sheet for 30, 60, 100, and 120 minutes of practicing math facts. There is also a certificate of achievement for each time increment completed. However, there is no guide or check sheet for students to indicate mastery of facts or skills. The materials do not include opportunities for the students to track their progress, and this is the only unit with evidence of students tracking or awareness of their progress.

In each unit (which covers multiple modules), a "Diagnostic Interview Task" evaluates student understanding of each "Show-What-You-Know" skill. The diagnostic chart may be used for intervention on prerequisite skills. The materials list the student materials needed and provide scripted activities for students to perform. This is designed to determine if students need intervention for the unit's prerequisite skills. There is a flow chart for the teacher to use that

outlines the tier, the skill to practice, where to go to obtain the practice lesson/activity, and how to differentiate. Based upon assessment performance, the materials list that the student will either “On-Level Intervention” (for children who are generally at grade level but need early intervention with the lesson concepts); “Strategic Intervention” (for children who need small group instruction to review concepts and skills needed for the unit); “Intensive Intervention” (for children who need one-on-one instruction to build foundational skills for the unit); or “Enrichment” (for children who successfully complete lessons). The materials correlate the scripted lesson activities with the intervention level and indicate where to go within the resources to provide these for students.

In Module 2, an “Essential Question” is “What happens when you add 0 to a number?” (TEKS 1.3D & 1.5G). Students receive the following problem: “One chicken has 0 eggs in her nest. Another chicken has 7 eggs in her nest. How many eggs do the chickens have?” Teacher guidance states that if students missed adding 0 to a number, they should work on Soar to Success and complete “Warm-Up 10.07.”

In Module 3, which involves addition to 10, students first represent problems using two-color tiles and ten-frames; then, teachers guide them to use the ten-frames with number sentences and draw their own pictures to represent the problem. At the end of the module, students only use number sentences, no models or picture representations. However, the opportunity to use them as a scaffold and support is still there as needed. Teachers assess students throughout the lesson via their representations and their verbal responses to questions such as “How can you show joining with counters?”

In Module 7, the RtI Quick Check states: “If a child misses the checked exercise(s), then Differentiate Instruction with RtI Tier 1 Lesson 42. If a student got the assigned questions correct, they can move on to higher-level thinking problems, called HOT problems in the student edition (SE).” The Problem Solving section following the RtI Quick Check states: “If children answered the checked exercise(s) correctly, assign Exercises 4 and 5.” Exercises 4 and 5 are HOT problems in the lesson. This Quick Check after “Share and Show” is strategically placed to allow students the opportunity to understand the lesson whole group and practice whole group, usually with manipulatives and always with pencil and paper, in the SE. Lessons also include a Daily Assessment Task section and a “Test Prep Coach” section. There are also “Common Errors” sections. The Daily Assessment Task section in this lesson states: “Can children use a problem-solving strategy to solve a problem?” If no, materials guide teachers to Soar to Success small group activities; for example, in this lesson, materials guide teachers to Soar to Success “Warm-Up 60.02.” The Test Prep Coach section helps teachers to identify common errors that children can make. In this lesson, it states: “If children selected: 7, or 8, they subtracted incorrectly.”

In Module 20, in a lesson on financial literacy, materials advise teachers to use Are You Ready? to access prior knowledge and the prerequisite skills for this lesson. The RtI Quick Check states: “If a child misses the checked exercise(s), then Differentiate Instruction with RtI Tier 1 Lesson

49." Common Errors guides teachers on possible misconceptions students may have while attempting to master the lesson's concept; for example, "Children may not include all of the coins mentioned in the problem when they find the total. Springboard to Learning: Have children use coins to model the coins mentioned in the problem. Suggest that they count the number of coins mentioned in the problem and then make sure that they have modeled both the correct number and the correct kind of coin." The Daily Assessment Task states: "Can children determine the total value of a group of coins?" If no, it guides teachers to "Soar to Success Math Warm-Up 3.11." If yes, teachers use "Enrich 97, Homework and Practice Lesson 20.4." The Test Prep Coach in the TE also helps teachers identify possible common errors that students can make and provides guidance.

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4.2 Materials include guidance for teachers and administrators to analyze and respond to data from diagnostic tools.

- Materials support teachers with guidance and direction to respond to individual students' needs in all areas of mathematics, based on measures of student progress appropriate to the developmental level.
- Diagnostic tools yield meaningful information for teachers to use when planning instruction and differentiation.
- Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.
- Materials provide guidance for administrators to support teachers in analyzing and responding to data.

Partially Meets 1/2

The materials include guidance for teachers and administrators to analyze and respond to data from diagnostic tools. There are supports, guidance, and directions for teachers to respond to individual students' needs in all areas of mathematics based on the measures. Tools yield meaningful information for teachers to use for planning instruction and differentiation, and materials guide teachers on how to leverage different activities to respond to the data. However, there is no guidance for administrators to support teachers in analyzing or responding to data.

Evidence includes but is not limited to:

Throughout the curriculum, every module across grade levels includes one or two problems for teachers to use as a "Quick Check" to monitor and assess students' needs. If a student misses the Quick Check problems, teachers provide them with differentiated instruction using lessons from the "RtI Guide." There is also a "Data-Driven Decision Making" section in every grade level's Teacher Edition (TE); module and unit assessments guide teachers on next steps for individual and whole class instruction. The lessons within the modules include various opportunities for differentiating instruction in the "RtI Quick Check," "Problem Solving," "HOT Problems," and "Daily Assessment Task" sections. An "Assessment Guide" resource outlines the purpose of the diagnostic assessments, thus supporting understanding. The Assessment Guide includes "Individual Record Forms" (IRF) for all tests. On these forms, each test item is

correlated to the TEKS it assesses; there are intervention resources correlated to each item. "Common Errors" explain why a child may have missed the item. These forms can be used to follow progress throughout the year, identify strengths and weaknesses, and make assignments based on the intervention options provided. Although administrators can use the data included in the materials to identify specific areas of need for program improvement or to provide support for teachers to improve instruction, this is not explicitly stated or evidenced in the materials.

In Unit 5 (which covers Module 19), in the Teacher Edition (TE), the "Summative Assessment" contains a "Data-Driven Decision Making" section, which, similarly to the "Module Assessments," provides guidance and suggested responses to those needing additional practice in order to master the concept(s). It states that if children struggle with items 3–4 (Lessons 19.1 & 19.3; TEKS 1.8C), teachers should use "RtI" Lesson 98 and 99 as well as "Soar to Success Math" 54.05 and 54.06. A "Common Error" is that the student may not understand how to write a question about a graph.

In Unit 4 (which covers multiple modules), the "Assessing Prior Knowledge" component has students complete "Show What You Know" on their own. Tested items are the prerequisite skills of this unit. The "Diagnostic Interview Task" evaluates understanding of each Show What You Know skill. There is a diagnostic chart used for intervention on prerequisite skills. The teacher displays one cylinder and two cones, all standing upright on their flat surfaces. Students identify the objects that are alike. The teacher shows students a crayon and has the students choose an object that is longer. Next, the teacher displays three short pencils and one long pencil. Students put the pencils in two groups according to size. The teacher refers to a chart to determine the next course of action. The chart directs the teacher on supports (tiered activities) to provide for students who were unsuccessful in the task and on independent activities for students who were successful.

