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Accelerate Learning 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 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 for planning further instruction.
- 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 some supports for English Learners (ELs); however, strategies are general and not provided for varying 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 Agencies the ability to incorporate the curriculum into district, campus, and teacher design and considerations. Guidance for implementation is provided that ensures the sequence of content is taught in an order that is consistent with 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 submitted 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 materials concentrate on the development of the primary focal areas and rigor for the grade level. They provide authentic practice opportunities for students to master the content in a varied range of settings. The program has a "Scope and Sequence" that outlines the TEKS covered in each scope and the suggested pacing of each scope. The Scope and Sequence strategically and systematically develops student content knowledge for each concept at the grade-appropriate level. The pacing of the Scope and Sequence allows students to systematically develop content knowledge and build on knowledge learned in previous units. Materials provide multiple opportunities for students to practice and master concepts through various modalities and real-world scenarios. Students have the opportunity to practice skills in primary focal areas and multiple settings: whole group instruction, games, interactive activities, stations, and small group instruction. The content increases in rigor across the course of the school year.

Evidence includes but is not limited to:

The materials devote a majority of lessons to the focal areas, as outlined in the TEKS. The material is broken into topics, which are referenced as scopes. The scopes are clustered by TEKS alignment. Within each scope, a detailed homepage outlines the TEKS and student expectations based on what they learned in the previous grade level and what they will learn in the upcoming grade level. In kindergarten, eight out of the twelve scopes focus on whole numbers, addition and subtraction, two-dimensional shapes, and three-dimensional solids. In addition, each scope includes one spiraled review activity under the "Elaborate" tab. For example, the spiraled review activity titled "Game Day," found in the "Represent Numbers to at Least 20"

scope spirals skills taught in previous scopes. These skills include comparing numbers to 10, counting, addition, and representing numbers to 10.

“Content Support” elaborates on vertical alignment by stating the standards to follow in first, second, and third grade. The TEKS are also dissected by standard with the scopes. These key focal areas are located under the Elaborate tab and spiral into each scope as the lessons progress. For example, in the “Measurement” scope, there is an option to print or assign a spiral review with questions from the prior scope of 2D and 3D shapes.

The Scope and Sequence focuses on the provided scopes one at a time; it also suggests that teachers and students focus on addition and subtraction fact fluency in addition to daily numeracy. This indicates that whole numbers and addition and subtraction concepts are majorly focused on throughout the entire year, even when the scopes have an alternate focus. Teachers use the “Daily Numeracy” and “Fact Fluency” components in their daily whole group and small group lesson plans for the span of the entire school year.

The materials, specifically the “New Teacher Navigation Guide,” provide the philosophy of the publisher’s approach to systematically develop students’ mathematical learning. The materials discuss the constructivist approach to mathematical instruction, meaning that students follow the “concrete to representational to abstract” (CRA) progression while acquiring knowledge and skills. The materials state that they provide “an interactive curriculum that encourages your students to rely on critical thinking, compelling reflection, and collaborative exploration within each scope.” The scopes also provide opportunities for students to engage in intentional discourse to broaden student mindset and encourage educational growth. The systematic philosophy around the introduction of each lesson uses a three-part anticipatory set per lesson topic. This anticipatory set, referenced as the lesson’s “Engage” section, begins with an informal pre-assessment, a “Foundation Builder” task, and a “Hook” activity. Consistently, throughout the lessons, all three introduction activities are hands-on and encourage the use of dialogue to explain various methods of problem solving.

The materials use a “5E+IA” learning model to enhance problem-solving and STEM-based thinking through real-world exploration. The components of the model are “Engage, Explore, Explain, Elaborate, and Evaluate” plus “Intervention and Acceleration.” Every scope within the materials follows this model, and all components are designed to incorporate real-world problem solving.

Within the kindergarten “Scope List,” teachers find the TEKS covered within the scope, how many lesson plans are in the scope, and the suggested pacing. The pacing in the Scope and Sequence allows students to systematically develop content knowledge and build on knowledge learned in previous units. The “TEKS Unwrapped” section clearly states the TEKS along with individual breakdowns and verbs to note what the students will be doing. The section also discusses how background knowledge applies to the current scope, the TEKS and skills necessary for students to show mastery of the scope, and the content-specific vocabulary to introduce during whole group lessons. The Content Support section also provides teachers

with an overview of the upcoming scope, the TEKS covered, and what students need to know to show mastery. It provides information about background knowledge (what was taught in the prior grade) and student misconceptions. Sample questions model what students should be able to answer by the end of the scope to demonstrate mastery. For example, in the “Money” scope, the Content Support section explains what students learned in pre-kindergarten. It also lists several misconceptions that kindergarten students have about money; for example, “Some students may think all coins are the same regardless of size and color.” The section explains that by the end of this scope, students will be able to identify each coin by name and that money is used to purchase things. In the “Coming Attractions” section, the program explains how students will build on their knowledge of coins in first, second, and third grade.

The materials systematically develop content knowledge. For example, in the area of generating and comparing numbers up to 20, lessons progressively follow the 5E+IA model. Students have multiple opportunities to practice in a variety of ways, including through paper-pencil tasks, hands-on manipulatives, and interactive games. In the “Join and Separate” scope, the Elaborate section integrates fact fluency games. This is a trend, as noted in the “Represent Numbers to at Least 20” and “Data Analysis” scopes. The Elaborate tab for each module provides multiple fact fluency games, which spiral throughout the entire year.

The kindergarten materials provide lessons and activities for students to practice primary focal-area skills in a variety of settings within the classroom to master content. Each scope has a variety of whole group lessons, practice problems, games, digital games, station options, and small group intervention activities. Each lesson plan includes step-by-step instructions for how teachers can implement the activity in the classroom and all of the necessary materials. Each unit begins with an anticipatory set, referred to as an “Engage Activity” within the lesson; it progressively builds to greater sophistication and variety in problem-solving throughout the unit. For example, in the unit on money, the lesson progresses from sorting coins to identifying coins to finally engaging in a math chat about the characteristics of each coin. In “Problem-Based Tasks,” students work collaboratively to solve real-world, open-ended questions as they transition around the classroom and school. These Problem-Based Tasks are present in all the units throughout the instructional material.

Each scope has “Fluency Builder” games located in the Elaborate section. These are independent or partner games that provide students with an engaging way to practice the new concept. Each unit also has a “Parent Letter,” which includes several ways to practice learning at home and other settings through authentic methods. For example, in the Join and Separate scope, there are three Fluency Builder games—“Four in a Row,” “Go Fish,” and “Join and Separate Match”—that reinforce addition and subtraction skills being taught in the scope. Each scope has at least one digital game, located in the Elaborate section, that reinforces skills taught in the scope.

In the scope related to two-dimensional shapes, students engage in a Hook activity: They create 2D shapes using manipulatives and discuss the attributes of shapes by relating them to cookies they have eaten in their lives. In an “Explore” activity, following a scenario provided by the

teacher, students use pre-cut shape printouts and 3D solids to sort shapes based on attributes. In the Elaborate component, students play “Go Fish,” where they work to match shapes with their corresponding name and quantity. This activity incorporates the same concepts but in a game using pictorial models instead of manipulatives. Additionally, in the Elaborate component, students read a story titled “A Day in the Life of My Shapes and Me” and answer questions based on the information in the text. They also have the opportunity to play virtual games, such as “Coloring Shapes,” “Uncover the Shapes,” and “Shape Sorter,” to practice the concepts in a virtual format. Finally, students complete a show-and-tell evaluation activity, where they use cards with pictures of 2D shapes and answer questions based on teacher prompts. The Measurement scope has four Explore activities where students observe different measurable attributes and use manipulatives to measure objects in the classroom. Practice problems are embedded in the lesson plan through class discussion and student handouts.

The materials use a Scope and Sequence that builds upon previously taught concepts so that students can continue to practice previous skills while applying them to new concepts that increase in rigor during the school year. For example, in the “Compare Numbers to 10” scope, students learn how to generate a number that is more or less, compare sets of cubes within 10, and compare numbers within 10. This work precedes the scopes that focus on representing numbers to 20 and comparing numbers to 20; they use the same concepts but increase the number to 20. After students learn to represent numbers to 20, they begin to compare numbers with large differences within 20, then compare numbers with small differences within 20, and finally, compare numbers. As new scopes are introduced, such as “2D and 3D Shapes,” “Data Analysis,” “Money,” and “Personal Finance,” the scope uses spiraled practice, math stories, and problem-based tasks to incorporate and combine previously-learned skills with newly learned skills.

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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.

Meets 4/4

The materials sequence concepts from concrete to representational to abstract (CRA) within the school year and within each scope. The materials include a variety of opportunities for students to use concrete, representational, and abstract materials while learning specific concepts. The "Content Support" section provides teacher guidance on prior knowledge from previous grade levels; there are different activity ideas based on the CRA model to teach new skills. Rationale is provided for the materials used in the program, as well as suggestions for supporting students as they progress through the CRA continuum. The materials used in the CRA model increase in rigor over the course of the school year. Each lesson plan states whether students will be using manipulatives, pictorial representations, or abstract representations. The plans also provide teachers with facilitation points on how to teach each skill and instructional support for students struggling to move across the CRA continuum. The instructional materials show a clear progression in the CRA continuum through both the usage of materials and the information written for teacher support.

Evidence includes but is not limited to:

The materials include a variety of concrete models and manipulatives, pictorial representations, and abstract representations to introduce and practice mathematical concepts. According to the program's "Math Philosophy," students progress through the CRA model in each "Explore" activity. When students first learn a new concept or skill, the program incorporates carefully selected concrete materials to develop their understanding of it. As students gain understanding with physical models, they begin to draw a variety of pictorial representations that mirror the work they did with the concrete models. Then, students learn to use symbols

and algorithms to represent their concrete and pictorial models. Each Explore activity follows one of the components in the CRA approach. In the first few Explores of a scope, students use concrete materials to learn the new skill. Then, students begin drawing pictorial representations. By the final Explore activity, students work to represent their models with symbols and algorithms.

The instructional material provides a range of concrete models and manipulatives throughout the kindergarten lessons. Various concrete models are clearly shown in the “Materials List” located in the “Home” tab of each scope. Materials also clearly note them at the beginning of each lesson in the Explore tab. All of the scopes use models, manipulatives, and representations, including the scopes teaching the primary focal areas for kindergarten. Before giving students any Explore activities, the program provides “Skill Basics” lesson plans. In these lesson plans, students learn necessary skills for the scope, including how to use any model or manipulative. For example, in the “Join and Separate” scope, students learn how to use a ten-frame and rekenrek, and then begin the Explore activities. In this scope, students begin using counters and a ten-frame to represent numbers 6 to 10 in multiple ways. Students begin using pictorial representations by coloring in a ten-frame to mirror what they modeled with concrete objects. By the end of the unit, students use two-colored counters to model addition number sentences up to 10. Students fill in number sentences with the information from their concrete and pictorial models. This scope also includes a Skill Basics lesson where students learn how to write equations; then, they apply this skill to the Explore activity.

The materials change with the content taught in each scope and increase in rigor over the course of the school year. For example, students begin using a ten-frame to represent numbers up to 10. Later in the school year, students learn to use double-ten-frames to represent numbers to 20.

The materials support teachers in identifying where student understanding is along the phases of the CRA continuum. Each scope provides content support for teachers on the homepage of the scope. Content support gives teachers information on background knowledge, misconceptions and obstacles, what will be covered during the current scope, and what is to come in future grades related to the concept. Within these sections, teachers receive suggestions and guidance on supporting students through the CRA continuum. For example, students are expected to move from one-to-one correspondence using manipulatives, to composing and decomposing numbers, to abstractly representing their ability to compose and decompose numbers by using number sentences. This follows a logical progression; students must understand each progressive step before moving to the next level of rigor. Students use concrete items, such as bears, colored counters, or buttons, to foster automaticity when composing and decomposing numbers.

Content Support sections are located at the beginning of each scope. These sections denote what students have learned in previous grade levels and how their background knowledge applies to the current scope. They also explain common misconceptions that students may have

about the materials before beginning the scope. For example, in the Join and Separate scope, Content Support first elaborates on using concrete models to join and separate; materials provide the teacher with graphics and suggested question stems. Then, the section explains pictorial modeling and explains the CRA continuum step by step.

“Foundation Builders” give detailed descriptions about the progression of the phases of the continuum. For example, in the “Composing and Decomposing Numbers” scope, students use counters to work through word problems. Afterward, they progress to using counters to verbalize their thinking to a partner. Materials alert teachers to a possible misconception about the word *counter*: It can be understood as a table in the kitchen. To eliminate the confusion with the multiple-meaning word, teachers explain the word in context by providing a visual of bear counters. If the student is unable to use concrete objects during the “Accessing Prior Knowledge” portion of the lesson, teachers are referred to the Foundation Builder, where they provide explicit procedures and facilitation points to foster learning.

Other examples of teacher support are found in the “Composing and Decomposing Numbers to 10” scope. Materials provide feedback that students may find it easier to count real objects; they may struggle when counting pictures because real objects can be picked up and moved while pictures are stagnant on the paper. Additionally, the Content Support suggests that students need to experience each number through multiple representations, such as five-frames, ten-frames, number-bond bracelets, linking cubes, dominoes, and number cubes. In an Explore activity within this scope, students color squares to represent cupcakes in order to make six. If a student struggles to complete this task in the representational format, the materials suggest the student should use concrete linking cubes to practice and to complete the task. In a subsequent Explore activity on composing and decomposing numbers to 10, students use a ten-frame mat to represent bugs. Once students have finished using the concrete materials, they create a pictorial model in their journal to show the transfer from concrete to representational. At the end of the scope, materials provide teachers with an observation checklist that monitors students’ counting to 20 with and without objects. This information helps teachers to know where students are in the CRA continuum.

Each Explore activity provides teachers with details about procedures and facilitation points as a guide to help support students as they work through the CRA model. Teachers determine which part of the CRA model the students are working in by reading the description of the lesson. Skill Basics lesson plans give students a necessary foundation in skills before they progress through the CRA model. For example, in the Join and Separate scope, in a Skill Basics lesson, students act out “joining and separating” word problems using school supplies; then, they begin Explore 1. After students have a foundation in using concrete materials to model word problems, students move on to using counters and a story mat to act out “joining and separating” word problems. As students progress through the Explores, the lesson plans explicitly explain how to guide students in representing their work using a pictorial model. Finally, students represent their concrete and pictorial models by writing an equation. The lesson plan also includes suggestions for students who are struggling to write number

sentences independently; for example, students can verbally explain their pictorial representations.

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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 include supports for students to build their vertical content knowledge by providing prior-knowledge activities and foundation builders for students who have gaps in their prior knowledge. Materials also provide supports for teachers to understand the prior knowledge students should have, as well as how the concepts will be applied and further integrated in future grade levels. The materials also include tasks and problems that connect multiple concepts as appropriate for the grade level. The materials provide opportunities for students to engage in math talk and discover math as they explore relationships and patterns within and across concepts. The materials are organized in a way that provides students opportunities to examine relationships and patterns within and across different concepts. Some activities require students to interconnect different mathematical ideas to problem solve. The program provides teachers with a scope overview, “Scope and Sequence,” and vertical alignment to denote which TEKS are introduced in that grade level and how they progress in future grade levels. The “Content Support” and “TEKS Unwrapped” sections at the beginning of each scope provide teachers with a deeper understanding of students’ background knowledge, expectations for the current grade level, and how the concept develops in future grade levels.

Evidence includes but is not limited to:

Each scope begins with an “Accessing Prior Knowledge” activity where students apply prior knowledge to a vertically-aligned standard. The activity either assesses students’ knowledge of skills taught in a previous grade level or skills taught in previous units. As students progress

through the materials, the program incorporates previously learned skills and applies them to new concepts. As the program progresses, scopes utilize familiar models and strategies from previous units and introduce new models and strategies that students apply to the new skill. The Content Support documents for each scope provide teachers with the related background knowledge that students should have obtained in previous grade levels. Under the “Home” tab, materials provide teachers with “Coming Attractions,” which provide details on how students will build upon the concepts taught and mastered in each module.

The materials provide tasks that help students recognize and make connections among mathematical ideas. Each scope contains a “Foundation Builder” activity. These are intervention activities that review vertically-aligned standards and fill gaps before teaching new concepts. Materials encourage students to make connections among mathematical ideas by using prior knowledge to learn new concepts. The instructional materials include tasks where students make connections among mathematical ideas in an authentic methodology. Throughout each kindergarten scope, in the “Elaborate” section, there is a section titled “Problem-Based Tasks.” The Problem-Based Tasks in each unit bring academic vocabulary and mathematical ideas into the unit of new learning. The materials also include tasks that require students to recognize and apply math contexts outside of math.

Within each kindergarten scope, three sections directly task students with applying mathematics outside of the classroom: “Life Connection,” “Math Today,” and “Math Story.” Life Connections introduce students to careers and everyday life experiences that highlight the mathematical concepts being learned in the classroom. In the Math Today section, students explore connections and applications of math and other cross-curricular content through interactions with authentic, real-world events. Math Stories support literacy and expand students’ ability to identify the information they need to solve math-related problems. The stories are interactive and prompt students to answer questions as the teacher reads.

The materials provide opportunities for students to make connections within and across math concepts. For example, in the scope related to representing numbers to 20, students engage in an “Explore” activity where they count various collections of objects of up to 20 and then organize their counts by circling groups or by using ten-frames and counting strips. After students have completed the task, they answer a series of questions: “How did you use the counting mat to organize your collection?” “Can you explain how you counted this collection?” “How many groups of 10 are in the number for this collection?” “How many other objects did you count after that group of 10 was made?” “What does the total number look like when it is written?” “How do you say this number?” “Is it easier to find a group of ten when you are counting collections? Why?” These questions help students understand how mathematical ideas interconnect and build on one another; students use their knowledge of one-to-one correspondence and counting to 10 and apply it to making groups of 10 and counting on.

The materials include a grade-level scope list, a Scope and Sequence, and a vertical alignment chart. In the grade-level scope list, teachers can find what TEKS are covered in each scope. The Scope and Sequence shows how to pace each scope over the course of a school year. The Scope

and Sequence is organized by week and includes the scope name and which TEKS to introduce. The Scope and Sequence does not indicate where spiraled TEKS are retaught. The vertical alignment chart gives teachers an overview of how each standard progresses from kindergarten through third grade.

Each scope has a Content Support section that teachers read before introducing the scope to the students. In this section, teachers find which TEKS are covered in the upcoming scope, students' background knowledge, and Coming Attractions. The background knowledge section explains what students have learned in previous grade levels or previous units. For example, in the "Represent Numbers to at Least 20" scope, the background knowledge section explains students' experience with counting and representing numbers in pre-kindergarten. Some examples include orally counting to 30, counting objects up to 10 using concrete and pictorial models, and identifying numbers. The Content Support section then explains how students will build on their prior knowledge in the current scope and identifies what students should be able to do by the end of the scope. For example, by the end of this scope, kindergarteners should be able to identify the associated number when presented with a bundle of tens and some ones. Coming Attractions describe how the skills learned in this scope progress in first through third grade. For example, in first grade, students apply their prior knowledge from this scope to use concrete and pictorial models to compose and decompose numbers to 120.

In the kindergarten unit covering money, Content Support states that because students in pre-k have not been formally introduced to money, they should have some life exposure to it, and they should also be aware that money is used to buy things. It also states that students should have experience in using play money to buy things from pretend stores in classroom centers and that, in kindergarten, students will work to identify coins based on their physical appearance; students will be able to identify the purpose of money and how it is used. The end of the document explains how money and coin knowledge will be used in first, second, and third grade. In first grade, students continue to identify coins and learn the coins' value; students also represent money with the cent symbol and practice their skip counting using the values of the different coins. In second grade, students work to determine the value of a set of coins up to one dollar and represent the amount using either the cent symbol or the dollar symbol and the decimal point. In third grade, students determine the value of a collection of coins and bills.

Each scope has a section titled TEKS Unwrapped, where teachers can view a dissected version of each TEKS in the scope and an explanation of the verbs and nouns found in the standards. This section also includes a vertical alignment document that lists how the skills taught in the current scope progress into upcoming grade levels. For example, in the "Money" scope, students must identify U.S. coins by name, including pennies, nickels, dimes, and quarters. The TEKS Unwrapped section provides teachers with a dissected version of the standard, which explains exactly what students should be able to do by the end of the scope. It highlights the verb *identify* and explains that students should be able to recognize or name each coin. The nouns that are highlighted from the TEKS are *U.S. coins*, *penny*, *nickel*, *dime*, and *quarter*. The

vertical alignment section shows that in first grade, students are expected to identify U.S. coins by name and by value and describe the relationships among the coins.

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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 materials meet some of the guidance bullets; however, some of the guidance bullets are only partially met. The tasks are designed to engage students in the appropriate level of rigor as identified in the TEKS and as appropriate for the development of the content and skills. The materials clearly outline for the teacher the mathematical concepts and goals behind the tasks. Each lesson plan provides teachers with the objective for the lesson, procedure and facilitation steps, prompts to use during the lesson, and instructional support for students struggling to meet mastery. The "Content Support" section provides teachers with students' background knowledge, common misconceptions, and skills students need to demonstrate to meet mastery. Each Explore provided in a scope integrates contextualized problems, as well as all the elements under the Elaborate section. Problem-Based Task and Life Connections provides students the opportunity to apply math knowledge and skills to new and varied situations. The materials provide teachers with many prompts for questions to ask students and even possible student responses. In the STEMcoach in Action component, administrators and teachers are provided with professional development to guide teachers on how to begin the facilitation of quality classroom discourse. The "Building Scientific and Mathematical Understanding," "Facilitating Questioning and Discourse," and FAQ sections in the STEMcoach can be used to determine what the students, teachers, and administrators should both do and see in the classroom.

Evidence includes but is not limited to:

The tasks in the material are designed to engage students in the appropriate level of rigor as identified in the TEKS and as appropriate for the development of the content and skill. Throughout each scope, there is an increase in depth and complexity. The design of the instructional material begins with an “Engage” activity to hook students. The Engage activities guide the teacher in asking thought-provoking questions. As the lessons advance toward the “Explore” portions, there is a higher level of questioning and rigor. The Explore tasks in each scope are scaffolded in a way that guides students through CRA tools, models, and understanding with increasing depth and complexity. Students have opportunities to use concrete and pictorial models to demonstrate their thinking in the Explore tasks. As students progress through the Explore tasks, they begin to demonstrate their knowledge through abstract models. For example, in the kindergarten scope related to joining and separating, students are working on the following TEKS: K.3A—Model the action of joining to represent addition and the action of separating to represent subtraction; K.3B—Solve word problems using objects and drawings to find sums up to 10 and differences within 10; and K.3C—Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences. In the materials, students start with composing and decomposing numbers to 10; then, they progress to comparing numbers; eventually, they progress into joining and separating. This process is repeated after mastery, with the goal of mastering these tasks up to 20. Students first use counters to concretely represent problems with cubes, then draw pictures, and then use number sentences. This follows the CRA model to allow students to get a deep conceptual understanding of number sentences.

The materials clearly outline the mathematical concepts and goals behind each task for the teacher. They include explanations of the mathematical concepts and goals behind each scope and serve to build teacher content knowledge. For example, each scope includes a Content Support document to explain the TEKS that will be covered in the scope, background knowledge that students will be coming with, misconceptions and obstacles that students may have during the scope, terms to know in the scope, specificity in content that students will gain throughout the scope, and how the information learned in the current grade level will be reinforced and elaborated on in future grade levels. Each scope also includes a document titled “TEKS Unwrapped,” which dissects the standards, the key verbs and nouns within the standards, and the vertical alignment with the grade below and above. Additionally, each scope’s “Home” page lays out the student expectations for the entire scope for teachers to review. Below that, there are key concepts in the form of “I can” statements; these can be used as objectives for the teacher throughout the scope. Finally, materials present the fundamental questions for the scope; this guides conversations between teachers and students and provides recommendations of what the students should be able to answer at the end of the scope.

The materials guide the teacher in supporting student discussion and responding to student strategies as they use problem-solving to support skills development. In every Explore activity, the materials provide supporting questions to ask students during the activity, as well as

questions to ask the whole class during the “Math Chat” time after the activity has concluded. The “Scope Overview” explains the “5E + IA” process for each scope. In this overview, a graphic organizer shows the stages of the process and what occurs in each stage for the scope; there is a list of standards, and arrows assist the teacher on the next step. Callout boxes provide suggestions, such as “Once all of the Explores have been taught, go back to the Hook for students to apply knowledge learned.”

The materials integrate contextualized problems throughout, providing students the opportunity to apply math knowledge and skills to new and varied situations. Materials provide “Hook” activities; these include tasks posed within real-world contexts that are meaningful for students. Each Explore lesson has a scenario that is familiar to most students. For example, in Explore 1 of the “Personal Financial Literacy” scope, students learn about the differences between wants and needs. The teacher reads a scenario about a boy who has to clean his messy room before he can go outside and play with his friends. The boy’s mom gives him two baskets and tells him to sort his mess into the needs basket and the wants basket. If he keeps letting his room get messy, she will take away the objects in the wants basket until he can earn them back. Students are prompted to help the boy sort his mess before he can go outside and play. Using a story mat that depicts the boy’s messy room, students work with a partner to mark the wants and needs in the picture. Then, students complete a picture sort independently to demonstrate their knowledge of wants and needs. “Math Today” activities are located in the “Acceleration” section. In these activities, students explore real-world connections and applications of math content through media provided by the *Associated Press*.

The materials provide support to teachers on lesson modification with relevant context for students who are English Learners. Within the Explore activities, materials suggest the teacher use modeling and sentence stems to support students as they work to respond. Also, a parent letter to be sent home at the beginning of each scope provides information on the concepts being taught in class and a choice board of activities so families can practice the concepts at home.

The materials provide teacher guidance on anticipating student responses and strategies as students practice questions and tasks. Before starting each scope, the teacher can read about the misconceptions and obstacles that could be encountered prior to teaching the concepts. Throughout the materials, in each lesson, there are embedded sample guiding questions. Within every “Assessing Prior Knowledge,” “Foundation Builder,” Hook, and Explore activity, the materials provide possible student responses next to the questions that teachers can ask. These student responses are typed in red so they can be spotted during the planning phase. Each Explore lesson introduces students to a new strategy that can be used to answer questions and tasks. The strategies introduced in the lesson plans are appropriate for the grade level and task students are expected to complete. By the end of the scope, students have learned multiple strategies they can use to problem solve. Students use different strategies they have learned throughout the scope on a “Skills Quiz” at the end of the scope.

In the Content Support section of each scope, there is a portion titled “Misconceptions and Obstacles.” This section outlines common misconceptions and areas that students may struggle with as they progress through the scope. For example, for the “Three-Dimensional Solids” scope, materials list a possible misconception: “Students may transpose two-dimensional terms with three-dimensional terms, such as using the term side for 2D polygons when referring to an edge on a 3D solid.” They also list an obstacle: “Students may not know that a square is a rectangle.” Teachers can find ideas on how to combat these misconceptions in the materials’ explanation of the current scope. For example, kindergarten students are expected to identify 2D shapes within 3D shapes. To prevent students from naming 3D solids by their 2D attributes, students are encouraged to explore the different 2D shapes that make up a 3D solid. Teachers can give students opportunities to trace or stamp out the faces of 3D solids into clay to help students identify the 2D shapes and see that the 2D shapes create the 3D solid.

The materials sequence anticipated strategies in order of strategy sophistication so that teachers know how to push students from one strategy to the next. The Explore lessons begin with students learning new concepts with concrete materials. In these early stages, students can also use pictorial models by illustrating the concrete model they used to solve the problem. As students progress, they move toward using only pictorial models and representing their answers in an abstract way. The Content Support section also provides two additional teacher guidance pieces. There is guidance for appropriate grade-level strategies and the sequence of the strategies. This section also provides examples of vocabulary, strategies, and detailed statements of what the students will be learning in that particular scope. Materials provide information on what is developmentally acceptable at this age. They encourage teachers to allow for lots of practice and listening, especially in counting forward and backward in sequence, and to only provide material and manipulatives for students who need it as they progress through the CRA model.

The materials partially provide teacher guidance in preparing and facilitating strong student discourse grounded in the quality tasks and concepts. Each activity has an outlined facilitation piece with step-by-step instructions and questions that teachers should ask. The “Home” page of each scope lists the overarching fundamental questions for that scope. The Explore activities provide possible student responses to teacher questions and questions that can be asked after the students have responded. The materials do provide instructional support on how to support a student with misunderstandings, and Small Group Intervention is available to break down the concepts when students misunderstand a concept. Also, after the teacher completes the Observation Checklist, the teacher is guided on how to direct students when there is misunderstanding.

The provided “Teacher Toolkit” contains a section titled “Communicate Math,” which provides information on the importance of discourse within the math classroom and expectations for the K-2 classroom. Some of these expectations include modeling discourse interactions for students to have a clear understanding of what discourse is and what it sounds like; providing sentence stems to help scaffold language; including a variety of approaches to convey knowledge, strategies, justifications, and conclusions; allowing adequate wait time after asking

a question or hearing a response; and ensuring each student contributes to the discussion with clear and organized thoughts and ideas. The “Daily Numeracy” component of the program encourages students to participate in a daily math talk. Daily Numeracy is a 15-minute class meeting where students share connections and mental strategies used to solve problems. The program provides slides with numeracy activities that reinforce skills such as counting, patterns, and guess-the-number. Teachers choose a topic they want to discuss with the class, show the slide, and use guiding questions to facilitate the discussion. The program provides teachers with how this should look in the classroom, examples of guiding questions, and how students should respond to the questions.

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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.

Meets 4/4

The materials include guidance for teachers on the structure and design of the “Fact Fluency” scope. The materials include a cohesive, year-long plan for students to develop fluency in an integrated way. However, the fluency activities are completed in isolation as opposed to being integrated into the lessons. Fact Fluency is its own scope that can be used in daily instruction at the teacher’s discretion. The content in the Fact Fluency scope is sequenced so that students can make connections across and between strategies. The components of the Fact Fluency scope give students opportunities to practice the skill in multiple ways. Students are assessed at the end of the scope using an online assessment.

Although materials provide several fluency activities for each scope, there is no evidence of differentiation or guidance for teachers on how to evaluate or track student progress. The Fact Fluency scope is the same in grades K-2. This includes mini-lessons, stations, games, and assessments. Materials do not build upon skills in each grade level; instead, skills are retaught using the same materials. There is no evidence of grade-level fluency expectations, tools to monitor students’ fluency, or interventions/extensions for students who are struggling or who have mastered the fluency activities.

Evidence includes but is not limited to:

The materials include teacher guidance and support for conducting fluency as appropriate for the concept development and grade. Teachers are provided guidance on how to evaluate or track student progress through the use of the Observation Checklist and Show-and-Tell.