Module 2 states: "Test Prep Coach helps teachers to identify common errors that children can make. If children selected 99, they might not understand less than. If children selected 80, they might be looking at the ones." The "Formative Assessment" for this module also has a Data-Driven Decision Making section in the TE, which guides teachers on resources that may be used individually or whole class to help strengthen and master that content. For example, if a student misses or struggles with items 2–7 (Lesson 2.3), a listed "Common Error" is "May confuse the symbols," suggested intervention is RtI Tier 1 Lesson 13 and Soar to Success Math 7.15.

In Module 3, which involves addition to 10, students first represent problems using two-color tiles and ten-frames. Then, they are guided to use the ten-frames with number sentences and draw their own pictures to represent the problem. At the end of the module, students use only number sentences, no models or picture representations. However, students still have the opportunity to use the manipulatives as a scaffold and support as needed.

In Module 7, the “RtI Quick Check” states: “If a child misses the checked exercise(s), then Differentiate Instruction with RtI Tier 1 Lesson 42.” If a student got the assigned questions correct, they can move on to higher-order thinking (HOT) problems in the Student Edition (SE). This Quick Check after “Share and Show” is strategically placed to allow students the opportunity to understand the lesson whole group and practice whole group, usually with manipulatives and always with pencil and paper, in the SE.

In Module 11, teachers perform an RtI Quick Check with an “If …, then…” course of action. If a student misses a checked item within the “Share and Show” activity, the teacher differentiates instruction by using RtI Lesson 62. Common Errors state that if students do not comprehend the action described in the problem, since the approach varies based on the type of problem, students must first identify whether a problem shows joining, separating, or comparing. Then, students need to identify which part of the problem is unknown. Students who master the assigned tasks complete the HOT problems and the “Go Deeper” and “Enrich” activities. These are scripted and correlate to respective lesson objectives. The “Evaluate” portion of lessons contains the “Daily Assessment Task,” which also provides recommendations in responding to student needs.

In Module 11, students use a bar model (i.e., a part-part-whole model) to help model and solve subtraction problems. A listed Common Error is that students may incorrectly write the whole. Teachers are then directed to “Springboard to Learning” by reading the problem again with children and having them “identify the two parts in the model.” Materials instruct: “Explain that the two parts equal the whole. Have them write the whole in the model and in the number sentence.”

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4.3 Materials include frequent, integrated formative assessment opportunities.

- Materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress.
- Frequency of progress monitoring is appropriate for the age and content skill.

Meets 2/2

The provided materials include frequent, integrated formative assessment opportunities. There are routine and systematic progress monitoring opportunities that measure and track progress. The frequency of progress monitoring is age and content skill appropriate.

Evidence includes but is not limited to:

Throughout all modules, there are routine and systematic progress monitoring opportunities through the "RtI Quick Check," "Problem Solving," "HOT problems," "Common Errors" sections, and "Daily Assessment Task" sections found in the Teacher Edition (TE) of every lesson. These sections consistently and accurately measure and track student progress. A "Prerequisite Skills Inventory" in the "Assessment Guide" is given at the beginning of the school year or when a new child arrives. This multiple-choice test assesses children's understanding of prerequisite skills. The "Assessment Guide" for each grade level also includes "Individual Record Forms" (IRF) for all tests. On these forms, each test item is correlated to the TEKS it assesses. There are intervention resources correlated to each item as well. At the end of every lesson, the last "E" of the "5E" model is "Evaluate."

Module tests evaluate if students have mastered the content of that module; unit tests check if students have mastered all of the modules in the unit; the "Beginning of the Year Test" sets the baseline; the "Middle of the Year Tests" allows teachers and administrators to see if and how much students have grown; the "End of the Year Test" monitors if they have mastered the content for the year and show a year's worth of growth. Modules also provide options on how students demonstrate the skill for progress monitoring. Every unit begins with a "Show What You Know" assessment that assesses students' prerequisite skills for the unit. A "Diagnostic Assessment" graphic/chart is included on each unit page for teachers to use to determine if children need intervention for the unit's prerequisite skills. This graphic includes sections with Tier 2 and Tier 3 skills, number of questions missed, intervention, online intervention, and

independent activities. If students are unsuccessful with Show What You Know, teachers intervene with the lessons listed on the chart from the RtI Tier 2 or 3 Guide or the online "Soar to Success Math" lessons. Every first grade module ends with a "Texas Test Prep" question to help teachers assess students' readiness for state assessments as well as identify any common errors they may be making.

In Module 1, students use base-ten blocks to model the number shown (120). In the margins of the TE, the "Texas Test Prep Coach" section informs teachers that if students chose 102, they counted the tens as ones; if they chose 110, they miscounted the tens. Every module and unit ends with a "Module Assessment" and/or a "Unit Assessment."

In Module 3, in the TE, the "Access Prior Knowledge" section prompts: "Use the Are You Ready? 3.1 in the Assessment Guide to assess children's understanding of the prerequisite skills for this lesson." The main question in the lesson is, "How can you use a ten-frame to add 10 and some more?" The 3.1 section of the Assessment Guide is appropriate for the age and content level because it has questions that pertain to tens and ones. Students need to master this skill in order to understand "add 10 and some more."

In Module 4, in a lesson on composing 10, teachers use Are You Ready? in the Assessment Guide to assess children's understanding of the prerequisite skills for the lesson. In the same lesson, the RtI Quick Check states: "If a child misses the checked exercises, then Differentiate Instruction with RtI Tier 1 Lesson 26." Every lesson incorporates a Daily Assessment Task, which assesses students on their ability to compose 10. Also in this module, students model putting together, either using counters to show the numbers in the problem, drawing, or counting how many to write an addition sentence.

In Module 5, if students cannot model "taking from, or separating from, a group," they complete a Soar to Success Math Warm-Up.

In Module 7, the RtI Quick Check states: "If a child misses the checked exercise(s), then Differentiate Instruction with RtI Tier 1 Lesson 42. If a student got the assigned questions correct, they can move on to higher-level thinking problems." (These are the HOT problems; students are directed to Exercises 4 and 5.) This Quick Check after "Share and Show" is strategically placed to allow students the opportunity to understand the lesson and practice whole group. The Daily Assessment Task section in this lesson states: "Can children use a problem-solving strategy to solve a problem?" If no, materials guide teachers to a Soar to Success Warm-Up. The Test Prep Coach section helps teachers identify common errors that children can make; in this lesson, it states that "If children selected 7 or 8, they subtracted incorrectly."

In Module 12, Are You Ready? assesses students' prior knowledge and the prerequisite skills for a lesson on solving addition word problems by drawing a picture. The lesson contains differentiation/leveled activities for English Learners. An RtI Quick Check that directs the

teacher on supports to use should a student experience difficulty. Students who are mastering the skill/concept complete HOT problems and “Go Deeper” activities. Should students experience challenges with the Go Deeper task, the “Math on the Spot” video tutor provides a mediation piece to guide students on solving addition problems using varied strategies. In the lesson’s RtI Daily Assessment Task, students solve addition problems by drawing a picture. If successful, students move on to the “Enrich” and “Homework and Practice” portions. If students need more support, the materials direct teachers to specific Soar to Success activities. In the Evaluate portion of this lesson, students individually solve addition problems using varied strategies (drawing a picture, mental math, algorithm) as part of a culminating independent assessment.

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5.1 Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

- Materials provide recommended targeted instruction and activities for students who struggle to master content.
- Materials provide recommended targeted instruction and activities for students who have mastered content.
- Materials provide additional enrichment activities for all levels of learners.