The scope list provided for each grade level suggests that fluency activities should be taught to students from October to May during the course of the school year. The materials' mathematics program uses a four-part process to ensure students get the most out of their time with Fact Fluency. First, materials introduce the strategy through discussion and hands-on manipulation. Next, they reinforce the strategy with discussion and visual models. Then, students practice the strategy with discussion and games. Finally, students apply the strategy through discussion, games, and everyday applications. The program utilizes an untimed, online assessment to analyze the students' automaticity. The materials in the Fact Fluency component are sequenced so that students can make connections across and between strategies. The teacher's guide includes procedure and facilitation points on introducing the game as well as questions to ask students with possible responses.

Each scope contains a fluency component within the structure and the design of the fluency practice games; however, there is also no guidance on how much time needs to be spent on fact fluency daily. There is no evidence of guidance on when to assess students or when to use intervention activities for students struggling to meet fact fluency goals. There is also no evidence of intervention for students who are not mastering math facts.

The materials include a year-long plan for building fluency as appropriate for the concept development and grade. Each lesson in the fluency component explains how to introduce the new skill and how students should apply the skill independently. The materials provide a year-long plan for building fluency, and evidence on when to introduce fluency activities is listed in the markdowns. In addition, there are recording sheets tied to each fluency activity, and The Observation Checklist is provided to track progress. According to the scope list, the Fact Fluency component should be implemented from October through May. However, there is no evidence of a scope and sequence for teachers to follow for pacing the fact fluency component across the entire school year.

The materials integrate fluency at appropriate times and with purpose as students progress in conceptual understanding. Components of the Fact Fluency program can be integrated into different scopes, and opportunities for mathematical fluency are evident throughout each Scope. "Fluency Builder" activities specific to the content being taught in each scope integrate fluency activities within the development of conceptual understanding. Every scope includes fluency activities and games, used after the introduction of the skill and vocabulary. Students have multiple opportunities to master the skill in the "Explore" and "Explain" portions of the scope. The fluency activities in the "Elaborate" tab provide students with opportunities to apply what they have learned and reinforce the skill in an interactive partner game.

The materials provide students with opportunities to efficiently and accurately solve grade-level tasks by applying their conceptual understanding of number relationships and strategies. Each scope has multiple "Show What You Know" activities where students apply the different

strategies they have learned throughout the scope to demonstrate their learning. When completing tasks at the Explore level, students are encouraged to share their thinking and strategies used when completing the activities. Some prompting questions that students answer include “What strategies can you use to understand what is happening in the problem?” “Can you explain how you solved this?” “Is there a different way to solve this?” and “Is there a math tool that can be used to help solve this problem?”

The materials partially include scaffolds and supports for teachers to differentiate fluency development for all learners. The materials include assessments to assess students as they develop fluency skills in their mathematical understanding and reasoning. For example, at the beginning of every scope, an “Assessing Prior Knowledge” activity allows teachers to determine where students are in their conceptual and fluency understanding. The Explore lessons are scaffolded in a way to increase fluency in each concept. Students begin by using manipulatives and pictorial models to explore new content. By the end of the scope, students move toward written strategies and algorithms. Teachers can use information gathered from the Explore activities to determine if students need differentiated supports for fluency activities. Instructional interventions provided for students struggling to meet mastery include the small group intervention lessons. These lessons are meant to reteach skills introduced in the Explore lessons, not to support students’ fluency skills. In the “Acceleration” tab for each scope, there are “Math Today” activities and a “Connection Station” activity. These activities are designed to take the concepts learned in the scope and extend student knowledge of the concept and fluency. In the Teacher Toolbox, the instructional materials provide a Lesson Planning Guide that gives teachers guidance on how to differentiate all of the activities based on student levels.

If students are struggling to meet the fluency expectations for the grade level, the materials provide supports for teachers to scaffold activities within the scopes that relate to fluency. For example, during Explore activities, teachers receive instructional supports to help students who may be struggling with particular components of the activity. An example of this can be found in the scope related to representing numbers at least to 20. In Explore, if students are struggling to generate sets of concrete objects, the materials recommend giving students counting strips or ten-frames to help organize their counts. Additionally, materials provide interventions within every scope in order to support students who are struggling to grasp concepts. During those intervention lessons, supplemental aids are provided to support students as they acquire fluency skills.

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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.

Meets 4/4

The materials include embedded opportunities to develop and strengthen students' mathematical vocabulary. The materials provide authentic opportunities for students to develop mathematical language. There are opportunities for students to listen, speak, read, and write using academic language. The instructional materials are designed so that the development of mathematical language is scaffolded and students are supported as they learn the new language. Students use their prior knowledge to apply vocabulary words within the "Foundation Builder" and "Hook" activities. There are embedded opportunities for students to develop and strengthen their mathematical vocabulary in "Explore" lessons, class discussions, and "My Math Thoughts" prompts. Materials provide tools and techniques such as vocabulary cards, sentence stems, modeling, and visual supports to help teachers encourage academic talk with students in the Explore lessons and the Math Talk sections. Students apply their mathematical vocabulary in the "Show and Tell" assessments, where they complete performance tasks and explain their thinking. The materials include supports such as picture vocabulary and anchor charts to support the use of academic vocabulary. Explore lessons are scaffolded in a way that guides students from using informal vocabulary to using formal vocabulary.

Students engage in daily math chats to strengthen their vocabulary knowledge. They also practice vocabulary through games played with other students. Additionally, the materials include guidance for teachers on how to scaffold and support students' development and use of academic mathematical vocabulary in context. The "Content Support" document provides teachers with the terms to know in each scope. A parent letter informs parents about how vocabulary words can be applied in different contexts in the real world and at home.

Evidence includes but is not limited to:

The materials include embedded opportunities to develop and strengthen students' mathematical vocabulary. The learning goals, or key concepts as they are referred to within the instructional material, address the development of mathematical vocabulary. Within each scope, a homepage outlines both the key concepts of the scope and fundamental questions that can be used to increase the use of mathematical vocabulary. Teachers can also obtain more information about scope-specific vocabulary in the Content Support section. In each activity, throughout all scopes in the materials, there is a teacher instruction page that provides guiding questions for the application of the vocabulary. Within each scope, the "Accessing Prior Knowledge," Foundation Builder, and Hook activities often embed content-specific vocabulary into the questions and discussions to determine where students are in their vocabulary knowledge. Explore activities provide teachers with the facilitation to attach academic vocabulary to the students' experiences. Each Explore activity includes discussion prompts for the teacher to help guide students in communicating their thoughts using academic language. Each Explore lesson also has ELPS strategies that support English Learners to acquire new vocabulary. Each scope has a picture vocabulary presentation for teachers to use as a support tool to represent new vocabulary with pictures and student-friendly definitions. Students engage in math chats with every Explore activity, and vocabulary acquisition is embedded within those classroom conversations. The My Math Thoughts sections provide students with the opportunity to complete sentence stems using academic vocabulary that is given in a word bank. The questions and word problems provided throughout the My Math Thoughts activity use precise mathematical vocabulary consistently and frequently. Students' knowledge of academic vocabulary is assessed in the Show and Tell assessments, where students must understand and use precise mathematical language as they respond to prompts.

The materials provide scaffolding suggestions to support students with the development and use of academic vocabulary in context. The design of the lesson follows the "5E + IA" design model; lessons start with "Engage" activities, which build on prior knowledge and develop an anticipatory set; lessons progress to Explore activities, where teachers use dialogue to introduce new vocabulary through hands-on learning and within the context of the mathematical concepts. This model is consistent throughout the instructional materials. The "Explain" portion of the 5E model dedicates several parts to the direct teaching of new academic vocabulary. In the "Anchor Charts" portion and the "Picture Vocabulary" portion, students can listen to new academic vocabulary in context with the new material.

The instructional materials include ELPS strategies, which include sentence stems for language development and the use of academic language. The sentence stems are consistently embedded in every Explore activity throughout the instructional materials. Following Explore activities, to scaffold the use of academic vocabulary, there are Math Chats. Teachers prepare sentence stems and place them in a visible spot for students to use during the chat. Within each scope, a Picture Vocabulary section is located under the Explain tab. This provides students with an academic math vocabulary word and a picture that represents the definition. The instructional materials provide the option for teachers to print picture vocabulary cards; they can be used on a math word wall. Teachers can also virtually assign cards to students.

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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 multiple opportunities for students to apply mathematical knowledge and skills to solve problems in new and varied contexts. They provide opportunities for students to solve grade-appropriate real-world scenarios through the application of their knowledge and skills. They also include opportunities for students to integrate their knowledge and skills by solving real-world problems in various situations. Students have the opportunity to use mathematics efficiently in real-world problems through “Engage,” “Hook” activities, “Explore” activities, “Problem-Based Tasks,” “Life Connections” activities, “Math Stories,” and “Spiraled Reviews.” Each Explore lesson is embedded with a new, real-world topic that is developmentally appropriate for grade-level students. The lessons require students to integrate knowledge from previous Explore lessons to problem solve. When students interact with the “Accelerate” activities, they use their knowledge and skills and apply them to real-world scenarios that are related to cross-curricular content; “Math Today” activities and the “Connection Station” activities also apply math to real-world events.

The materials include a variety of different activities that require students to solve math problems in real-world scenarios. In Problem-Based Tasks, students work collaboratively to apply the knowledge and skills learned in the current scope to solve open-ended, real-world challenges. Students have the opportunity to integrate knowledge and skills they previously learned in the current scope and previous scopes in order to solve new problems. The materials provide students with opportunities to analyze data through real-world problems within the “Data Analysis” scope. Each activity that students engage in connects them to a real-world scenario in some context.

Evidence includes but is not limited to:

The materials include opportunities for students to integrate knowledge and skills together to successfully problem solve and use mathematics efficiently in real-world problems. Within each component of the “5E+IA” model, students engage with real-world problems in multiple contexts. Each scope in the instructional materials begins with an “Accessing Prior Knowledge” activity and a “Foundation Builder” activity. In these activities, students solve real-world problems based on prior knowledge from early childhood outcomes and pre-kindergarten guidelines. Within the Engage component, students participate in a Hook activity that relates the new skill to a real-world concept. Within each scope, Explore activities require students to solve scenario-based story problems using concrete and representational methods. Each Explore lesson is embedded within a new real-world context that is developmentally appropriate for kindergarten students. Each Explore lesson also has a different scenario that requires students to integrate knowledge from previous Explore activities to find a solution to the new problem.

Each scope uses the knowledge from the previous Explore in order to support students to solve the problems in the new Explore activity. As students progress through the Explore activities within each scope and within the scopes throughout the year, they integrate knowledge and skills to make sense of specific contexts and solve problems. For example, in the scope related to comparing numbers to 20, students progress through four different Explore activities. Before students engage in the Explore activities, the teacher completes the “Skill Basics” lesson to ensure that students know how to use a number line and a hundreds chart to compare numbers. Once students have completed that, they begin by comparing sets with large differences and then move to generating a number that is more or less. After this, students move to the Explore that asks them to compare sets with small differences. Finally, students explore the concept of comparing written numerals. These Explore activities integrate the knowledge and skills from the previous activities to support students as they move through their conceptual understanding of comparing numbers to 20. In addition to the Explore activities, the materials include a variety of activities that require students to use their skills to solve different real-world scenarios. In Problem-Based Tasks, students work collaboratively to apply the knowledge and skills they have learned in the current scope to an open-ended, real-world challenge. Math Today lessons provide real-world videos and images that relate to the scopes.

The materials provide students opportunities to analyze data through real-world contexts. Students analyze data through real-world contexts in the Data Analysis scope for kindergarten. Students engage in five different Explore activities related to analyzing data in real-world contexts. For example, students create a real-objects graph using snack crackers; in another task, they create a picture graph with images of buttons. Students must then draw conclusions based on the data in their graphs. In addition to the Explore activities, the materials include opportunities for students to analyze data from real-world contexts in the Life Connections activities. Life Connections activities introduce students to careers and everyday life experiences that highlight the math concepts taught in the scope. In the Data Analysis scope, students watch a video that highlights the job of a zoologist working on a bird habitat. After the

video, the teacher facilitates a discussion about the video, asking questions such as “How does a zoologist sort and organize data in their job? Why is sorting animals into categories helpful for a zoologist?” Next, students pretend to be zoologists in charge of the bird exhibit. Their job is to collect the correct number of birds and create a graph to show the data. After students create their graph with pictures of different birds, they identify which bird they have the most and fewest of and how many total birds the zoologist saw.

Also in the Data Analysis scope, students participate in a Problem-Based Task: They are enlisted to help their teacher pick a shape for the classroom logo that will go on their field day shirts. Students survey their classmates to collect data on whether the class is voting on a circle, a triangle, or a square to be the logo. Then, students create a picture graph based on the results. Students also engage in a Math Story titled “Planning the End-Of-Kindergarten Celebration.” Using this story, students are taken through the process of planning a party with a class. The story embeds picture graphs; students analyze the data as they read the story. Students also look at surveys conducted within the story and create a picture graph based on the data. At the very end of the story, students interview their classmates and create a graph based on the data they collect. In the Connection Station activity, students make connections with social studies standard K.10D, which states that students are expected to use voting as a method for group decision making. Students ask their classmates to vote for their favorite ice cream flavor and then create a picture graph to represent their data. Finally, students analyze the data by completing the provided sentence stems.

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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.

Meets 4/4

The materials include cited research in the curriculum that supports the design of the materials and the teacher and student resources. Materials are supported by current and relevant research on how students develop mathematical understandings. The research is cited and is linked to the publisher's design model and recommendations. The "Math Research and Philosophical Approach" document provides educators with an explanation of research used to design the program and where the research-based materials can be found within the program. The "Content Support" section provides teachers with research-based guidance for instruction that enriches their understanding of mathematical concepts. Cited research is current, academic, and relevant to skill development in mathematics. Teachers can find support for teaching the process standards in the "Teacher Toolbox." A bibliography is present.

Evidence includes but is not limited to:

The materials include cited research throughout the curriculum that supports the design of teacher and student resources. The "Math Research and Philosophical Approach" document, located in the Teacher Toolbox, cites research to support the design of the teacher and student resources. Some of the topics in this document include conceptual learning, number sense, computational fluency, and learning in a real-world, relevant context. There is a research summary, excerpt, and "Math Element" for each topic of design. For example, the document describes the program's concrete-representational-abstract (CRA) approach. First, it explains the research studied regarding the CRA approach and how it benefits students' learning. It

states that when students are first learning a new skill, they should use carefully selected concrete materials to develop their understanding of the new concept. Next, students begin to use pictorial representations that mirror their work with concrete models. Finally, students learn to translate these models into abstract representations using symbols and algorithms. This summary of the CRA approach to learning is supported with citations from *Special Connections*, 2005.

The materials embed the “Process Standards” within every scope and activity. In the Teacher Toolbox, for every process standard, materials provide the research, the meaning behind the standard, and how to apply it within the materials. For example, the materials address the process standard related to communicating mathematical ideas and their implications. The materials provide information on understanding the standard, along with relevant research from the National Council of Teachers of Mathematics (NCTM) and Van de Walle. The materials cite the research provided from the field of mathematics and explain how that research applies to the components of the materials. After describing how the process standard can be used within grades K-5, at the end of the description, the materials provide a summary. This summary includes a research statement from Van de Walle in addition to the overall summary and views of the materials.

The materials provide research-based guidance for instruction that enriches educator understanding of mathematical concepts and the validity of the recommended approach. In the Teacher Toolbox, there is a “Research and Philosophical Approach” chart that links the research with sections of the publisher’s “Math Elements.” The summary of the “Fact Fluency,” “Explore,” and “Decide and Defend” portions of the program quotes Marilyn Burns’ book *About Teaching Mathematics* (2007). The discussion on using picture vocabulary to attach new worlds to prior knowledge and basic communication using academic vocabulary references Vygotsky (1962) and ACSD (2008). The embedding of the ELPS strategies and the Explore activities are supported by Francis, Rivera, Lesauz, Kieffer & Rivera (2006). For example, materials provide the rationale behind including conceptual understanding and number sense. They state that students are more likely to retain and apply mathematics if they understand how and why different procedures work. Establishing conceptual understanding and number sense routines helps students understand the “why” behind other mathematical concepts. This philosophy about conceptual understanding and number sense is justified with a citation of Marilyn Burns’ *About Teaching Mathematics* and Laney Sammons’ *Guided Math*. Additionally, the mathematics instructional philosophy document explains the program’s Math Elements that support conceptual understanding and number sense.

Also in the instructional philosophy document, materials provide the rationale behind the importance of teachers’ and parents’ content knowledge as it can be found in the instructional materials. The materials state: “The ability of teachers and parents to help students understand math is limited by their own basic understanding.” The materials explain that many parents and teachers learned math differently from how it is currently taught and that it is important to provide them with content knowledge. The materials cite research conducted by the NCTM and

Marilyn Burns' text *About Teaching Mathematics* to justify their philosophy about the importance of content knowledge for teachers and parents.

The cited research is current, academic, relevant to skill development in mathematics, and applicable to Texas-specific context and demographics. The research cited in the materials includes sources that are well-known for research and practice in the field of mathematics. Many pieces of cited research are published by the NCTM, which, according to their website, is the world's largest mathematics education organization. Additionally, the research resources provided include many current articles and publications that address current mathematics teaching. For example, research surrounding the ideas of promoting equity within the mathematics classroom includes research published by Boaler and Staples in 2008, research published by Boaler in 2016, and research published by the NCTM in 2012. The materials were created by Rice University, located in Texas, after the success of the publisher's science program. According to the "New Teacher Navigation Guide," the materials were developed by teachers, for teachers.

A bibliography is present. Materials on research listed in the instructional philosophy document contain a bibliography citing several researchers and organizations, including Marilyn Burns, Jo Boaler, the NCTM, and Laney Sammons. There is also a bibliography that cites research presented throughout the instructional materials, which can be found in the Teacher Toolbox. Additionally, at the end of each component dedicated to the mathematics process standards, the materials cite the research and resources used in the rationale and explanation.

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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 guide students in developing and practicing the use of a problem-solving model that can be transferred across problem types. The materials include high-quality examples for developing and implementing problem-solving while providing adequate resources for the teacher. In “Skill Basics” lessons, students learn the problem-solving model they will use throughout the scopes and when solving problems. The materials also prompt students to variously apply a problem-solving model in context throughout the year. The “Content Support” and “Process Standard” documents provide teacher guidance on problem-solving models as well as support and prompt student reflection on approaches to problem solving. After teachers introduce the problem-solving model, materials prompt them to create an anchor chart to post in the classroom for students to quickly reference each step in the model. After each “Explore” lesson, the teacher facilitates a “Math Chat” where students discuss their learning and share how they solved the problem.

Evidence includes but is not limited to:

The materials guide students in developing and practicing the use of a problem-solving model that is transferable across problem types and is grounded in the TEKS. The materials state that teachers should provide opportunities for students to analyze given information, formulate a plan or strategy, determine a solution, and justify and evaluate the process or strategy and reasonableness of a solution. Additionally, the materials state that students need multiple opportunities to share in pairs, small groups, or with the whole class in order to have the opportunity to challenge or argue a solution or strategy. Students develop problem-solving skills in each Explore activity throughout the instructional materials. Each scope provides

several Explore activities; they focus on problem-solving through the use of concrete and representational models. Students practice these skills in the Skill Basics activities embedded in each scope. In Skill Basics, for example, students practice using a ten-frame, a hundreds chart, or a number line as tools to problem solve.

Each scope has a “Problem-Based Tasks” section that poses a real-world problem that students must analyze. Students formulate a strategy with a group, create a problem-solving model, and then determine and justify their answer through dialogue with their group. Each Problem-Based Task also has a “Think About” question that requires students to reflect on the reasonableness of their response and elaborate on other ways that they could have solved the problem. Math Chats also help guide the students to reflect on the strategy they used and to justify their answers.

The materials prompt students to apply a transferrable problem-solving model. Within each scope, in the “Explain” tab, materials provide descriptions and examples of usable anchor charts. The class creates the anchor charts together and uses them as a reference tool throughout the scope. Each scope in the instructional materials includes an anchor chart example that models problem-solving and can be used as a quick reference for students. In addition, each Explore activity in the instructional materials comes with a “Student Journal.” The journal prompts students to apply the problem-solving model they are learning within that lesson. In most instances, there is a template of the problem-solving model in the Student Journal. The Explore lessons include guiding questions for teachers to use to support students in learning the model.

The materials provide guidance to prompt students to reflect on their approach to problem solving. In the “Hook” activities within the “Engage” component of the materials, students are asked to consider what they already know, consider what information they need to find out, discuss solutions to the problem, and justify their responses. “My Math Thoughts” are journal prompts that provide students with the opportunity to write out their mathematical thoughts and ideas using several different avenues. These activities prompt students to reflect on their approach to problem solving. My Math Thoughts are in each scope, and students are tasked with using the problem-solving skills taught in the lesson to solve a problem before completing a reflection. The reflection asks students to circle how they feel about different problem-solving skills presented in the unit. The options that students can circle include “I got it!” “Almost there!” and “Not yet!” Questions on different levels accommodate all students as they reflect on what they are learning and how they use strategies to solve their problems. Reflective questioning suggestions include “What did you notice?” “Is there a different way to count out your crackers?” “Is there a math tool you could use?” Although it is not consistent throughout each piece of the instructional materials, there is an opportunity for students to reflect on the problem-solving model that they are using. This reflection seems to focus more on the student’s ability to use the skill as opposed to how effective the skill was as a problem-solving resource.

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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 teachers with examples of how to introduce and explain the correct use of the manipulatives. Within the scopes, the materials provide multiple opportunities for students to learn how to use the various mathematical tools during lessons, including both hands-on and virtual manipulatives. Students can select whether they want to use hands-on manipulatives or virtual manipulatives. Students can also select which manipulatives they want to use when completing the “Math Thought” activities; on occasion, they can also select the tools they want to use during “Explore” activities. Virtual manipulatives are available within most scopes for students to use when completing activities. Material lists are explicitly provided for each scope and each activity, although there is not a specific rationale behind why each manipulative was selected. However, the “Teacher Toolbox” provides information within the process standard regarding intentional tool selection that helps teachers understand why particular tools are selected for different scopes and activities.

Evidence includes but is not limited to:

The materials partially 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. They provide students opportunities to learn to use grade-appropriate tools for solving tasks and understanding concepts. For example, in the scope related to composing and decomposing numbers to 10, students are expected to use tools such as a ten-frame and a rekenrek during the Explore activities. The materials provide a “Skill

Basics” lesson on how to use these tools to prepare students for the following scope activities. This lesson ensures that students use the tools appropriately for solving tasks and understanding concepts. During this lesson, the teacher presents students with a ten-frame and a rekenrek and engages them in a conversation about the name of the tool, what it is used for, and the proper way to use the tool for mathematical concepts. Students have time to set up the rekenrek with counters and to explore how to use the tools with number cards. At the end of the lesson, students have time to discuss how they used the specific tools to model different numbers and complete the activity. Although students are not always allowed to select their own grade-appropriate tool for solving tasks, there is an embedded portion that allows for student choice. Many of the Explore activities are guided and provide teachers with instructions on which tool to provide for students; however, in the “Show What You Know” activities, students apply the knowledge and skills learned during the Explore using the tools they select.

The 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. Most scopes have virtual manipulatives that students can use during Explore lessons. Virtual manipulatives related to the scope are found under the Explore tab. Each virtual manipulative has a video tutorial teachers use to model the correct use of the manipulative. When applicable, Explore activities prompt teachers to “go digital.” This means that teachers can assign each student a virtual manipulative, rather than a concrete manipulative, to use as a support throughout the activity. For example, in Explore 3 of the “Two-Dimensional Shapes” scope, students identify and create shapes based on their names. This lesson includes a virtual geoboard that students can use to create their shapes. The instructional materials also provide an “Interactive Practice” that allows students to use technology to solve real-world virtual problems that are designed to look like a game. The Interactive Practice combines math problem solving and technology in a real-world scenario.

The materials provide teacher guidance on tools that are appropriate and efficient for the task. The instructional materials have a Teacher Toolbox, which contains a portion titled “Intentional Selection of Tools and Techniques to Solve Problems.” This portion provides teachers with some background knowledge on common tools used in various grade levels. Each scope also contains a “Content Support” section on the “Home” page. This section explains which tools are appropriate and efficient for the unit. Each Explore lesson contains a materials list to inform teachers which tools are appropriate and efficient for the task. Each Explore lesson lists how many of each manipulative will be used in the activity and when to use them during the activity. For example, in Explore 1 of the “Compare Numbers to 10” scope, students use linking cubes to generate a number that is one more and one less than a given number. The lesson plan lists that teachers need to prepare 50 white linking cubes and one chenille rod for each station. In this activity, students look at pictorial models of marshmallows on a stick. The white linking cubes represent marshmallows, and the chenille rod represents the stick. Students count the number of marshmallows on the pictorial model and create a concrete model to represent the starting number. Then, students use the linking cubes to create a concrete model that shows one more and one less than the starting number.

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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 provide a variety of opportunities for students to select problem-solving strategies that are appropriate for the work, concept development, and grade. In addition, the instructional materials provide teachers with guidance, support, and general background knowledge on various strategies and their importance. Many activities ask students to reflect on their chosen strategy versus a different strategy; some even ask students to solve one problem using multiple different strategies. The “Content Support” section explains the different strategies students will learn throughout the scope and how to develop the use of those strategies across different activities. Students learn a variety of strategies throughout a scope that can be used to solve a class of problem types. The “Explore” lessons provide students with opportunities to apply multiple strategies to solve a problem.

Evidence includes but is not limited to:

The materials prompt students to select a technique as appropriate for the grade level and the given task. The “Daily Numeracy” component ensures that all students participate and engage as mathematical thinkers. The goal is to empower students to reason with numbers in an accurate, efficient, and flexible way. These activities allow all students to solve problems using mental math strategies. The class gathers as a whole group in a central location where the teacher displays a numeracy activity. The students think about what they see and how they will solve the problem mentally. They then use a discrete sign to notify the teacher if they are still thinking or have a strategy to share. Students articulate their problem-solving strategies by verbally sharing their thinking with the class.

Throughout the instructional materials, materials often guide students to use generalization and abstraction techniques as they explore new concepts and apply them to new contexts. For example, each scope has several Explore activities. These activities prompt students to use various problem-solving skills and techniques. Throughout the Explore activities, facilitation points help teachers guide students as they solve tasks. “Math Chat,” embedded in each Explore activity as a closure, provides opportunities for students to share problem-solving techniques. The materials also support students in the selection of techniques that are appropriate for their grade level. For example, because the instructional design follows the “5E” model, prior to completing the “Explain” portion of the lesson, students explore a variety of problem-solving techniques, including estimation and number sense. The Explain portion of the lesson provides an opportunity for students to showcase their learning and explain their mathematical ideas.

The materials support teachers in understanding the appropriate strategies that could be applied and how to guide students to more efficient strategies. The materials provide support for teachers in understanding which strategies are appropriate for solving tasks within various scopes. The “Facilitation Points” and the Content Support sections before the start of each scope provide guidance for teachers. Materials provide teachers with visuals to help “bridge the connection from concrete model to pictorial model to abstract model” throughout the course of students’ learning, which allows them to solve problems more efficiently. The support document explains where students should be in their knowledge acquisition for the content and the strategies students should be using based on their current level of development and age. For example, in the scope related to joining and separating, the materials state that students should begin exploring this concept through concrete models; this allows students to have hands-on opportunities to model the addition and subtraction using objects they can easily manipulate. Materials state that as students work through the steps of creating their models, the teacher should be writing the numerals on the board as a visual aid. This will bridge the connection from concrete models to pictorial models to abstract models throughout the course of the students’ learning.

The “Mathematics Instructional Philosophy” document, provided within the “Teacher Toolbox,” explains that as students progress through the Explore activities within a scope, they transition from hands-on experiences with concrete objects to representational, pictorial models and ultimately arrive at symbolic representations using only numbers, notations, and mathematical symbols. The layout of the Explore activities and the sequence in which they are taught support teachers as they guide students towards increasingly efficient strategies. In the scope related to comparing numbers to 20, students begin the Explore activities by comparing sets with large differences and using manipulatives, so it is easier for them to see which is larger and smaller. Then students practice generating a number that is more or less using pictorial models on paper. Then students move into comparing sets with smaller differences using pictorial models on paper. Finally, students practice comparing written numerals to move towards more abstract ideas. Within these Explore activities, the teacher has guidance on how to support students to move towards more efficient strategies when comparing numbers within 20.

The materials provide opportunities for students to solve problems using multiple appropriate strategies. In kindergarten, students learn how to use a ten-frame, manipulatives, drawings, and part-part-whole mats to solve contextual addition and subtraction word problems. For example, in the “Compose and Decompose Numbers to 10” scope, students use manipulatives, ten-frames, and story mats to explore the ways to compose and decompose numbers to 10. In Explore 3, students use linking cubes and a story mat to compose and decompose the number 8. After students create concrete models, they draw a picture and write a number sentence that mirrors their concrete model. In the “Join and Separate” scope, students solve part-part-whole word problems with story mats and manipulatives. In Explore 2, students model and solve part-part-whole word problems with manipulatives, draw the result of the word problems, and orally explain the strategies they used to solve. The strategies that students learn in the various Explore activities can be applied to solve a class of “joining and separating” problem types. Within the materials, students consistently come across problems that provide the opportunity to solve using multiple appropriate strategies. For example, every Explore activity opens with a scenario that is related to the concept being practiced. These activities include very little teacher-led instruction and involve students in discovering learning through solving problems. Students are not expected to use just one way of solving problems, and they are provided with time to share their strategies with other students in the class.

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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 materials develop students' self-efficacy and mathematical identity by providing opportunities to share strategies and approaches to a task. The materials are designed so that students complete most activities with a partner or in a group. Students share ideas and learn from each other as they explore new concepts. All students have an opportunity to participate and engage as mathematical thinkers during their collaborative work. The materials include tasks that support students in productive struggle as they learn concepts. The materials also support and guide teachers in facilitating the sharing of students' approaches to problem solving. The "Content Support" document describes how to support students in selecting strategies to solve problems related to the concepts and provides the teacher with multiple question stems and prompts in order to support students both during and after activities. In addition, embedded "Facilitation Points" provide guidance and support for teachers. Materials provide sample responses as an added layer of support for teachers.

Evidence includes but is not limited to:

The materials support students to see themselves as mathematical thinkers who can learn from solving problems, make sense of mathematics, and productively struggle. The "Daily Numeracy" component ensures that all students participate and engage as mathematical thinkers. The goal of Daily Numeracy is to empower students to reason with numbers in an accurate, efficient, and flexible way. The class gathers as a whole group in a central location where the teacher displays a numeracy activity. Students think about what they see and how they will solve the problem mentally. Students use hand signals to indicate if they are still thinking, if they have one strategy, or if they have more than one strategy. Once everyone has at least one strategy,

the teacher facilitates a conversation about the strategies the students came up with. The Daily Numeracy lesson plan describes the environment of the classroom as an accepting and safe sharing environment. Students should feel and believe that it is a risk-free environment where making mistakes and diverse thinking are expected parts of the learning process. For example, in the “Guess the Number” activity, students ask questions using academic language to try and guess a number by eliminating numbers that do not match the clues. Questions provided to the teacher guide a conversation piece that walks through the steps the students took to arrive at their answer. Students also receive tasks to solve in order to struggle productively and learn the content through their experiences. Each scope begins with a “Hook”; it sets the stage for learning a new skill by presenting a problem that students cannot yet solve. Students then move to the “Explore” tasks, where they work in groups to explore concepts through problem-solving.