Meets 2/2

The provided materials include guidance, scaffolds, supports, and extensions that maximize student learning potential. The materials provide recommended targeted instruction and activities for students who struggle to master content; they provide enrichment activities for all levels of learners.

Evidence includes but is not limited to:

In all modules, the Teacher Edition (TE) provides an outline of how and where to find activities to provide targeted instruction for students who may require additional support; the TE also provides prompts for differentiation in each module. Assessment guides titled “Are You Ready?” assess children’s understanding of the prerequisite skills for the lessons within the module. There are suggested scripts and activities for each content area as well as enrichment activities; these are embedded in the module and in resources such as the “Response to Intervention” (RtI) Tiers 1–3 support and the assessment guides. Further scaffolds are given in the “Math on the Spot” video tutor and in the online resources. Each lesson includes graphic organizers, visual aids, and opportunities to use hands-on manipulatives. In each lesson, there is a differentiation component that equips the teacher with a strategy to assist English Learners (ELs) — content language support within a small group setting. Every lesson includes leveled activities for each TELPAS level: Beginning, Intermediate, Advanced, and Advanced High. Enrichment activities are available, which include visual and kinesthetic activities in individual, partner, and small group settings. 15 out of the 20 modules contain hands-on lessons; all modules include hands-on center activities. Module lessons also include two higher-order thinking skills (HOTS) questions that require students to use HOTS and, typically, multiple steps to solve. Throughout all modules during the year, materials use the 5E lesson model: “Engage,

Explore, Explain, Elaborate, and Evaluate" to build students' mathematical learning and understanding.

In each module, the TE also provides prompts for differentiation throughout each component of the lesson. For example, during a lesson on making a ten to add, the TE directs teachers to do a "Quick Check" on two problems in the "Share and Show" section on the student's page. If the student misses those two problems, materials direct teachers to a correlating activity in the "RtI Guide."

In Module 19, an "Essential Question" is "How does a bar graph help you compare information?" Students share their prior knowledge about the topic, giving the teacher insight as to which guided questions to ask next. The lesson cycle follows the 5E model, incorporating flexible groupings throughout: student pairs, whole group, station groups of 2–4 students, and small groups of 3–6 students with the teacher.

In Module 20, during a "Lesson Opener," the teacher helps students make connections to prior knowledge, asking, "What does it mean to earn money?" and "What are some ways you can earn money?" The TE provides the "Are You Ready?" pre-assessment to check for previous knowledge and help scaffold the lesson. Each lesson provides differentiated centers in the "Grab-and-Go" section. Further in the module, Grab-and-Go activities include the games "Bank It," "Literature Ken's Coins," and "Activities Dime Store."

In all modules, the Elaborate part of each lesson gives further guidance for students who are ready to move on to the next steps and HOTS questions. Materials only guide the teacher to this part in the lesson once students complete the first few assignments correctly. The teacher can then guide students to these problems, which require using HOTS skills or multiple steps to solve. If a student needs additional help with these problems, they can use Math on the Spot, the video tutor. To extend thinking, teachers can then guide students to the "Go Deeper" sections. Materials provide teacher guidance for walking through each lesson, covering Lesson Openers, "Making Connections," how to use the digital lesson, and what specifically to discuss with each lesson.

In Module 1, students identify one versus two items and draw their own pictures; then, one partner finds examples of one and two items in the other's drawings. Further in the module, the teacher provides students with school supplies, with stick-on notes showing different price amounts. Students generate number sentences and story problems using the school supplies and prices, again working with partners to share.

In Module 15, during a lesson, students use HOTS and multiple steps to solve a riddle describing a triangular prism; they also draw shapes to represent rectangular prisms that may or may not be cubes. Math on the Spot, the video tutor, guides students through an interactive problem solution related to the lesson objective. Grab-and-Go activities provide independent practice in

an engaging, project-based exploration format. The Lesson Opener allows students to make connections to the lesson and determine the purpose; it also helps the teacher determine students' prior knowledge about the topic.

In STEM activities, Lesson 6, "Care for Earth," students learn about Recycle, Reduce, and Reuse; then, materials provide "Math Connections." For example: "Solve a Problem: Explain that it takes about 5 gallons of water to brush your teeth if you leave the water running while you brush. You can show a gallon milk container to help children visualize the amount of water that action wastes. Have children use manipulatives or pictures to estimate how many gallons of water it would take if you brush your teeth two times a day."

In Module 12, lessons reinforce addition by having students draw pictures to represent a story problem and find the answer. Students then challenge partners to create other problems similar to the one they solved and to draw a picture to represent the problem. Pairs exchange pictures and solve the problems. Materials also guide teachers to visit thinkcentral.com for additional enrichment activities (in the "Enrich Activity Guide," included as part of the materials' resources).

In Module 17, in a measurement lesson, teachers are directed: Have children choose a nonstandard unit of measurement such as a paper clip or color tile and have them measure 5 different classroom objects and record the measurements; have them order their 5 objects from longest to shortest. Students can also do this activity with objects at home.

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5.2 Materials provide a variety of instructional methods that appeal to a variety of learning interests and needs.

- Materials include a variety of instructional approaches to engage students in mastery of the content.
- Materials support developmentally appropriate instructional strategies.
- Materials support flexible grouping (e.g., whole, small, individual).
- Materials support multiple types of practices (e.g., guided, independent, collaborative) and provide guidance and structures to achieve effective implementation.

Meets 2/2

The provided materials include a variety of instructional methods that appeal to a variety of learning interests and needs. Materials include a variety of instructional approaches to engage students in the mastery of the content. They support developmentally appropriate strategies, flexible grouping, and multiple types of practice. Materials provide guidance and structures to achieve effective implementation.

Evidence includes but is not limited to:

Throughout all modules, students cycle through the systematic “Engage, Explore, Explain, Elaborate, and Evaluate” (5E) format. Materials include hands-on, concrete practice with manipulatives and work with visual representations in both the digital and workbook (paper-and-pencil) format. Hands-on, concrete practice with manipulatives appears in the Engage, Explore, and Elaborate portions of lessons as well as in the “Grab-and-Go” differentiated centers. Each lesson provides opportunities for various instruction techniques; these include, but are not limited to, learning types, such as visual or kinesthetic learners; and instructional settings, such as individual, partners, or small groups. Materials provide scripts for large and small group instruction throughout each lesson. Each lesson suggests pre-assessment tools in the “Are You Ready?” resource. Whole group instruction contains directed “Lesson Openers.” The 5E lesson format begins with an interactive video and an “Essential Question” that helps students make a relevant connection. The implementation of manipulatives and models is consistent throughout the modules. Manipulatives are also available in the “Problem Solving” portion of each module; manipulatives, visual representations, and symbolic abstractions are

also recommended in the “Differentiated Instruction” portion. The materials state that Tier 3 intervention support is included “for children who need one-on-one instruction to build foundational skills for the unit.” Later activities, such as in the “ELL” (English Learner [EL]) and “Enrich” sections, suggest individual, partner, or small group instruction. However, there is no direction for whole group transitions to working with other peers if students do not fall in the EL or Enrich categories, and there is no guidance for teachers to support small groups that are on level.

In Module 1, the Teacher Edition (TE) states, “Children build proficiency with math vocabulary by repeating sentences modeled by English speakers.” Teachers then have ELs build the number 47 and repeat sentences describing the blocks; then, they build another number and use the modeled sentences to describe their new number.