The materials provide opportunities for students to see themselves as doers and thinkers through the use of scenario-based problem-solving. Each unit or scope has scenarios that the teacher reads aloud or shares with the class; in these scenarios, students imagine themselves in the role of the problem solver. These scenario-based story problems are targeted to reach all students and provide opportunities for all students to see themselves as mathematical thinkers.

The materials support students in understanding that there can be multiple ways to solve problems and complete tasks. Within each component of the scope, students receive tasks designed to allow for multiple pathways to a solution. For example, within the “Engage” component, students complete the Hook activity; they listen to a scenario and determine a solution to the problem in partners. Every scope presents an open-ended scenario to students; students have time to explore the problem and determine a strategy they can use to solve the problem. Students also engage in a “Math Chat” with their teacher and classmates; it provides opportunities for students to see multiple pathways for solving a problem. For example, in the scope devoted to two-dimensional shapes, students engage in an Explore where they sort 2D shapes based on attributes determined by the students. The materials state, “The students will decide how they will sort the objects based on their observations. Encourage students to sort in several different ways.”

“Life Connections” activities introduce students to careers and everyday life experiences that highlight the mathematical concepts they are learning in the classroom. For example, in the scope focused on money, Life Connections highlight the career of a bank cashier. Students discuss why it is important for bankers to be able to distinguish the difference between coins, how bankers use their knowledge of coins to do their work, and whether they would be interested in such a job in the future. These activities relate the math skill to real-world activities and careers.

Materials support and guide teachers in facilitating the sharing of students’ approaches to problem solving. In several instances, the instructional materials encourage the use of divergent solution strategies. This can be seen through the scripted scaffolding opportunities and teacher questioning as students problem solve. Facilitation Points and lesson guidance support

monitoring students as they develop solution strategies. The Facilitation Points also provide sample student responses to guide students as they problem-solve. Sample student responses are written in red throughout the instructional materials, where there are opportunities for students to engage in problem-based tasks and hands-on activities. The Daily Numeracy routines encourage students to mentally solve problems in a whole group setting. Students share how they solved the routine rather than just tell their answer. This allows for students to articulate their steps to clarify their problem-solving process. Content Support provides teachers with possible misconceptions for the upcoming scope and explains how to clarify those misunderstandings.

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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 provide students an opportunity to communicate mathematical ideas and solve problems using multiple representations. The materials prompt students to effectively communicate mathematical ideas, reasoning, and their implications using multiple representations. During “Explore” activities, students communicate mathematical ideas through concrete objects, pictorial models, numerical expressions, and verbal discussion. The materials also guide teachers in prompting students to communicate mathematical ideas and reasoning in multiple representations, including writing and the use of mathematical vocabulary. After each lesson, students communicate their ideas orally through a teacher-facilitated “Math Chat.” Each lesson plan includes prompts for teachers to use to guide students in their learning and to reflect on the activity once it is complete. Each lesson plan includes facilitation points that guide teachers in developing students’ mathematical vocabulary. The “Content Support” documents give teachers suggested prompts in order to engage students in discussion about their mathematical ideas.

Evidence includes but is not limited to:

The materials provide students an opportunity to communicate mathematical ideas and solve problems using multiple representations, as appropriate for the task. In kindergarten, students draw pictures and manipulate objects on a story mat. During Explore tasks, students draw representations and explain their thinking on their “Student Journal” pages. In each scope, the “Facilitation Points” in the Explore lessons guide teachers in asking guiding questions, introducing new vocabulary, and recording ideas on the Student Journal page. These opportunities for students to use representations to organize and show their thinking is evident throughout the instructional materials. Materials instruct teachers to allow time for students to

problem-solve on their own. Once they have had the opportunity to solve and come up with an answer, the teacher asks provided questions to guide the students through their reasoning. Math Chats also provide questions to foster and encourage students to share their thinking.

Additionally, every scope contains an activity titled “Math Thoughts.” In this activity, students receive questions or problems related to the concept they are learning; they must solve the problem and explain their thoughts. For example, in the scope related to composing and decomposing numbers to 10, students receive a picture of eight teddy bears; they are asked to show one way to compose the number 8. Materials provide a sentence stem for students to use to show their thinking. Then, students draw a picture showing a different way that the number 8 could be composed. Finally, in a Math Thought, students communicate how they feel about each concept being taught in that scope. They reflect on how they feel about counting forward to 10 and backward from 10; reading, writing, and representing with and without objects and pictures; knowing how many objects there are based on the last one that was counted; and using objects and pictures to compose and decompose up to 10. In the “Data Analysis” scope, students use a picture graph to answer questions about the graph, use a word bank to fill in sentences, and reflect on their learning by answering questions on the specific skills taught throughout the scope. The picture graph shows data about a person’s pets. Students write the pets’ names with the name number, identify the pet that has the most, and draw a picture to show how they found how many kittens and fish there are all together. A provided word bank contains the words *picture graph*, *data*, *sort*, and *real-life object*. Students use the word bank to complete these sentences: “You can...objects into groups if they have things in common.” “I collected data and created a...using different pictures.” Finally, students reflect on their learning by showing how they feel about each skill in the scope. The reflection questions are, “I can make a real-object graph. I can make a picture graph. I can draw conclusions from a real-life graph and picture graph. I can collect, sort, and organize objects into two or three groups.”

The 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. Teachers receive guidance and specific questions in the Facilitation Points of the lessons. These questions guide students as they participate and explore. After students have completed the lesson, Math Chat questions ask them to share their findings and observations. For example, after an Explore lesson in which students are generating a set of objects, students answer questions like “Is there a different way to count out your crackers?” and “Is there a math tool you could use to help you count the crackers more efficiently?” These questioning types prompt students to think about how they solved. In each Explore lesson, students represent their learning with concrete and pictorial models. The lesson plans provide teachers with prompts to support students’ reasoning with multiple representations.

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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 for students to engage in mathematical discourse in a variety of settings. Students engage in whole group discussions during “Hook” activities as well as during “Math Chats,” after completing “Explore” activities. Students engage in small group discussions during “Problem-Based Tasks” and during some “Elaborate” activities, such as “Fluency Builders” and “Life Connections.” Students also engage in partner discussions during Explore activities, Fluency Builder games, and “Acceleration” activities. The materials integrate discussion throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level. Students actively engage in discussing their mathematical thinking in all components of each scope; teachers model mathematical language, which is built into the conversations. Materials guide teachers in structuring and facilitating discussions as appropriate for the concept and grade level. Teachers receive guidance through the “Teacher Toolbox”—specifically with the process standards and “Communicate” math component. Materials suggest hand signals, possible sentence stems, and questions for teachers to use throughout the scopes.

Evidence includes but is not limited to:

The materials provide opportunities for students to engage in mathematical discourse in a variety of settings. The materials intentionally provide opportunities for students to engage in mathematical discussions in a variety of different groupings. Students have multiple opportunities to engage in discussions with partners, small groups, and the entire class based on the activity and setting of the lesson. Each scope opens up with a Hook activity in which students are given an engagement piece to introduce the scope. Explore tasks encourage small

group time to problem solve. Each lesson provides instructions on how the teacher should group students. Grouping possibilities range from pairs of student groups to groups with five students. While in small groups, the teacher facilitates the Math Chat questions to determine mastery. Throughout the lessons, students share their thinking with a neighbor and also have opportunities for whole group discussion. Intervention and Acceleration tasks are conducted in small group settings, giving students the opportunity to engage with other students and the teacher and have mathematical discussions. In those small groups, students discuss the task with one another and respond to prompts provided by the teacher to move along their mathematical thinking. At the end of the lesson, the teacher orchestrates a whole group discussion with the class based on observations conducted during the small group. The teacher records individual student responses through conversations, journal responses, and “Show What You Know” assignments.

The materials integrate discussion throughout to support students’ development of content knowledge and skills as appropriate for the concept and grade level. Students have opportunities to discuss mathematical ideas throughout the program. Materials provide teachers with specific facilitation points and guiding questions that can be used to facilitate this level of mathematical discourse. Opportunities are embedded with discussions in all phases of concept and skill development. Each Explore lesson includes opportunities for discussion in all phases of the activity. At the beginning of the lesson, the teacher reads a scenario to the class. In groups or partners, students discuss how they will solve the problem. While students are working, the teacher monitors the students and asks guiding questions. At the end of the activity, the teacher facilitates a Math Chat using prompts included in the lesson plan.

For example, in Explore 1 of the “Two-Dimensional Shapes” scope, students explore a series of two-dimensional shapes and three-dimensional solids. They sort the shapes into groups based on their observations. In partners, students receive a bag of shape cutouts (the shapes are regular and irregular 2D shapes). Students discuss the manipulatives with their partners and decide how they will sort the shapes. As students are working, the teacher monitors the class and uses guiding questions to check for understanding. Prompts include “How did you sort your shapes?” “What do the shapes in this box have in common?” and “Is there another way you can sort your shapes?” At the end of the activity, the teacher facilitates a Math Chat where students discuss what they learned in the activity. Prompts include “How did you and your partner sort the objects in your bag?” “Were there some objects in your bag that didn’t seem to fit?” and “What do shapes C and M have in common? How are they different?”

The materials guide teachers in structuring and facilitating discussions as appropriate for the concept and grade level. In the Teacher Toolbox, there is a tab designated for communicating math. Within that tab, teachers have guidance to support students in the elements of discourse, making connections, questioning, representations, and writing. According to the materials, discourse is an oral exchange of ideas or a conversation between two or more students. It provides students the opportunity to share ideas with others in order to solve problems, increase learning, or express opinions. Discourse may take place around mathematical concepts, procedural knowledge, or problem-solving processes and solutions.

Discourse can take place in a whole group setting, small groups, or partner groups. Materials provide teachers with clear expectations in order to facilitate discourse in the K-2 classroom. These expectations include: modeling discourse interactions for students to have a clear understanding of what discourse is and what it sounds like; allowing students to use tools or models necessary to help with their expectations; providing sentence stems to help scaffold language; allowing adequate wait time after asking a question or hearing a response; ensuring each student contributes to the discussion with clear and organized thoughts and ideas; actively listening by making eye contact with the speaker and asking questions; including accurate academic math vocabulary; and presenting and explaining ideas, reasoning, and representations in pairs, small groups, or the whole class.

Each lesson plan includes prompts for teachers to use throughout the lesson, facilitations points on when to ask the prompts, and sample student answers to guide the discussion. The facilitation points instruct teachers to invite the class to a Math Chat to share their observations and learning after the activity. The “Daily Numeracy” component ensures that all students participate and engage as mathematical thinkers. The goal of Daily Numeracy is to empower students to reason with numbers in an accurate, efficient, and flexible way.

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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 teacher materials foster students to justify their reasoning. They also help teachers establish a math routine. Materials provide opportunities for students to construct and present arguments to justify mathematical ideas using multiple representations. Students are able to justify their thinking using concrete manipulatives, pictorial models, equations (when necessary), and oral explanations. Students have the opportunity to justify and defend their thinking frequently throughout the scopes, particularly when completing “Explore” activities. Students can also present and justify their thinking through activities such as “Math Thoughts” and the show-and-tell assessment. The materials also assist teachers in facilitating students to construct arguments using grade-level appropriate mathematical ideas. Question stems throughout the materials help teachers facilitate conversations with students that allow them to justify and defend their thinking. Additionally, in the “Daily Numeracy” scope, provided teacher tools such as hand signals and sentence stems support students as they defend and justify their thinking in a productive way.

Evidence includes but is not limited to:

Materials provide opportunities for students to construct and present arguments to justify mathematical ideas using multiple representations. Problem-solving activities lead students to justify their reasoning verbally and in written form using different methods. Teachers guide students in creating an argument by asking questions while they work and encouraging them to justify their answers with representations they create throughout the activity. In Explore 1 of the “Two-Dimensional Shapes” scope, students explore a series of regular and irregular 2D shapes and sort the shapes into groups based on their observations. Each pair of students receives a bag of regular and irregular 2D shape cutouts. Partners discuss and decide how they will sort the objects based on their observations. Answers to this activity vary based on each

partnership. Students sort their shapes by using the manipulatives and their group's sorting methods. Students then show their work in written form by drawing a representation of how they sorted their shapes in their "Student Journals." As the students are working, the teacher asks guiding questions, and students must justify their answers.

In another example, in the scope related to composing and decomposing numbers to 10, students have the opportunity to show and justify their thinking through multiple representations such as physical body movement, using hands-on manipulatives, drawing pictorial models, and expressing their ideas orally to the class. In the first Explore activity, students practice composing and decomposing the number 6 with objects and pictures. Students use linking cubes to compose the number 6 and then draw their thinking in their Student Journal; afterward, groups must orally justify their thinking to the class. Extension questions include "How is your box of cupcakes similar/different than your neighbors' box?"

The materials assist teachers in facilitating students to construct arguments using grade-level appropriate mathematical ideas. The "Teacher Toolbox" guides teachers on facilitating the process standard of displaying, explaining, and justifying mathematical ideas. According to the materials, this standard focuses on students validating their conjectures and conclusions with displays, explanations, and justifications, with an emphasis on mathematical ideas and arguments. The materials also state that problems provide a context in which students draw conclusions and support mathematical ideas or arguments with their evidence. Within the Explore activities in the scopes, teachers use provided question stems to promote students in justifying their mathematical thinking and processes. Questions include "How did you solve this problem?" "Is there another way you can solve this problem?" "When is a good time to use this strategy?" and "What is similar/different between the way you solve the problem and how your neighbor solved the problem?"

The Daily Numeracy component ensures that all students participate and engage as mathematical thinkers. The goal of Daily Numeracy is to empower students to reason with numbers in an accurate, efficient, and flexible way. After students formulate at least one mental strategy, the teacher facilitates a conversation about the strategies the students came up with. Students first share their ideas with a partner and then with the whole class. Students learn from each other as they listen and respond to their peers' problem-solving strategies. To show that they agree with another student's response, students put their pinky finger and thumb out and shake it back and forth. Teachers also invite students to respectfully disagree with another student's response. The Daily Numeracy lesson plan includes prompts for teachers to use to guide students in justifying their answers. Some prompts include "Explain how you...." "How do you know your answer is reasonable?" "How can you explain this differently?" "Can you justify/defend how you...?"

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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 a variety of diagnostic tools that are developmentally appropriate; for example, diagnostic tests (formal assessments) are given three times a year. The materials also include other formal assessments at the end of each scope, such as the “Show-and-Tell” assessment and the “Skills Quiz.” Additionally, the materials provide informal assessments to help guide teacher instruction, such as observations during prior-knowledge activities and an observation checklist for each scope. The materials provide guidance on the administration of formal and informal assessments. Students have the opportunity to reflect on their understanding of concepts within a scope during the “My Math Thoughts” activity. The materials also provide the opportunity for students to set goals and track and monitor progress on those goals or their mastery of various standards. Diagnostic tools are presented to measure all content standards.

Evidence includes but is not limited to:

The materials include a variety of diagnostic tools that are developmentally appropriate. The materials provide teachers with an array of assessments ranging from anecdotal notes and checklists to formal assessments three times a year. In kindergarten, there are formal assessment tools, such as the “Pre-Assessment,” “Mid-Year Assessment,” and the “Post-Assessment.” Students complete the Pre-Assessment to determine what they remember from the previous year’s standards. This allows teachers to identify knowledge gaps before attempting to build on that knowledge throughout the year. The kindergarten Pre-Assessment assesses students’ knowledge of counting objects, identifying shapes, and length. About

halfway through the year, students complete the Mid-Assessment to monitor their progress and track growth. In the mid-assessment for the kindergarten level, students are instructed to listen to their teacher read the question if they are unable to read it themselves. Students can demonstrate knowledge through oral response, 15 multiple-choice questions, and two drawing questions. Finally, students complete an end-of-year “Post-Assessment” that evaluates all grade-level standards. Each assessment provides class performance analytics, standard analysis, item analysis data, and a personal quantile measure for each student, which can be used to inform instruction. The “Benchmark Assessments” home screen provides guidance on how the assessments function. Informal assessments are noted within the scopes and include facilitation points for the teacher. These developmentally appropriate assessments provide teachers with an accurate assessment of each student’s ability in the scope. Students show their knowledge in a variety of ways, such as journal entries, verbal communication, modeling with concrete manipulatives, formal assessments, exit tickets, and skill-builder assignments.

The materials provide guidance to ensure consistent and accurate administration of diagnostic tools. Each diagnostic tool includes facilitation instructions for teachers to follow as they administer formal and informal assessments. For example, the “Show What You Know” assessments are independent practice assignments that give students an opportunity to demonstrate their learning after scope activities. In the “Data Analysis” scope, students complete “Show What You Know, Part 1: Sorting Objects” after the Explore 1 activity. This activity has facilitation points for teachers to read to implement the assessment correctly. Teachers provide each student with a handout; students are prompted to cut out images of different shapes and sort them into the correct categories. The facilitation points state that this element of the program can be used to assess whether intervention is needed for each student. The assessment also includes an answer key, which teachers can use to accurately grade each handout.

At the end of each scope, an observation checklist guides teachers with facilitation. The materials suggest that as students are working through the Explores for each scope, teachers should take note of what they observe for each standard breakout. The materials also state that this is a good place to document accommodations or modifications used during the Explores and conduct documentation for standards-based report cards. The observation checklist provides teachers with the TEKS covered in the unit and specificity within each TEKS. There is also guidance on which Explore activity can be used to document student mastery of each TEKS and a place to take anecdotal notes as students are working.

The materials include an age-appropriate tool for students to track their own progress and growth. Exit tickets and the My Math Thoughts activity allow students to reflect on their problem-solving. In My Math Thoughts, students self-assess their learning by completing the bottom part of the student handout. They circle how they are feeling about their work in each skill. The three choices that help them reflect upon their learning are *I got it*, *almost there*, and *not yet*; each statement includes a visual of thumbs up, thumbs down, or thumbs sideways. While students can reflect on their understanding of specific concepts within scopes, there are no evident opportunities for students to track their own progress and growth based on

assessment information. Additionally, there is no evident opportunity for students to set goals before scopes and track progress based on the goals that were set.

The materials include diagnostic tools to measure all content and process skills for the grade level, as outlined in the TEKS and Mathematical Process Standards. The instructional materials provide various diagnostic tools, including both informal and formal assessments. Formal assessments include benchmark assessments that can be given three times throughout the year to track student progress. The pre-, mid-, and post-assessments can be administered as a formal assessment. Each assessment provides a blueprint to the TEKS that will be covered on the assessment. For informal assessments, throughout the instruction material, each component of the 5E model provides an opportunity for students to show their understanding of a concept. For example, in the Explore section, there is a “Student Journal” that allows students to record their answers; in the “Evaluate” portion, there is a Skills Quiz that tests the mastery of the skill being taught in that unit.

The “Accessing Prior Knowledge” activities are brief probing activities to gauge students’ prior knowledge before engaging in new content taught in the Explore activities. Each scope includes a Show-and-Tell assessment and a skills quiz. Show-and-Tell assessments are quick assessments graded by a rubric. Students use manipulatives to respond to teacher prompts. The skill quizzes are short, standards-based assessments to determine students’ ability to compute efficiently and accurately. For example, in the “Represent Numbers to at Least 20” scope, students take a five-question quiz that covers TEKS taught in the Explore lessons. Students are required to count objects in a ten-frame and write the number, count objects and write the number, count objects and represent the number in a ten-frame, read numbers and draw a set of objects to represent the number, and read numbers to represent them on a ten-frame.

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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.

Meets 2/2

The materials support teachers with guidance and direction to respond to individual students' needs based on informal assessments and observations in the classroom. The materials include guidance for teachers to analyze and respond to data. Protocols are included for formal and informal assessment, with guidance for teachers on using the data to drive instruction. Assessment and response routines are present within the scopes to address student learning needs. The materials include a variety of diagnostic tools for teachers to use throughout the school year. Assessments include informal assessments such as exit tickets or individual student worksheets. Formal assessments include "Benchmark Assessments," "Show-and-Tell" assessments, and "Skill Quizzes." Each assessment tool includes an answer sheet for teachers to use while they are grading. Some answer keys also state which standard individual questions assess. The materials provide callout boxes or instructions within our markdowns to guide teachers on using the data to plan instruction. For example, at the end of Accessing Prior Knowledge, teachers are prompted to move to the Foundation Builder if students are still not understanding the concept. The program's lesson planning guides assist teachers in knowing when to administer different assessments and how to evaluate and respond to data. The materials include a variety of activities for teachers to use to address the results of student assessments. Each scope includes an "Intervention" section for students approaching grade-level expectations and an "Acceleration" section for students who have mastered grade-level expectations. Benchmark Assessments provide teachers with meaningful data that can be used to inform instruction; the data can be compared with other classes or schoolwide.

Evidence includes but is not limited to:

The 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. Within every unit, a "Content Support" document provides teacher guidance on scaffolding within the scope. A "TEKS Unwrapped" component breaks down the TEKS within the scope and provides implications for instruction and student misconceptions. Each first-grade scope begins with an informal assessment to assess prior knowledge. If a child cannot complete the assessment or is struggling, teachers are guided to reference the "Foundation Builder" to help close the gaps. The Foundation Builder provides the teacher with possible misconceptions and suggestions on how to correct them. The Foundation Builder focuses on students thinking about the strategies used and talking about how they solve problems.

Each "Explore" lesson plan includes instructional supports for teachers to use based on their observations of students as they are working. Explores provide teacher guidance on how to scaffold next steps or instruction based on student needs. The materials also include questions that allow for a variety of strategies for finding the correct answer. Some questions include, "How did you solve this problem?" "Is there another way to solve the problem?" "What strategy is your favorite?" and "What was hard about solving this problem?" Students take assessments at the end of every scope to measure their knowledge of the content that has been taught. Materials guide teachers to use the results of the assessments to determine whether students need interventions or acceleration.

The diagnostic tools yield some meaningful information for teachers to use when planning instruction and differentiation. Benchmark Assessments include an answer key and blueprint for teachers to determine a students' understanding of certain topics. The answer key provides teachers with the answers to each question and which TEKS each question is assessing. The blueprint document lists the topic of each question, the standard each question assesses, and the correct answer for each question.

Each scope has an "Evaluate" section. This section includes three diagnostic tools for teachers to use during the scope to assess students' knowledge of the content covered in the scope. The Skills Quiz is a short, standards-based assessment to determine students' ability to compute efficiently and accurately. Teachers use an answer key to grade each student's responses to determine if the student has any learning gaps on skills in the scope. The answer key provides teachers with correct answers. The Observation Checklist is a list of standard breakouts and where they are found in each Explore. Teachers use this checklist to record anecdotal notes throughout the scope. The Show-and-Tell Assessment is a quick assessment with a rubric. It can be administered individually or in small groups using teacher prompts and manipulatives. Teachers use the rubric to assess students' knowledge of each standard taught in the scope. This rubric provides teachers with information about what standard each question assesses so that they can determine specific skills on which students may need intervention. Based on the

results of these three assessments, teachers determine if students meet grade-level expectations, need small group intervention, or can move onto Acceleration activities.

The “New Teacher Navigation Guide” states that materials include “a robust student data system that allows you to group and organize students based on areas of content mastery, re-teaching needs, quantile scores, and response to individual questions.” While the guide provides information on the data analysis tools that teachers can use after administering the diagnostic assessments, material reviewers do not have access to seeing what this would look like for a teacher and therefore cannot give a review on this component.

The materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data. The materials provide teachers with a variety of suggestions and activities to use to address the results of student assessments. Each scope has an “Intervention and Acceleration” tab, which includes lesson plans and activities based on student performance. The Intervention section of each scope contains supplemental aids and small-group intervention activities specific to the scope. The Acceleration section of each scope contains extension activities for students who have demonstrated mastery of the content being taught in the scope.

As students move throughout the scope, they complete a “Show What You Know” activity after each Explore, which provides the teacher with a quick assessment to measure student understanding of a concept. Based on these results, teachers have guidance on how to plan and implement activities for students moving forward. If students are demonstrating an understanding of the concepts, the teacher has the option to allow them to participate in “Fluency Builder” games, digital interactive practice, game-based activities, problem-based task activities, or “Math Stories” during center time. If students are demonstrating a lack of understanding within a concept, the teacher is provided with small group instruction lesson plans to use in order to support students in closing their gaps.

The materials provide some guidance for administrators to support teachers in analyzing and responding to data. The New Teacher Navigation Guide provides information about data analysis; it suggests using quantile information in order to analyze data for students based on the results of their pre-, mid-, or post-assessments. Administrators are provided their own Administrative Portal in order to analyze data and guide teachers with designing instruction in response to the data. Materials reviewers do not have access to an example of student data based on information gathered from a diagnostic assessment.

Benchmark Assessments provide teachers with meaningful data that can be used to inform instruction in the classroom. The intent of each assessment is to evaluate students’ progress on standards they have already learned. When students submit their answers online, the teacher receives data, which includes standard-specific performance and a quantile measure. Quantile measures can be used to determine a student’s mathematical performance level, assess what content the child is ready for, and track student growth over time. This data can be analyzed for individual students, classes, and schoolwide. While this data is available, there is no guidance for administrators in supporting data analysis and planning future instruction.

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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

Within the materials, there are various ways teachers can collect data, both formally and informally, to assess students' knowledge. There are routine and systematic progress monitoring opportunities that accurately measure and track student progress. The informal and formal progress monitoring activities are grade-level appropriate for a primary-aged learner. Formal benchmark assessments are administered at the beginning, middle, and end of the year. These assessments are standards-based and track student growth from the beginning to the end of the year. Additionally, informal assessments included throughout the materials provide teachers the opportunity to observe and make notes based on student growth and progress. These activities are included in an age-appropriate format and enable students to demonstrate learning through games, discussions, "Math Chats," interactive games, and show-and-tell tasks. Progress monitoring occurs frequently enough to support the teacher in making adequate observations. The monitoring also guides instruction based on student needs, but it does not occur in a manner or frequency that disrupts student learning or overwhelms students.

Evidence includes but is not limited to:

The materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress. There are benchmark tests consisting of 15 questions to be administered three times a year—at the beginning, in the middle, and at the end of the year. There is guidance for the teachers to determine the best frequency for assessing students' progress when using informal assessment. For example, each scope provides an "Exit Ticket" for each "Explore" task and an observation checklist that helps the teacher evaluate students as they work. The observation checklists include a breakdown of the standards taught in the scope, the Explore activities in which teachers can observe the skills, and a section for anecdotal notes. Exit Tickets are embedded after students complete the Explore activities and can be used to monitor progress. In addition, "Student Journals" and "Show What You Know"

activities allow for progress monitoring during informal assessment activities. Materials provide teacher guidance on when to administer assessments in the “Lesson Plan Guides” as well as in the “Scope Overview.” Each scope also has a “Skills Quiz” and a “Show-and-Tell” assessment. These assessments track whether students are able to apply skills learned in the scope to different situations. The Skills Quiz is a short, standards-based assessment to determine the students’ ability to compute efficiently and accurately. According to the lesson planning guides, students complete the Skills Quiz at the end of the scope. Teachers encourage students to respond to questions in both verbal and written form. Students also participate in progress monitoring; within the “My Math Thoughts” exercises, students rate how they feel about each skill with ratings such as *I got it*, *almost there*, and *not yet*. This allows the teacher to see how students feel about their own learning and can alert them to intervene.

The frequency of progress monitoring is appropriate for the age and content skill. The materials include formal benchmark assessments that students take at the beginning, middle, and end of the school year. These assessments include multiple-choice questions and open-ended questions. The pre-assessment is administered at the beginning of the year to determine what students remember from the previous year’s standards. There is no guidance in the “Scope and Sequence” suggesting when to administer the mid-year assessment; however, the mid-year assessment contains a variety of questions, including questions on skills taught in pre-kindergarten and new skills taught in kindergarten. The post-assessment tests students’ knowledge of all kindergarten standards, including but not limited to comparing numbers, solving contextual word problems, and describing attributes of shapes. Students are informally assessed daily through the use of Exit Tickets and Show What You Know activities. According to the lesson planning guides, teachers should use Exit Tickets and Show What You Know activities after each Explore activity to assess student learning. Teachers use data from these informal assessments to provide students with “Intervention” or “Acceleration” activities.

As students engage in stations, such as “Fluency Builder” games and interactive practice games, the teacher makes observations to determine whether students understand the skills they are working on. Students demonstrate their skills through games, peer collaboration, and group discussions. The teacher uses an observation checklist to determine whether students demonstrate mastery of concepts as they engage in the activities. At the end of each scope, students complete a show-and-tell activity, which involves students answering questions through verbal answers, written answers, and manipulation of concrete objects. The teacher makes anecdotal notes and observations through these activities to determine whether each student has mastered each TEKS or component within the TEKS and whether or not the student needs small group intervention or can move on to the Accelerate components.

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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 materials provide guidance and support that help teachers meet the diverse learning needs of all students. Each scope provides targeted instruction and activities for students struggling to master the content and for students who have mastered the content, as well as enrichment activities for all levels of learners. Each scope has an “Acceleration” section, which includes recommended targeted instruction to engage students that have already mastered the content and are ready to apply it in a different way. The “Elaborate” section of the program provides enrichment activities for all levels of learners through “Problem-Based Tasks,” “Interactive Practice,” “Math Stories,” “Life Connections,” and “Fluency Builder” games. Each scope has an “Intervention” section with small group intervention activities and instructional aids for students to use throughout the unit.

Evidence includes but is not limited to:

The materials provide recommended targeted instruction and activities for students who struggle to master content. The materials allow teachers to assess and develop precursor skills by including formal assessment, videos, and hands-on activities. Materials note opportunities for teachers to introduce, reinforce, practice, and apply different levels of learning within the assigned TEKS. Questioning strategies engage students in accessing prior knowledge. “Content Support” details common misconceptions and obstacles that students may face throughout each lesson; there are lists of clearly stated preconceptions, misconceptions, obstacles, and suggested solutions.

In order for teachers to begin meeting the diverse needs of each learner, each scope begins with an “Assessing Prior Knowledge” activity, found in the “Engage” section. Based on the

results of this activity, teachers may use the “Foundation Builder” activity to give students the necessary background knowledge for the remainder of the scope if they are struggling with the concept. In addition, for students struggling to gain a conceptual understanding of an idea, there are instructional supports such as creating an anchor chart to provide a visual and pre-cutting materials for students with fine motor issues. Teachers can also use the Foundation Builder to fill gaps in prior knowledge. Provided interventions allow teachers to address various developmental areas, such as adaptive development, cognitive development, communication development, physical development, and social and emotional development. Within each category, the provided strategies relate to different struggles the student may have.