In Module 6, the Explain portion of the lesson directs teachers to go to the “Response to Intervention” (RtI) Tier 1 lessons. If a student misses a checked problem, either “count on 3” or “doubles plus 1,” the teacher is to provide immediate intervention. There is evidence of exploration with concrete, hands-on materials; teacher modeling; problem solving; and language supported with pictorial support. Each lesson lists the necessary manipulatives.

In Module 8, materials provide a list of resources to use with ELs depending on their TELPAS level (Beginning, Intermediate, Advanced, and Advanced High). The lessons also provide EL “Language Support;” for example, the “Define Strategy” found in this lesson suggests teachers should have students work in small groups and use grade-appropriate language while discussing the problems they are learning to solve. In a lesson on generating addition word problems, materials direct: “Have children write and act out a skit based on the story problem.” In this module, materials provide teacher guidance for “Lesson Opener” introductions on the concept of “generating addition word problems.” In the next section, teachers read a number sentence, while the students come up with a story problem to match the number sentence; teachers write several of these student-generated story problems on the board. The teacher then discusses why the story problems are addition and not subtraction problems. The TE provides further teacher prompts and possible answers. The teacher checks for understanding by seeing if the students’ responses match the possible answer in the scripted lesson. If they do, and students are able to master the correlating assignments in the student edition, the teacher moves them to a higher level of mastery of the concept.

In Module 11, the Engage portion of the lesson has students use models to compare numbers as learned in previous lessons. In the Explore portion, students utilize a model to determine “greater than or less than.” In Elaborate, students use counters to record sums and differences of numbers within a model.

In Module 15, the materials recommend a “Quick Check” utilizing the first three practice problems. If the students struggle to solve these problems correctly, the materials suggest using

the RtI Tier 1 lesson. The TE also lists Common Errors and strategies to assist students in overcoming the errors. For example, in Lesson 15.1, students may forget some of the flat surfaces when drawing or tracing the flat surfaces of 3D shapes. A recommended strategy is to have students use models of the three-dimensional solids and place a sticker on each flat surface after they have drawn it.

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5.3 Materials include supports for English Learners (EL) to meet grade-level learning expectations.

- Materials must include accommodations for linguistics (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency.
- Materials provide scaffolds for English Learners.
- Materials encourage strategic use of students' first language as a means to develop linguistic, affective, cognitive, and academic skills in English (e.g., to enhance vocabulary development).

Meets 2/2

The materials include supports for English Learners (ELs) to meet grade-level expectations. The materials include communicated, sequenced, and scaffolded linguistic accommodations commensurate with various levels of English language proficiency. However, there is not much evidence of students using their first language as a means to develop skills in English.

Evidence includes but is not limited to:

Throughout all modules, every lesson contains leveled activities for each type of EL (Beginning, Intermediate, Advanced, and Advanced High); they correspond with the appropriate English Language Proficiency Standards (ELPS). The materials are structured to provide a variety of effective strategies for teachers to support students at different English language proficiency levels. The modules include an "English Language Learners" box in the margin of the Teacher Edition (TE); it provides teachers with leveled activities in the "ELL Activity Guide" for students at each proficiency level across grades K–2. The guide encompasses effective instructional strategies such as drawing, describing, identifying relationships, exploring content, defining, rephrasing, and modeling language. Each module also includes an "ELL Language Support" section for teachers to use to support ELs. Each module focuses on a different ELP strategy; strategies are referenced on the unit planning page at the beginning of every unit (units include multiple modules). The materials provide opportunities for repetition in a fun and engaging way, such as in the "Grab-and-Go" sections found at the end of every lesson, the "Interactive Math Videos," and the "Soar to Success" activities.

The “Bilingual MathBoards” resource has graphic organizers in Spanish to support Spanish-speaking ELs when problem-solving; however, this does not benefit ELs whose primary language is not Spanish. The materials also provide “Vocabulary Cards” in English and Spanish, which have pictures to represent the math term; these cards do not fully benefit ELs whose primary language is not Spanish. The materials do not include a list of resources for teachers to access to learn more about ELs. They also do not contain examples of how to use students’ first language as the foundation for developing skills in English; the short overview in the ELL Activity Guide does indicate that doing so is important.

For all modules, the ELL Guide, included for grades K–2, provides scaffolds and language development strategies. It includes a list of effective instructional strategies and a list of mathematical vocabulary words and their definitions for every grade level (K–2). The guide also provides teachers with tips to help students develop and use academic vocabulary. One tip is, “Many numbers and number concepts are best demonstrated with physical objects or visualized with drawings. Provide drawings and demonstrations whenever possible to help children gain an understanding of the definitions.” Another tip is, “The use of the terms tens and ones as place value can be confusing. Children may also confuse one and won when these words are spoken.”

In Module 1, for Beginning ELs, Activity 50 provides sentence stems to model mathematical language. For Intermediate ELs, Activity 21 provides sentence frames to identify mathematical relationships and practice math vocabulary. For Advanced ELs, Activity 26 allows students to identify mathematical relationships and practice math vocabulary as they sort words into different categories. For Advanced High ELs, Activity 16 allows students to ask questions for information to describe a mathematical tool, number, or object.

In Module 5, an ELL Language Support activity encourages ELs to define words by matching them with their definitions. Students are presented with two drawings — one shows addition, and one shows subtraction. Students must point to the drawing that shows subtraction. The teacher uses the word *subtract* in context to help ELs understand the meaning. This activity is repeated with other drawings.

In Module 8, in Activity 19, Beginning ELs use the strategy “Identify Relationships” with a semantic map. Children either use printed words or copy the word onto the spokes of the map. Intermediate ELs work with partners to think of vocabulary words to use in the map, or they can use a Venn diagram to sort words into groups. Advanced ELs complete Activity 14, “Fact Strategy Poems;” students use their listening, speaking, and reading skills to learn and practice fact strategies using poems. Advanced High ELs complete Activity 16, “Twenty Questions,” using their speaking and listening skills. In this activity, the teacher shows students an object, and they must identify what it is. Students then list words that describe the object, and the teacher writes each descriptive word. The teacher points out that they can ask questions to learn more about an object.

In Module 9, a Grab-and-Go lesson consists of “Games: Bank It,” in which students practice counting money; “Literature: Ken’s Coins,” in which students read the book while identifying the coins; and “Activities: Dime Store,” in which students complete the activity card by reviewing the value of pennies nickels, and dimes, and skip counting by 10s.

In Module 11, teachers develop students’ linguistic and academic skills in English; teachers help students define new expressions by using them in context and by matching visuals to the words. Teachers show students three related number sentences and one number sentence that does not belong. Students point to the fact that does not belong. Teachers are directed to use the phrase “related facts” to describe the relationship between the number sentences; they write related facts on the board. Students list the facts that are related, and the teacher repeats the activity with other related facts.

In Module 14, there are leveled activities to support learning shapes. Beginning ELs complete Activity 18; Intermediate ELs complete Activity 22; Advanced ELs complete Activity 41; and Advanced High ELs complete Activity 16. Activity 18, “Which Picture Doesn’t Belong?” uses the strategy of identifying relationships; it is geared toward a partner setting and should last for 10 minutes. There is a “Speaking Objective” for the activity: “Make connections among pictured vocabulary words to identify relationships.” It prompts teachers: “Provide children with 4–6 pictures that illustrate grade-level vocabulary. All of the pictures should be related in some way except for one. Children choose a picture that doesn’t belong. Encourage children to discuss how the other pictures are related to reinforce their decision. If they don’t know the name for one of the pictures, name it for them and have them repeat the word.” Activity 18 also has a leveling option for Intermediate ELs: Teachers “select pictures that are more closely related; for example, a nickel, a dime, a penny, and a dollar; or three clocks that show time to the hour and one that shows time to the half-hour. Have children complete the following sentence frames to help them discuss their choice: ... does not belong. The other pictures are ….”

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6.1 Materials include year-long plans with practice and review opportunities that support instruction.

- Materials include a cohesive, year-long plan to build students' mathematical concept development and consider how to vertically align instruction that builds year to year.
- Materials provide review and practice of mathematical knowledge and skills throughout the span of the curriculum.

Meets 2/2

The materials include a year-long plan with practice and review opportunities that support instruction. They include a cohesive plan to build students' mathematical literacy skills; however, there is little evidence to consider how to vertically align instruction that builds year to year to future grades. These materials provide review and practice of foundational skills throughout the curriculum.

Evidence includes but is not limited to:

Throughout all modules, the content plan is cohesively designed to build upon students' current level of understanding with clear connections within and between lessons. There is a year-long plan of content delivery, as seen in the "Unit at a Glance" and "Module at a Glance" found in the introduction of each unit as well as in the Table of Contents, with the expectation that the concepts are taught in this order. The Teacher Edition (TE) for every grade level includes a unit page for each set of modules that allows the teacher to visually see how concepts are spiraled throughout the year. The materials connect learning to previously learned concepts, knowledge, and skills in a variety of ways; there are reviews and practice throughout the curriculum, as seen in the "Grab-and-Go" activities and "Differentiation Lessons" found in each lesson. The units are designed so that skills and concepts move from concrete or context-based situations and then build to the abstract as students encounter more opportunities to practice and apply the objective of study. Along the way, students use models, manipulatives, quick pictures, and symbols to build mathematical understanding.

However, the materials do not include a specific vertical alignment chart that shows how activities align, both directly and indirectly, to concepts and skills outlined for students in subsequent grades. Although the materials do not use preceding and subsequent grades' TEKS,

the skills used in kindergarten are built upon in first grade and then further built upon in second grade. For example, students learn basic numbers and basic addition in kindergarten, which correlates with the kindergarten TEKS. In first grade, students continue to use addition and subtraction and identify many strategies to perform those tasks. In second grade, they are finally introduced to adding and subtracting with two-digit numbers, using the same strategies learned in first grade. At the end of each module across grade levels, spiral review problems allow students to practice major skills and vocabulary learned throughout the modules. There is also a unit assessment at the end of every unit, across grade levels, that provides students an opportunity to practice and review major skills learned throughout the unit.

In Modules 1–5, the Unit 1 introduction states: "Prior Knowledge in Kindergarten. Children: model, count, draw, write, and read numbers; order numbers; use one-to-one correspondence to compare sets; and compare sets to identify more, fewer, and same numbers. This selection from the Unit Opener gives you the opportunity to review some of these prerequisite skills. However, the materials do not explain how the current concept will align with future grade-level concepts such as those in second grade.

In Module 1, "Number Sense – Tens and Ones," Lesson 1 is divided into three days about understanding tens and ones. Lesson 2 is a hands-on lesson about making tens and ones. Lesson 3 is divided into four days that go over tens. Lesson 4 is another hands-on lesson on tens and ones to 50. Lesson 5 is also hands-on with tens and ones to 120. Lesson 6 is a problem-solving lesson that prompts students to show numbers in different ways. Lesson 7 is hands-on and has students model, read, and write numbers from 100 to 120. Lesson 8, the final lesson of Module 1, covers expanded form. The sequence of these lessons is appropriate; students must understand tens and ones and how to make tens and ones before they can problem solve and understand expanded form.

In Module 3, teachers ask, "How can you write 30 + 4 using tens and ones?" In the middle of the year, in Module 9, students review and practice their addition, subtraction, and place value knowledge when they count coins. The teacher helps students see dimes as tens and pennies as ones. When shown three dimes and two pennies, students add 3 tens + 2 ones. At the end of the year, in Module 19, they once again practice these addition, subtraction, and place value skills when they answer questions about a graph; students write an addition or subtraction word problem based on the information in the graph and solve it using their addition and/or subtraction skills. These types of lessons provide opportunities for students to build upon previously learned content.

In Modules 3–5, students progress through addition and subtraction; they begin with two-color counters and ten-frames and then move on to mental math, which is abstract. Each module within Unit 1 concludes with a "Problem Solving Lesson," which has students apply the addition and subtraction concepts.

In Modules 4–8 and 11–13, addition and subtraction modules build upon the previous lesson. Each module begins with an assessment of prerequisite skills in the “Are You Ready?” section. These pre-assessments, consisting of two problems, are found in the “Assessment Guide.” For example, in a Module 4 lesson about using pictures to add, one question asks students, “Which one shows 1 and 3?” Answers are multiple-choice pictures. The second question shows them a group of two circles and four circles and asks them how many circles there are. Answers are multiple-choice numbers (4, 5, 6). These are quick checks to determine if children have the prerequisite skills they need for a particular lesson. In this example, they check if students can use picture representations to solve word problems involving joining. This shows a connection with what they learned in kindergarten, where they used picture representations to solve addition problems within 10.

In Module 8, in a “Generate Addition Word Problems” lesson, the Essential Question is, “How can an addition sentence help you write an addition story problem?” Students have already found sums and missing addends and used information to solve addition sentences in prior lessons in a consistent manner. During the “Making Connections” piece of the “Lesson Opener” in this module, students tell the teacher what they know about addition sentences from prior lessons within Modules 3, 4, 6, and 7. Students also describe the different components of an addition number sentence. In previous Lesson Openers, in Module 4, students already used pictures to add to, model adding to, model putting together, and adding in any order. Students utilize addition as part of the “Explore,” “Explain,” and “Evaluate” portions of Module 8 just as they have done in prior addition lessons throughout Units 1 and 2.

In Module 18, lessons cover telling time to the hour, then to the half-hour, then to the hour and half-hour; the last lesson covers practicing telling time to the hour and the half-hour. Both of the “Addition and Subtraction” modules cover various strategies for adding and subtracting; the final lesson in the module is a practice lesson that includes all of the strategies learned in that module.

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6.2 Materials include implementation support for teachers and administrators.

- Materials are accompanied by a TEKS-aligned scope and sequence outlining the essential knowledge and skills that are taught in the program, the order in which they are presented, and how knowledge and skills build and connect across grade levels.
- Materials include supports to help teachers implement the materials as intended.
- Materials include resources and guidance to help administrators support teachers in implementing the materials as intended.
- Materials include a school years' worth of math instruction, including realistic pacing guidance and routines.

Partially Meets 1/2

The materials include some implementation support for teachers and administrators. Materials are accompanied by a TEKS-aligned scope and sequence outlining the essential knowledge and skills that are taught in the program, and there is a year's worth of instruction, including pacing guidance and routines. The program does not provide much guidance to build across grade levels. Materials include support to help teachers implement materials; however, there are neither resources nor guidance to help administrators support teachers.