“Explores” are scaffolded within each unit so that lessons build upon each other. The Explore activities for each scope provide instructional supports, guiding questions, and ELPS strategies to help the teacher support students. The Explore activities are produced in a variety of modalities to ensure materials are meeting the needs of different types of learners; Explores provide manipulatives and activities that allow students to investigate new learning through hands-on application tasks. There is a small group intervention lesson provided within each scope; it contains hands-on activities designed to target conceptual misunderstandings and build existing math skills. Intervention lessons may refer to concepts that have been previously learned in the year or concepts that are currently being learned. These lessons include supplemental aids for teachers to use during small group intervention activities, aids to supplement problem solving, and aids for individuals who are visual learners.

“Hooks” excite and motivate all learners before teaching. Materials include ideas to incorporate graphic organizers such as T-charts and anchor charts. They also provide picture vocabulary cards to maintain consistent vocabulary throughout the learning. Sentence stems provide additional supports. The lesson plan also has a list of possible preconceptions, suggested solutions, and discussion prompts for teachers to use during the activity.

The materials provide opportunities for teachers to give a variety of formative assessments to see where students currently are in their learning and how they need to adjust lessons. Some examples of formative assessments include pre-assessments in the Engage portion of each scope; these provide information on how teachers can fill in gaps in student background knowledge and adjust learning for those who have already mastered a concept. Observation checklists are included in the “Evaluate” portion of each scope. Teachers can write anecdotal notes on student performance so that further learning and small group instruction can be adjusted for students who have mastered the concepts. Within the “TEKS Unwrapped” portion of the instructional materials, there is a vertical alignment document that details the trajectory into the next grade level. Materials also strategically provide interventions and supplemental aids to meet the needs of all learners. Teachers can also assign exercises to individual students as needed.

Activities allow students to apply their learning in different ways and are accessible to students of all learning styles and capabilities. Each scope has an Elaborate section that allows students to extend their learning. It provides ready-made activities that students can engage in during

stations or rotations; there are tasks that encourage the use of academic vocabulary, Fluency Builders, and Problem-Based Tasks. As students engage in these activities, teachers can pull small groups of students who have mastered the content and are ready for further projects or activities. Life Connections and Math Stories extend the students' learning through literature and real-world connections. "Show-and-Tell" tasks allow for evaluation; there are provided rubrics and observation checklists. Interactive practice for all levels of learners is included in the form of digital games that address skills using games and technology. Problem-Based Tasks can be conducted independently or collaboratively; these allow students to solve a challenging, meaningful problem in a real-world context. Students can also engage in Fluency Builder games with a partner. These opportunities provide all students the chance to practice the concepts learned in the scope either as a whole class or individually.

The materials also allow for enrichment opportunities. Materials provide an array of activities to extend student learning with project-based exploration in each scope. Within each scope, the "Acceleration" and "Extend" sections recommend ways to enrich learning through station activities and connections to authentic, real-world events. These activities can be used to extend the lesson to maximize learning potential. The Acceleration section has different activities to engage students who have already mastered the concepts in a given scope. The "Connection Station" activity provided in each scope aligns with a kindergarten science or social studies standard; students engage in a task that encourages them to use math skills in a science or social studies context. In "Math Today!" students explore real-world connections and applications of math and other cross-curricular content through interactions with authentic, real-world events and media provided by the *Associated Press*.

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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 materials provide a variety of instructional methods that appeal to a variety of learning interests and needs. Students are engaged in mastery of the content through the use of concrete objects, pictorial representations, abstract representations, exploration activities, partner games, real-world applications, connections to literature, and virtual games and manipulatives. The “Explore” lessons are designed so that students practice new content in multiple ways, such as through using manipulatives, working with a partner or in a group, or completing a task individually. The materials use developmentally appropriate activities such as picture vocabulary, anchor charts, and teacher modeling. The materials support developmentally appropriate instructional strategies, such as starting with concrete objects and moving to pictorial and abstract representations, engaging students in exploration, and giving students the opportunity to work in small groups. The materials support flexible grouping and multiple types of practices; students have multiple opportunities to complete activities as a whole group, in small groups, with partners, or independently.

Evidence includes but is not limited to:

The materials incorporate a variety of different instructional approaches throughout every scope. Each scope begins with a “Hook” activity, which engages and motivates students. It also sets the purpose for learning the new content in the scope. Before teaching the corresponding Explore activities, teachers use the “Pre-Explore” lesson from the Hook to engage the students in the new content in a hands-on way. After teaching all of the Explore lessons, teachers use the “Post-Explore” activity in the Hook to revisit the activity and solve the original problem with

the new skill. An example of the different instructional approaches used can be found in the “Compare to 10” scope. Teachers use the Hook activity titled “Counting Watermelon Seeds” to engage students in the new content. In the Pre-Explore activity, students are presented with a real-life example of finding one more and one less than the number 6. Each student receives a bag of ten black beans, which represent the watermelon seeds in the problem. Students use the black beans to try and solve the problem independently. After teaching the Explore activities, the teachers use the Post-Explore activity to revisit the question. Students apply their new knowledge to solve the original question of finding one more and one less than the number 6.

The Explore lessons are designed so that students are able to practice new content in multiple ways. The Explore activities are all teacher-facilitated; students work in partners or groups, often using manipulatives or other instructional supports to solve a problem. Lesson plans list necessary manipulatives, reproducibles, and visual aids for each activity. For example, in Explore 1 of the scope “Two-Dimensional Shapes,” teachers facilitate a whole group lesson where students sort regular and irregular 2D shapes. Students work in partners to sort cutouts of regular and irregular 2D shapes into four groups. After they sort their shapes, students ask their partners to check their work for any errors. When their work has been checked, students use a handout to draw how they sorted their shapes. After the activity, the teacher facilitates a “Math Chat,” where students share how they sorted their shapes and other observations they made during the activity. This lesson plan uses a whole group model, partner work with manipulatives, independent practice with a worksheet, and a class discussion to introduce students to attributes of 2D shapes.

The materials support developmentally appropriate strategies. There is clear guidance to support teacher understanding of developmentally-appropriate instructional strategies as they guide the students through the “5E+IA” process. The “Scope Overview,” found on the “Home” tab, displays a flowchart of how the 5E+IA portions work together to ensure all learners are supported. Also, on the Home tab of each scope, “Student Expectations” and “Key Concepts” provide an overview of the learning expectations. “Content Support” provided for each scope lists information such as background knowledge, misconceptions, obstacles, and strategies to support the teacher in delivering instruction. “Vertical Alignment” provides information to the teacher about the logical progression of the TEKS and how concepts are built upon for the next grade level. “What Should Students Be Doing?” found in the “TEKS Unwrapped” section ensures students are progressing appropriately. Each scope also contains step-by-step instructions for teacher modeling. Across the instructional materials, teachers find modeling and sample think-aloud questions, with sample student responses noted in red. For example, in the “Money” scope, teachers ask the question “How are pennies and dimes different?” while displaying the two coins. The “Picture Vocabulary” section, provided for each topic, provides added language support; it contains image or pictorial support for new academic language. “Foundation Builder” lessons are used at the teacher’s discretion before beginning a new unit. Teachers use this lesson plan if there are noticeable learning gaps after assessing prior knowledge. In these activities, teachers model important skills necessary for the upcoming scope while also giving students time to problem solve on their own. Students then begin the scope in the “Engage”

phase; the teacher uses this component to increase student engagement through exploration and open-ended questions. Once student engagement has been obtained, the teacher moves into the Explore component, which gives students the opportunity to build their knowledge through hands-on activities that promote understanding of new concepts. In the “Explain” tab, each scope has a slideshow with picture vocabulary and anchor chart examples. Each Explore lesson plan includes teacher support for students struggling to master the material and ELPS strategies.

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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).

Partially Meets 1/2

Within the materials, each “Explore” activity has ELPS strategies for teachers to use to support students in that lesson. However, these strategies are general and do not provide support for varying levels of English language proficiency. In addition to the ELPS strategies, each scope has a “Picture Vocabulary” slideshow, which includes a picture and definition of content-specific words for the scope. Instruction is sequenced in a way that supports all learners and allows for repetition. Students use discourse and manipulatives in each Explore lesson to learn new content. However, there is limited instruction on how to further scaffold the materials for English Learners (ELs). Small group instruction focuses on reteaching content taught in the Explore lessons through hands-on experiences with manipulatives. These lessons do not focus primarily on language development. Most resources in each scope are translated into Spanish; however, there is no guidance for teachers on how to use these materials with ELs. There is also no evidence of a teacher guide that supports teachers on the use of effective strategies specific to ELs.

Evidence includes but is not limited to:

The materials partially include accommodations for linguistics commensurate with various levels of English language proficiency. The materials are sequenced in a way that supports students' understanding of new academic vocabulary in an authentic manner. For example, the program supports the development of academic vocabulary for all students by introducing new terms within the context of an activity. This allows students to connect the term to a physical object or process and supports the retention of academic vocabulary. An extension of this is the Picture Vocabulary element, which can be used to support the development of academic

vocabulary with visual supports. Materials provide sentence stems for students who might be at the beginning and intermediate level and need support with expressing mathematical ideas. Illustrations help students make connections between the new word they have learned and an image of something they are familiar with. The teacher supports ELs by modeling actions while speaking out loud and having students repeat the action and the phrase.

While the materials provide different levels of support throughout the scopes, they provide one example of support for each Explore activity; therefore, the support is not directly differentiated based on the level of support ELs need. All EL students receive the same support regardless of where they are in their progress of language acquisition.

The materials partially provide scaffolds for ELs. There is little evidence of research-based scaffolds in the materials to provide support to ELs. The only evidence of support is the ELPS strategies listed at the bottom of each Explore lesson. These strategies list the ELPS standards being taught in the lesson and explain how to support students during that specific lesson. The instructional materials also do not explicitly address scaffolding for ELs; however, the materials do include whole group, small group, and flexible grouping opportunities for the entire class. Although there are no direct resources for scaffolding intentional and natural lessons, the “Foundation Builder” of each scope provides the teacher with words that often have a double meaning and can be a roadblock to understanding the mathematical meaning. The words can be found at the bottom of the facilitation instructions.

The Explore lessons are written in a way that makes scaffolding intentional and natural. However, these scaffolds are intended for the whole class and do not have additional supports listed on how to further scaffold for ELs. However, small group intervention activities include rich vocabulary conversations and hands-on manipulation of materials. For example, in the scope related to three-dimensional solids, students receive 3D solid manipulatives and irregular real-world solids to hold as they discuss what they know about the solids. Teachers instruct students to use mathematical vocabulary and manipulatives as they discuss their observations in order to support English language acquisition. There are Spanish versions of all student materials and resources for students who need support in their native language. While there is no specific assistance for teachers when using the Spanish version with students in their class, the Spanish version of materials is identical to the English version, so teachers will be able to understand the questions asked in each activity, journal, or exit ticket.

Materials partially encourage strategic use of students’ first language as a means to develop linguistic, affective, cognitive, and academic skills in English. Within the individual Foundation Builder activities for word meaning, aside from the supports and suggestions made in the individual Explore activities and picture vocabulary, there is no evidence that supports the use of students’ first language as the foundation of developing skills in English. In the Foundation Builder activities, the materials reference multiple-meaning words in English, such as the word *face*, and words that sound the same but that are spelled differently and mean different things, such as *ate* and *eight*. However, the materials do not reference words from a student’s native language that can be connected to new vocabulary words in English. Each Explore activity

contains ELPS strategies at the bottom of the facilitation points to guide teachers in supporting ELs during the activity. Teachers can use the ELPS strategies, along with the sentence stems that the instructional materials provide, to support students with strategic use of their first language. Some student materials in the program are available in Spanish and could be used as support for students who speak Spanish; however, outside of these resources, there is no other evidence noted on supporting students in their native language.

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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 year-long plans with practice and review opportunities that support instruction. The "Scope and Sequence" outlines how to implement the materials based on a 36-week school year. The Scope and Sequence also dedicates the final two weeks of school to reviewing focal skills taught during the school year. The content plan is cohesively designed to build upon students' current level of understanding with clear connections between lessons and across grade levels. The activities in each scope build upon each other and provide students with skills to apply new knowledge to more complex tasks. The materials include a "Vertical Alignment Chart" to show how content builds in preceding and subsequent grades. The "Content Support" section also provides teachers with an explanation of how the content builds in subsequent grade levels. The materials provide students with opportunities to review and practice throughout the program. Each scope contains a "Spiral Review" activity designed to provide students with opportunities to practice previously learned skills. The "Foundation Builder" reviews a vertically-aligned skill before beginning the remaining scope activities.

Evidence includes but is not limited to:

Materials include a cohesive, year-long plan to build students' concept development and consider how to vertically align instruction that builds year to year. The Scope and Sequence provided is for 36 weeks of instruction. It is noted that this Scope and Sequence is merely a tool and can be adjusted to meet the needs of students in certain classes. The Scope and Sequence chart provides a logical progression of skills for the entire year; it provides two weeks of instruction for every scope within the materials and a third week devoted to assessment for that scope. This allows teachers to provide depth to each scope and enables students to have time to master the concepts within the scope.

The materials pace the scopes in an order that makes sense for student mathematical development; each scope builds upon the concepts learned in the last scope. The Vertical Alignment Chart provided in the “Teacher Toolbox” is a color-coded document that shows the progression of each strand, including “Number and Operations,” “Algebraic Reasoning,” “Geometry and Measurement,” “Data Analysis,” and “Personal Financial Literacy.” The chart provides teachers with information on what is taught in the prior grade, the current grade, and the following grade. Teachers can use the chart to help determine gaps in a student’s learning by looking back at the prior year’s TEKS in each individual strand.

The materials provide review and practice of mathematical knowledge and skills throughout the span of the curriculum. The instructional materials build upon previously taught content from both prior grade levels and previously taught units. Each scope within the materials contains the same opportunities for review. Every scope includes an “Assessing Prior Knowledge” activity, a Foundation Builder, a Spiral Review activity, and time built into the day for “Daily Numeracy” review activities. Each lesson begins with the Assessing Prior Knowledge activity; this is a brief probing activity designed to connect learning from previous grade levels with new learning, to gauge students’ prior knowledge before engaging in the inquiry process. The Foundation Builder is designed to review the vertically aligned skill, as needed, before students complete the remaining scope activities. Spiral Review, found in the “Elaborate” portion of the instructional materials, suggests previous skills that students can continue to practice and review. Teachers have the option to spiral back to any skill they prefer. Daily Numeracy activities, included for each grade level, provide opportunities for students to mentally practice a variety of skills throughout the year. Each scope also contains elements that spiral back to previously learned content.

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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.

Meets 2/2

The materials include implementation support for teachers; administrators have access to the same planning documents as teachers. The "Scope and Sequence" document is aligned to the TEKS and outlines which essential skills are taught over the course of a school year; it also shows the order in which essential skills are presented. The "Vertical Alignment Chart" displays TEKS for kindergarten through third grade; it provides teachers with an explanation of the layout of the mathematics TEKS and shows how standards build upon each other. "Lesson Planning Guides" support teachers in using the program and materials as intended; they provide teachers with support in pacing lessons across a week and which lessons to teach on specific days. There are two lesson planning guides: one for scopes with one to three "Explores" and one for scopes with three to five Explores. The "Content Support" section provides teachers with an explanation of best practices for the current scope. Teachers find guidance on how to teach specific skills and what students should be able to do by the end of the scope to show mastery. Each individual lesson has an objective for the lesson, a materials list, preparation instructions, and procedure and facilitation points. The materials include lessons and activities for a full year of instruction and additional activities to use to extend learning or provide intervention for students. The materials include realistic pacing guidance at the unit and lesson level.