Evidence includes but is not limited to:

In the curriculum, the materials do not include a formal scope and sequence; however, the lessons within the modules are aligned to the TEKS; these standards are listed at the beginning of each lesson script. The Teacher Edition (TE) introduction states: "The content knowledge and skills in grades K-5 are organized into five mathematical strands: Number and Operations, Algebraic Reasoning, Geometry and Measurement, Data Analysis, and Personal Financial Literacy. In addition, in each grade K–5, TEKS outlines primary focal areas for instructional emphasis. This design permits instruction in each grade to focus on fewer concepts and skills in greater depth, while simultaneously building a foundation for the next grade, establishing an effective learning progression." "Unit Overviews" list the TEKS and Mathematical Processes taught in each lesson within each module. "Mathematics Correlations" provides a list of learning opportunities for each standard; there are also live links connecting the lessons to each of the TEKS. A teacher may search for a specified TEKS, and the resource generates all the lessons associated with that TEKS. The scope and sequence do not describe how the TEKS build

and connect across grade levels, but the lessons do begin with context-based situations and then build to more abstract problems in accordance with the state standards. There are no clear explanations of how the TEKS connect within the materials other than personal internalization. The only guidance the administrators have is the same as is provided to teachers in the introduction of the TE.

The materials include lessons and activities for a full year of instruction in the classroom. Materials are organized in a way that makes sense for ease of implementation, including accessing and storing of materials. All of the TEs come in a cardboard storage box, which includes a booklet for all modules; these TEs can be found and accessed through online resources. The lessons are designed to be implemented within one (or sometimes two) math blocks on an instructional day. Materials do not mention specific time or date parameters, but the units can be reasonably implemented within the timeframe of a school year, with ample time for pre-teaching, re-teaching, intervention, and extensions, as recommended within the lessons. The consistent "5E" format of the lessons helps maintain pacing. The assessment data from formative and summative assessments, as well as information gathered from "RtI Quick Checks" and "Daily Assessment Tasks" help the teacher to effectively group students and provide the needed instructional support. For example, if a student is unsuccessful on a Daily Assessment Task, materials provide guidance on necessary support items. The same is true if a student is successful in the Daily Assessment Tasks. The materials include embedded realistic pacing guidance at the unit and lesson level. Each unit has an overview that helps the teacher review the TEKS and focal areas, identify needed materials, and determine appropriate resources. Students have opportunities to spend sustained time developing content and skills in grade-appropriate areas. The materials spend more time on some focal areas compared to others; four out of the 20 modules focus on place value; eight modules focus on solving problems with addition and subtraction; and only one module focuses on identifying and creating two-dimensional shapes and three-dimensional shapes as well as principles of length and measurement.

In Modules 1–5, the unit page for "Number and Operations: Addition and Subtraction" states that, in kindergarten, children model, count, draw, write, and read numbers; order numbers; use one-to-one correspondence to compare sets; and compare sets to identify more, fewer, and the same number. Materials provide further explanation on how to review these prerequisite skills prior to beginning the lessons.

In Module 1, Lesson 1 begins with students understanding tens and ones; lessons build upon place value concepts through Lesson 7, where students model, read, and write numbers to 120. The units within each grade level's materials are also connected; for example, in a lesson on adding tens and ones at the beginning of the year, students use their knowledge of place value to add multiples of ten to a one-digit number up to 99. In Module 3, teachers ask, "How can you write 30 + 4 using tens and ones?" Students again connect their addition/subtraction and place value knowledge in Module 9 when they are counting coins. The teacher helps students see dimes as tens and pennies as ones. When shown three dimes and two pennies, students

add 3 tens + 2 ones. In Module 19, they once again connect these addition, subtraction, and place value skills, as they answer questions about a graph; students write an addition or subtraction word problem based on the information in the graph and solve it using their addition and/or subtraction skills.

In Module 4, Lesson 5, the "Essential Question" is "Why can you add addends in any order?" Further in the lesson, after reading an addition word problem, the teacher asks, "How many do we have altogether?" "How do you know?" "How might you add two groups of counters?"

In Module 5, Lesson 3, the top-right corner states the TEKS: Number and Operations — 1.3.B, "Use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns" as any one of the terms in the problem, such as 2 + 4 = [ ] ; 3 + [ ] = 7; and 5 = [ ] − 3. Algebraic Reasoning — 1.5.D, "Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences." Mathematical Processes — 1.1.C, "Select tools, technology, and techniques;" 1.1.G, "Display, explain, and justify mathematical ideas and arguments." In the bottom right-hand corner of each page, a "Go Digital Resources" section reminds teachers to access the "Digital Management Center," which organizes program resources by TEKS.

In Module 16, the "Lesson at a Glance" provides a detailed breakdown of each lesson within the module; it includes the "Essential Question," TEKS, Process Skills, vocabulary, materials, print resources, and available "Go Digital" resources. Each lesson is scripted and contains guidance; "Are You Ready?" sections help access prior knowledge; "Lesson Openers" contain guidance on making connections, using the digital lesson, and incorporating literacy. Lessons have scripted questions and possible answers; there are differentiated lessons for English Learners, struggling learners, and those needing enrichment. RtI Quick Checks help teachers guide the lesson; "Common Errors" explain how to help students that misunderstand the concept; the Daily Assessment Task at the end of the lesson provides guidance on the next steps. For example, "If the student can identify equal and unequal parts, then have them work on the Enrich 77 activity or Homework and Practice. If no, then have the student work on Soar to Success Math Warm-Up 5.03."

In Module 18, the TE provides guidance and preparation for the Essential Question on "Time to the Hour and Half Hour;" the TEKS 1.1.A, 1.1.C, 1.1.D; the Mathematical Process 1.7 E; the materials (MathBoard, analog clock model); the mathematical vocabulary (*minutes*, *minute-hand*); the print resources (Student Edition with "Homework and Practice," "RtI" Tier 1 Lesson, "Enrich," and "Grab-and-Go Centers Kit"); the English Learner strategy ("Define") and the digital resources (eStudent Edition 18 eTeacher Edition, "Math on the Spot" video tutor, "Soar to Success Math Digital Management Center," "iTools," and "Mega Math"). The combination of paper and digital resources helps to support ease of use for the teacher and limits the need for additional technology equipment.

In Module 20, in its top-right corner, one lesson lists TEKS 1.9 B, Personal Financial Literacy: “Define income as a means of obtaining goods and services, oftentimes making choices between wants and needs.” Without going back to the Unit Overview, looking in the “TEKS Correlation Guide” or relying on memory, the teacher does not know if this is the first time this standard is presented or if this is a TEKS for review and practice.

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6.3 Materials provide implementation guidance to meet variability in programmatic design and scheduling considerations.

- Materials provide guidance for strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression.
- Materials are designed in a way that allow LEAs the ability to incorporate the curriculum into district, campus, and teacher programmatic design and scheduling considerations.
- Materials support development of strong relationships between teachers and families.
- Materials specify activities for use at home to support students' learning and development.

Partially Meets 1/2

The provided resources partially meet the criteria for implementation guidance to meet variability in programmatic design and scheduling considerations. There is embedded guidance, but there is no specific guidance for implementation that ensures the sequence of content is taught in an order that is consistent with the developmental progression of mathematical concepts and skills. The materials are designed in a way that allows LEAs the ability to incorporate the curriculum into district, campus, and teacher design and considerations. However, the materials do not include guidance that supports teaching focal areas aligned to a classroom context without disrupting the sequence in which the content should be taught.