Evidence includes but is not limited to:

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. There is a “Scope List” and a Scope and Sequence document for teachers to follow. The Scope List shows the scope name, the TEKS covered in the scope, and the suggested pacing for the scope. The Scope and Sequence shows teachers how to pace the program throughout the course of the school year and is written based on a 36-week school year. Teachers learn which essential knowledge and skills are taught in each unit by reading the title of the scope and the TEKS covered on the Scope and Sequence document. Essential skills taught in each scope are described within the title; the document details the order in which the essential skills are presented. Teachers can view the pacing of each scope by seeing in which week new concepts are introduced.

The Vertical Alignment and Content Support documents for each scope provide information on prior knowledge and what students are expected to be able to do in future grade levels. Content Support documents also provide information on key concepts within the scope, fundamental questions, misconceptions and obstacles that may come about, terms to know, important information on how to guide students using prior knowledge, and where students are developmentally.

Materials include supports to help teachers implement the materials as intended. Lesson Planning Guides support teachers in using the program to best fit their needs and use the program as intended. The guides include notes on pacing and how to respond to student performance and data. Teachers choose between two guides depending on the number of Explore activities in the current scope. One guide provides pacing suggestions for scopes with one to three Explores and the other for scopes with three to five Explores. These guides provide teachers with pacing for both whole group and small group instruction models; they are based on a 90-minute class period. The whole group plan lists activities to do with the whole class and various assessment and closure activities to complete each day.

At the beginning of each scope, there is a list of materials and a unit overview. Each scope has individual tabs for each logically planned part of the scope that ensures the CRA method is being used. Lessons progress through the “5E” model (“Engage, Explore, Explain, Elaborate, Evaluate”). After the Evaluate portion, materials provide “Intervention” and “Acceleration” lessons to appropriately meet the needs of all students. The Lesson Planning Guide, located in the “Teacher Toolbox,” provides the teacher with an overview of the week. The whole group and small group plans provide the teacher with the content taught each day and remind the teacher to assess and reteach as needed. The materials are designed on a digital platform and allow for work to be assigned to the student. The instructional materials are also available in PDF or printable files that can be downloaded and printed. Teachers can also create editable Google slides for activities such as the academic vocabulary and the Explore student journals.

The materials partially include resources and guidance to help administrators support teachers in implementing the materials as intended. The Teacher Toolbox provides Lesson Planning Guides for teachers and administrators to use as a reference when planning for their students. As teachers collect data and respond in small group interventions, it is noted that their pacing can be affected. The suggested pacing ensures that the CRA method is followed and that

adequate time is spent in the individual scopes. The Scope and Sequence can be used as a tool to ensure that teachers cover all scopes within the 36 weeks of school. Lesson Planning Guides support teachers and administrators to best fit the program to their needs and to use it as intended. They provide notes on pacing and responding to student performance and data. Although this evidence is noted, there is no indication that this is solely meant to support administrators. Administrators have access to the same materials that teachers use to implement the program in their classrooms.

The materials include a school year's worth of math instruction, including realistic pacing guidance and routines. The Scope and Sequence provides the names of each scope within the materials and suggested pacing time of how many weeks should be devoted to each scope. The Scope and Sequence provides suggestions for scopes to teach over the course of 36 weeks; it provides anywhere from one to four weeks at the end of the school year for teachers to review the focal areas with students before they move into the next year of school. The Scope List for each grade level provides more detailed information about the pacing and planning of each scope. This document provides the name of each scope, the specific TEKS that will be covered within the scope, how many Explore activities are included in the scope, and the suggested amount of time that should be spent teaching the scope. The materials provide teacher guidance on how to pace scopes based on how many Explore activities are included within the scope. The suggested lesson plans provide support for a 90-minute math block and reasonable suggestions about how much a teacher can execute, considering the developmental level of the students. The units are connected and allow for depth and focus. The experiences do not skim lightly over focal areas; they support students in spending sustained time developing content and skills in grade-appropriate areas.

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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.

Meets 2/2

The materials provide implementation guidance to meet variability in program design and scheduling considerations. The “Scope and Sequence” provides guidance on implementation that ensures the sequence of content is taught in an order consistent with the developmental progression of mathematics. Students learn prerequisite skills in earlier scopes before moving on to content with increasing difficulty in later scopes. The Scope and Sequence states that there is flexibility in implementing the scopes. The activities within each scope are sequenced in a way that allows students to begin with foundational skills and work toward a more abstract understanding of the content taught in the scope. The program provides guidance to allow easy implementation in a variety of school designs. Each lesson planning template included in the scope is designed for a 90-minute math block. The “Lesson Planning Guides” (LPGs) provide teachers with guidance on implementing the materials in a whole group and small group setting.

Evidence includes but is not limited to:

The materials provide guidance for strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. The materials are flexible in the sequence of content and learning elements used during instructional time. The “Scope and Sequence” can be found in the “Teacher Toolbox”; while the program suggests a scope and sequence to be used, the scopes are modular and can be

rearranged to fit the needs of a particular teacher, campus, or district. LPGs provide options; teachers choose which elements they want to implement based on their given instructional time. Within each scope, teachers use the LPGs to plan their instruction for the duration of the scope. The activities in each scope are sequenced in a way that is consistent with the developmental progression of mathematics. Each “Explore” activity builds on the previous Explore activity. The LPGs ensure the sequence of content is taught in an order consistent with the developmental progress of mathematics. By using the organized LPGs, teachers make sure that precursor skills are taught first. LPGs are written based on a 90-minute math block and list each activity that teachers implement for each day of the week. Teachers choose from two different LPGs based on how many Explore activities are in the scope they are teaching—one to three Explores or three to five Explores. Each LPG provides teachers with pacing for both whole and small group instruction.

Materials are designed in a way that allows LEAs to incorporate the curriculum into district, campus, and teacher programmatic design and scheduling considerations. The materials are designed to allow easy implementation into a variety of school designs without compromising the validity of the materials or the structure of the program. The materials provide a 36-week scope and sequence but stress that the scope and sequence can be implemented in a way that meets specific campus needs. Teachers and campuses can determine how long to spend on each unit and how to use the review units at the end of the year. While the Scope and Sequence provides a suggestion to LEAs on how to structure the year and how much time to spend on each scope, there is still room for a campus to implement the materials in a way that meets the needs of the students and staff. Additionally, the materials provide lesson planning support to teachers. The lesson planning support documents are split up based on the number of Explore activities within the scope. Within these documents, LEAs are provided with suggestions on implementing the scope using a 5- to 10-day structure. The materials make suggestions to teachers on how the components can be taught in a way that fits within the time limits of the scope. The materials also provide suggestions and support for teachers to teach the lessons in a way that caters to the needs of the learners within the classroom. Because the materials are online, LEAs have the flexibility to implement the program virtually. The program has recently created a section titled “Virtual Learning.” Therefore, the materials respond to needs that may be occurring in many classrooms around Texas due to COVID-19. They provide the opportunity for teachers to meet the needs of students both virtually and face to face.

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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.

Meets 2/2

The materials support the development of strong relationships between teachers and families. They also specify activities for use at home to support students' learning and development. The materials include parent letters in both Spanish and English that can be sent home at the beginning of the year; there are also letters sent at the beginning of each scope that provide information on concepts that will be covered throughout the year or throughout the scope. The letters also provide background on the mathematical philosophy of the materials and suggested vocabulary that can support students while they are at home. Students have virtual access to different components of the materials, and parents can support their child's growth while at home. The materials also provide a tic-tac-toe board of suggested activities that families can complete during each scope in order to support and grow student understanding of the concepts that are being covered in the classroom.

Evidence includes but is not limited to:

The materials support development of strong relationships between teachers and families. Materials provide an editable parent letter, found in the "Teacher Toolbox," for teachers or administrators to use to share their choice of the program's curriculum. The letter introduces the "5E+IA" model and shares an overview of the program philosophy. The letter also notes that the program is aligned to the TEKS. Parents receive contact information for the school if they have any questions or would like to give feedback on the program. There are also parent letters sent out for each scope to provide an overview of the upcoming scope and a choice board to extend learning at home. For example, the "Join and Separate" newsletter introduces parents to the new scope, explains what it is that the student will learn, and advises parents on how they can assist at home. It clearly states vocabulary words and definitions and sometimes provides clipart. The newsletter encourages parents to identify examples of their child's learning in everyday tasks and thanks them for their support. All of these parent letters are also available in Spanish. The materials specify activities for use at home to support students'

learning and development. Each student has his or her own online account. Accounts provide students access to learning resources and assignments given by their teachers. Learning resources include picture vocabulary, virtual manipulatives, interactive practice games, and a visual glossary of math vocabulary. Home support materials are available in English and Spanish.

The materials provide appropriate suggestions and resources for home activities that support the curriculum and can be used easily by families. The parent letter provides a parent-friendly breakdown of the standards, a list of vocabulary words used throughout the unit, and a “tic-tac-toe choice board.” For example, in the “Two-Dimensional Shapes” scope, the parent letter explains that students will be learning to identify 2D shapes, explains how to talk about the attributes of 2D shapes, and explains how to create 2D shapes with several different materials. The letter defines the terms *two-dimensional shapes*, *attribute*, *polygon*, *circle*, *rectangle*, *square*, *triangle*, *vertex*, and *side* and encourages parents to use these vocabulary words with students at home. The choice board contains eight different activities that parents and students can play at home. In the “Sensory Shapes” activity, parents fill a reusable bag with a material such as sand, shaving cream, rice, or hair gel. Students pick a shape card, name the shape, and draw the shape in the sensory material. In another activity, “Who Am I?” parents describe the attributes of different 2D shapes. Students guess which shape their parents are describing based on their clues.

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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 is not distracting. The materials include appropriate use of white space and design that supports and does not distract from student learning. Student handouts are designed in a way that is easy for students to read; there is enough white space for students to complete their work. The pictures and graphics are supportive of student learning and engagement without being visually distracting. Teacher's guides are designed with clear, designated places for important information. Each scope includes a tab for each component of the "5E+IA" model and a description of each activity. Lesson plans are designed in a way that allows teachers to easily locate important information.

Evidence includes but is not limited to:

The materials include appropriate use of white space and design that supports and does not distract from student learning. The materials are designed in a way that supports student learning. The images are aesthetically pleasing to look at and provide information in a simple yet purposeful format. The student documents within the program include plenty of white space for students to perform tasks and calculations in order to complete their work. Clear images are appealing to students and also support their understanding of the concept. Scopes are easy to identify within the materials; students can easily see where to locate the scopes and components within the scopes when they are working. Virtual manipulatives are colorful, easy to locate, and user friendly to help support student understanding of concepts.

Teacher guides are designed with clear, designated places for important information. When logging into the system, the components of the materials are easily found along the top in various tabs. The scopes are easy to identify; teachers see the specific content being covered, the grade level it is designed for, the TEKS that are aligned to the scope, and the domain it

aligns to within the standards. Colorful sidebars give the teacher additional support and resources such as *STEMscopes* streaming, the “Teacher Toolbox,” visual glossaries, benchmark assessments, and professional development videos and support. Within the Toolbox components, tabs and sidebars are clearly defined and labeled to provide teachers information they need to support student learning. Colors are visually appealing and are not distracting; images do not take away from the information being provided to teachers. Information in the materials and different components are easy to locate and are clearly stated. Each scope is labeled with the topic, standard, and strand. The toolbar on the left-hand side of the screen can be used to search by keyword or filter scopes by grade level or strand.

The materials adhere to user interface design guidelines. Teachers are able to view the system status by referring to lesson plans that are added to their lesson planner; teachers can view which digital assignments have been assigned to each student. The materials in the program match the real world and are easily navigable by users. Teachers have control and freedom in the program and are able to take steps backward if they make an error. The materials in the program are consistent across grade levels. The materials provide error prevention by providing teachers with an explanation of the intention of use for each element in the program. The way the program is designed allows for recognition rather than recall. Consistency in each scope allows teachers to become familiar with each element in the program. The pictures and graphics included in the program are visually appealing with a minimalist aesthetic. The materials provide teachers with help and support. Teachers utilize the Teacher Toolbox for lesson planning guidance and descriptions on how each element in the program should be used.

Pictures and graphics are supportive of student learning and engagement without being visually distracting. The materials include pictures that are easily identifiable by students and support student learning. Images are included for students in order to support the task they are asked to complete. The images match what the problem or question is related to, are engaging for students, and are easy to see. The digital format of the materials includes colorful images that are visually appealing to students and easy to relate to the mathematics problems. In the printed materials, the images are black and white; they are still easy to understand and decipher. Images are the appropriate size and are not too small or too large. For students in kindergarten who have not developed adequate reading skills, images support learning and understanding. Fonts, graphs, and charts are clear and easy to read within the student materials. Manipulative images are provided when needed; they are not distracting, difficult to use, or difficult to understand. Student materials use white space appropriately.

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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 technology and online components included in the program are appropriate for grade-level students and provide support for learning. Most scopes have virtual manipulatives available for student use. Teachers are prompted to go digital in the lesson plans if virtual manipulatives are available to assign to students. The virtual manipulatives align to the curriculum and support student learning. Each scope has “Interactive Practice” activities; these are games aligned to what students are learning, which provide them with extra practice with the skills that are being covered in the scope. Teachers also have the option to assign certain activities for students to complete virtually. This option replaces the use of paper-and-pencil activities. Materials provide teachers with guidance and support in using virtual resources throughout the materials.

Evidence includes but is not limited to:

The technology aligns to the curriculum’s scope and approach to mathematics skill progression. The materials contain technological components that enhance learning for students. Students interact digitally with tasks through virtual manipulatives, interactive games, and digital journals or assignments. As students engage in “Explore” activities, they have the option to use the virtual manipulatives that align with the manipulatives that are offered in the classroom. In the “Elaborate” component of each scope, interactive games enhance students’ knowledge of the concepts and provide a way to practice in a virtual format. These games are available to play through the materials’ website and app; they support the materials’ progression of math content and skills introduction and practice.

Many elements within the materials can be completed digitally. There is a PDF version of the materials that teachers can print, but students can also complete activities virtually. Students

can digitally complete the “Show What You Know” activities from the “Explain” component of each scope. They can also digitally complete the “Problem-Based Task,” the “Math Story,” and the “Spiraled Review” from the “Elaborate” component from each scope. Skills quizzes and benchmark assessments can be assigned and completed virtually. When students take these assessments virtually and submit their work, they are provided with data and scores.

Due to COVID-19, materials have added additional components to support digital learning. Each grade level now includes virtual learning. Within the virtual learning components, students can interact with each scope. Students are able to watch videos that explain new concepts and model learning. Students are also able to use virtual manipulatives to support their conceptual understanding and virtually complete Explore activities.

Technology supports and enhances student learning, as opposed to distracting from it, and includes appropriate teacher guidance. Many of the student elements in the program can be completed digitally as an alternative to the paper-and-pencil version provided within the lesson plan. Assessments like the benchmarks can also be taken digitally. When teachers select this option, they are provided with whole-class data after the assessments are submitted and scored. The materials give teachers appropriate and sufficient guidance on using technology with students and how to support students with technology use. The procedure and facilitation instructions in the Explore lessons provide teachers guidance on how to use the virtual manipulatives during the activities. Virtual manipulatives are found under the Explore tab of each scope and can be digitally assigned to each student. Teachers know when they have the option to use the virtual manipulatives: Materials prompt them to “Go Digital” in the “Preparation” instructions of the Explore lesson plans. The instructions state that students can explore or present their solutions using virtual manipulatives during the activity. Lesson planning guides provide teachers with guidance on when to use the Interactive Practice games. For example, in the “Small Group Plan” guide, teachers use the Interactive Practice games as a math station.