Evidence includes but is not limited to:

Throughout the curriculum, units, and modules, each unit across grade levels includes a unit overview that lists the TEKS, skills, and objectives in each lesson. The introduction in the Teacher Edition (TE) explains how the TEKS need to be implemented within a coherent and balanced curriculum that treats mathematical knowledge and skills in a manner that will enable students to develop a deep understanding of the content by integrating process standards with

the mathematics content. The materials also provide a suggested sequence of units that considers the interconnections between the development of conceptual understanding and procedural fluency. The sequence in these lessons makes sense since the lessons build on each other in order for students to build their base knowledge. This sequence of content is taught in an order consistent with the developmental progression of mathematics; as stated in the Introduction under "Texas from the Ground Up," the instruction is grouped around each Texas focal area; within each unit, each module is designed around a concept.

The materials do not provide specific support for LEAs to consider how to incorporate the materials into a variety of school designs; however, the units and modules are built as "stand-alone" so that districts, campuses, and teachers can rearrange the materials in a way that adapts to their needs. The materials do not include specific timelines for teaching each TEKS, which allows districts flexibility in scheduling considerations. The "Program Overview" in the introduction of every grade level's TE states: "'Texas GO Math!' helps you with the big jobs of teaching. Our 'Teacher Digital Management Center' helps you create lesson plans that support your curriculum, can be sequenced to align with district requirements, and are completely focused on TEKS." The materials do have online components such as iTools, "Math on the Spot" videos, and an "Interactive Student Edition," which correlates with each lesson within each module. Even though there is no direct guidance regarding online schools or blended model schools, the online components do make these school options feasible.

In all modules, all components of the "5E" lesson plan model can be taught in a whole group setting: Engage ("Lesson opener"); Explore (working through a problem together); Explain ("Model and Draw" and "Share and Show"); Elaborate ("Problem Solving"); and Evaluate ("Daily Assessment Task"). The activities designed to be taught in a small group setting are the "ELL Language Support" section, "Enrich" section, "Grab-and-Go" center activities, and "RtI Interventions."

In Module 1, "Number Sense – Tens and Ones," Lesson 1 is divided into three days about understanding tens and ones. Lesson 2 is a hands-on lesson about making tens and ones. Lesson 3 is divided into four days that go over tens. Lesson 4 is another hands-on lesson on tens and ones to 50. Lesson 5 is also hands-on, with tens and ones to 120. Lesson 6 is a problem-solving lesson that prompts students to show numbers in different ways. Lesson 7 is also hands-on; students model, read, and write numbers from 100 to 120. Lesson 8, the final lesson of Module 1, covers expanded form. The sequence in these lessons makes sense because students must understand tens and ones and how to make tens and ones (including hands-on lessons) before they can start problem-solving and understand expanded form.

Modules 6–9, Unit 2, and Modules 10–13, Unit 3, are grouped around the focal area "Solve Problems involving addition and subtraction."

In Modules 10–13, Unit 3, students use their foundational counting skills (forward, backward, and skip counting), developed over the modules in Units 1 and 2 and in kindergarten, and apply them to addition and subtraction strategies at the culmination of Unit 3. The materials maintain that the curriculum represents a comprehensive system of mathematics instruction that provides teachers the tools and resources needed to support students' successful mastery of the TEKS.

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6.4 Materials provide guidance on fostering connections between home and school.

- Materials support development of strong relationships between teachers and families.
- Materials specify activities for use at home to support students' learning and development.

Partially Meets 1/2

The provided materials partially meet the criteria for guidance and fostering connections between home and school. The materials do not support the development of strong relationships between teachers and families enough, but there are specific activities for use at home to support students' learning and development.

Evidence includes but is not limited to:

The curriculum does encourage some building of relationships between teachers and families through the suggested family "Home Activity" in each lesson; there is little to no guidance provided to teachers on how to facilitate and foster these connections. Although these activities do allow the family to take part in the process, they do not necessarily provide opportunities to build a strong relationship between home and school. There is an "At-Home Learning Support Section" online that includes lessons, "Vocabulary Builder" sections, "Vocabulary Reader" sections, "Write About Math" sections, as well as lessons and homework. "At-Home Learning" is a digital copy of the Student Edition book for both volumes. This resource begins with a letter addressed to students and families explaining that the resource contains hands-on activities to do and real-world problems to solve. At the beginning of each unit, there is a page with a "Home Note" for families; it states that this will help families gauge where their child is and maybe areas they should improve. There is no evidence of other language support, but At-Home Learning Support could be easily used by families who speak English. The introduction in the "Digital Resources" section states, "Interactive Student Edition: Includes all Student Edition (SE) pages for student access at school or home." The materials provide tips for parents to practice new skills at home in meaningful, authentic ways. The ideas suggested involve items that are typically available in the home and do not require parents to buy anything or have special training.

Each unit includes a “Take-Home Vocabulary Reader.” This take-home book allows students to review some prerequisite skills as well as learn new mathematical vocabulary needed for the unit. It also lets parents know which skills and TEKS will be reviewed in the book. The materials provide digital resources for the student and parent to access, such as the “eStudent Edition,” “Math on the Spot” videos, “Math Concept Readers,” “Mega Math,” “Interactive Student Edition,” and “Math iTools.” These materials are available through the student’s login. The eStudent Edition is the digital version of the student math books. Math on the Spot videos are short tutorials for each lesson. Math Concept Readers are short math books available in three levels (Below Level, On Level, Above Level). Mega Math interactive math games are sorted by the concepts being learned, allowing for students to have additional practice. The Interactive Student Edition is another tutorial video designed for the beginning of a lesson or a review for those struggling with the concept. Math iTools are digital manipulatives students may use or practice using, such as counters, base-ten blocks, and connecting cubes.

In Module 1, a Home Activity directs parents: “Show your child one group of 10 pennies and one group of 8 pennies. Ask your child to tell how many tens and ones there are, and say the number. Repeat with other numbers from 11 to 19.” Mathematical skills and concepts are reinforced and connected to home with the “Homework and Practice” pages, which are also included at the end of every lesson.

In Module 3, a lesson has students demonstrate knowledge of adding tens and ones in various ways, such as modeling and drawing using ten-frames with counters. There are iTools students can access as needed. For this lesson, the materials have the following iTools readily available as they support this concept/skill development: base-ten blocks, play money, square inch tiles, 120 Poster, clocks, connecting cubes, and two-color counters.

In Module 10, the Take Home Activity directs parents: “Have your child use buttons or beans to make groups of five. Then have him or her count by fives to tell how many objects.” Another Home Activity is “Take a walk with your child. Count aloud together as you take 120 steps.”

In Module 11, for a lesson on skip counting, the Take Home Activity is “Have your child use buttons or beans to make groups of five. Then have him or her count by fives to tell how many objects.”

In Module 12, the Take Home Activity is “Have your child explain the strategies he or she can use to add the numbers 7, 2, and 3.”

In Module 18, the Take Home Activity” is “Show your child the time on a clock to the hour or half-hour. Ask him or her to tell you what time is shown.”

In Module 19, Unit 5, the Take Home Reader is *Rain, Rain Go Away*; it reinforces collecting, sorting, and organizing data into categories, creating real objects and picture graphs, and

analyzing graphs. This reader emphasizes the vocabulary terms *picture graph*, *bar graph*, *tally chart*, *tally mark*, and *T-chart*. A Take-Home Activity in this module states: “Together with your child, make a T-Chart showing how many times the two of you say the word ‘eat’ during a meal. Then have your child say the number.” This activity builds relationships between the teacher and family by communicating ideas about how the family can participate in the daily lessons at home, allowing the parents to be part of the learning process. Although this activity does allow the family to part of the process, it does not necessarily provide opportunities to build strong relationships.

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6.5 The visual design of student and teacher materials (whether in print or digital) is neither distracting nor chaotic.

- Materials include appropriate use of white space and design that supports and does not distract from student learning.
- Pictures and graphics are supportive of student learning and engagement without being visually distracting.

Meets 2/2

The visual design of student and teacher materials (whether in print or digital) is neither distracting nor chaotic. Materials include appropriate use of white space and design that does not distract from student learning; pictures and graphics are supportive of learning without being distracting.

Evidence includes but is not limited to:

Throughout all modules, the Teacher Edition (TE) is designed with a few blank spaces within each lesson as well as blank pages at the end of each module to be used for notes. The TEs are designed with clear, designated places for important information. The TEs are designed in a way that teachers can locate important information for lesson planning and implementation. For example, the unit overview pages list vocabulary; tools needed; and ancillary materials that can be used to support differentiated learning, the TEKS, skills, and objectives in each lesson. The introduction pages cite online tools and blackline masters that are used to support implementation. Within the module lessons, subheadings are color-coded, and important features are depicted in varied fonts to help teachers cue into the information. Parts of the “5E” lesson cycle include vignettes for teachers that provide sample questions and student responses to support instruction and discussion, as well as some supportive scripts for teachers to utilize. The materials include vocabulary cards with clear and authentic pictures and drawings to define and support the new words students are learning. There is an interconnection and sequential progression of math concepts across units that also builds on prior knowledge and toward the following grade’s continuation of the concept.

The materials provide easy-to-recognize pictures and graphics that support student learning; as seen in the picture glossary for vocabulary, the images are clear and match the vocabulary

term. Each lesson in the Student Edition (SE) has a large white space where children can work. The subsequent pages in a lesson are mostly white with little distraction. Most text is in black, which creates a stark contrast to help students focus in on the content. The question numbers are in blue, which also differentiates from the black text to keep students on track. There are little images throughout the SE that may connect with the content displayed. Clear and authentic pictures and drawings support the word problems that the students encounter. The materials include graphics that are easily identifiable to students and support their learning, as seen in the "Math on the Spot" videos and "Interactive Student Edition" tutorials. Tutorials utilize the same characters and routines for all lessons, making it easy for students to follow. The materials include pictures and graphics that are engaging, as seen in the "Vocabulary Readers" found at the beginning of each unit and the "Math Concept Readers" found in the digital resources. The pictures and graphics for student use adhere to "User Interface Design" guidelines; print, graphics, charts, models, pictures, and components are easily visible, clear, and appropriate for the learning tasks. Users can understand the representations and guidance pieces.

In Module 5, there are kitten graphics depicted in an authentic manner for students to cross out when subtracting. There are other colorful graphics of other animals in this lesson (insects, dogs, chicks) that help support the concept of subtraction. In the Unit 5 Vocabulary Reader, the materials include real photographs of children and a teacher as well as tally charts in helping to support the skills of collecting data, sorting, creating graphs, and interpreting graphs.

In Module 7, the pictures and graphics are colorful, with ample space for students to place the two-color counters in the ten-frames as required in solving subtraction problems. The area in which students are to write the number sentence is developmentally appropriate, as first grade students are still gaining fine motor control and often need a larger space to write. There are boxes and lines to help guide the placement of the numbers and symbols on the page. The numbers that students are instructed to read are in dark print and thus clear and easily seen.

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6.6 If present, technology or online components included are appropriate for grade level students and provide support for learning.

- Technology, if present, aligns to the curriculum's scope and approach to mathematics skill progression.
- Technology, if present, supports and enhances student learning as appropriate, as opposed to distracting from it, and includes appropriate teacher guidance.

Not Scored

The provided technology and online components are appropriate for grade-level students and provide support for learning. These components align with the curriculum's scope and sequence and enhance student learning. There could be more guidance for the teachers in relation to assisting students within the components.

Evidence includes but is not limited to:

Throughout the curriculum, all of the Teacher Editions (TEs), as well as other digital resources, are available to help support teachers in implementing the materials: the "eTeacher Edition," "Teacher Digital Management Center," "Teacher Resource Book for Assessment," "Online Assessment System," "Assessment Guide," "Student Edition," "Teacher Edition For Intervention," "Response to Intervention" (RtI) Tier 1, 2, and 3, "Soar to Success Math For Instruction and Differentiation," "ELL Activity Guide," "ELL Activity Guide," "Math Concept Readers," "Enrich" activities, "Mega Math," and "iTools."

The introduction in the "Digital Resources" section states: "Interactive Student Edition: Includes all Student Edition pages for student access at school or home. Provides audio reinforcement for each lesson. Features point-of-use links to animated math models." It also states, "Students are engaged and learn with point-of-use animated math models." "Math on the Spot" videos are also introduced in this section: "Actively introduces lesson concepts. Helps students solve the H.O.T. problems in the Interactive Student Edition. Builds the skills needed in the TEXAS assessment." The Interactive Student Edition has large color-coded navigation buttons to help

students use the technology appropriately and efficiently. For example, students click on a large orange button with an arrow inside to go to the next section. To go back a section, the arrow in a box points the opposite way; it is smaller, which makes the larger button more intuitive, so students don't get confused about how to go to the next section. There are other student-friendly buttons, like a speaker for sound, a home button to go home, a book with "A Z" on it for the glossary, and a wrench for "tools." The TE is set up in the exact same way, except there is an additional button that features an apple for teacher resources. Mega Math provides additional lesson practice with engaging activities, which include audio and animation.

The materials provide opportunities for students to select grade-appropriate technology tools for solving tasks. iTools enable students to solve problems with interactive digital manipulatives and model and explore lesson math concepts. Grade K–2 iTools include counters, math mountains, base-ten blocks, number lines, number charts, bar models, number tiles, secret code cards, graphs, fractions, geometry, measurement, probability, algebra, and place value drawings. These tools include a help button that explains to students how to use them. However, this feature does not read the directions to them.

The technology components align with the scope and sequence and "flow" of the materials as they are organized by units, modules, and lessons. During the "Lesson Opener" in every lesson, there is a "Using the Digital Lesson" section with guidance on how the teacher can apply the Interactive Student Edition at the start of the daily lesson. In addition, each lesson refers to the "Math on the Spot" video tutor for guidance and support for the lesson's HOT (higher-order thinking) problems. With these videos and the HOT problems, children will build skills needed in the Texas state assessment. The materials guide teachers to have students use the Soar to Success Math Warm-Ups if they do not show mastery within the "Daily Assessment Task." The TE refers teachers to resources they can provide for students in centers, as seen in the "Grab-and-Go" sections in every lesson.

There is an "At-Home Learning Support Section" online that includes lessons, "Vocabulary Builder" sections, "Vocabulary Reader" sections, "Write About Math" sections, as well as lessons and homework. At the beginning of each unit, there is a page with a "Home Note." For example, in Unit 1, it states: "This page checks your child's understanding of important skills needed for success in Unit 1." This will help families gauge where their child is and maybe areas they should improve.