

November
2020

Savvas enVision 3–5 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 %
Grade 3	100%	100%	N/A	100%
Grade 4	100%	100%	N/A	100%
Grade 5	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.
- Materials provide a limited variety of the types of concrete models and manipulatives, pictorial representations, and abstract representations; they rely heavily on pictorial representations. Materials do not support teachers in 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 some opportunities to develop their self-efficacy and mathematical identity by sharing strategies and approaches to tasks and some opportunities to select appropriate tools for the work, concept development, and grade (e.g., calculator, graphing program, virtual tools).

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

Section 5. Supports for All Learners

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

Section 6. Implementation

- Materials include a cohesive, year-long plan with practice and review opportunities that support instruction.
- Materials are designed in a way that allows Local Education 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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Savvas enVision Grade 5

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 spend the majority of concept development on the primary focal areas, strategically and systematically develop students' content knowledge, and provide practice opportunities for students to master the content. The materials devote 13 of the 16 topics to addressing one or more focal areas. The materials strategically and systematically develop students' content knowledge by using rigorous problem solving that enables development in students' procedural fluency and conceptual understanding throughout the consistent three-part lesson plan format. The materials provide various practice opportunities for different settings and modalities by using hands-on or visual representations when they are developmentally appropriate. Tasks also combine independent and guided practice as well as games that can be played alone or with partners. The tasks are differentiated to meet the needs of diverse learners. The materials build upon previously taught concepts from other topics within the grade and from previous grades to increase rigor and ensure students master the full intent of the concept. Each lesson uses familiar tools and strategies to be able to push students thinking to new understanding and application.

Evidence includes but is not limited to:

The scope and sequence lists color-coded strands that correspond to the TEKS; a visual chart displays when the strand is introduced, practiced, and applied throughout grades K–5. The focal areas in grade 5 have an emphasis on “Practice” lessons for each focal area. Students revisit and share their background knowledge through a series of problems on a worksheet titled “Review What You Know” in the Student Edition (SE).

The “Topic Planner” describes the content of each lesson, listing the TEKS, ELPS, “Essential Understandings,” materials, resources, and suggestions for professional development videos to help teachers build their background knowledge of the content or their teaching skills. The professional development video library includes a video for each of the focal areas. The multiplication video explains that “different kinds of situations can be represented using multiplication but that each involves the joining of equal groups in some way.” It then explains how the various models and joining strategies build into one another, including the repeated addition strategy introduced in second grade.

The materials devote a majority of lessons to the primary focal areas that align with the grade-level TEKS. For example, in grade 5, at least one of the primary focal areas is addressed in 13 of the 16 topics. Arithmetic operations with fractions and decimals are addressed in nine topics; expressions and equations to solve problems are addressed in four topics; perimeter, area, and volume are addressed in two topics; organizing, representing, and interpreting data sets is addressed in two topics. Topic 1 revisits place value and emphasizes decimal place value. Students compare, order, round, and problem solve with decimals through written explanations. Topic 2 shifts to adding and subtracting whole numbers and decimals, a key focal area skill for fourth grade. The first few lessons of Topic 2 refresh student memory of prior knowledge and skills: using mental math, estimating sums and differences to build reasonability, and adding and subtracting whole numbers. Similar to Topic 1, the remainder of Topic 2 then shifts to adding and subtracting with decimals before solving multi-step problems. Topics 3 and 4 pivot to multiplication and division. As multiplication and division are heavily emphasized in grades 4–5, materials build rigor from previous grade levels by emphasizing multiplying whole numbers and decimals (Topic 3) and dividing by two-digit divisors (Topic 4).

The materials include a “Correlations Guide” that breaks the TEKS into smaller objectives and lists both the SE and Teacher Edition (TE) pages that address those TEKS and objectives. Each objective is addressed in a formal lesson, and the materials offer a “Reteaching Set” with activities using related visuals and practice opportunities to master the skill. After explicitly naming the TEKS that are covered in each unit, the Topic 1 Planner names the two process standards that are featured in this topic (“formulate a plan” and “select/use tools”). The Topic 1 Planner broadens the scope of the numeration system that students have been developing throughout K–5, stating that “our place-value system is known as the Hindu-Arabic numeration system” and listing its four basic attributes. It also explains to students that “our number system is not the only number system” in the world.

The materials build upon previously taught concepts from other topics within the grade and from previous grades to increase rigor and ensure students master the full intent of the concept. The “Content Guide” includes “Big Ideas in Math,” a table that categorizes mathematical topics and lists the grades in which the topics are addressed. For example, “Estimation” is covered in three units in grade 3, six units in grade 4, and six units in grade 5. “Texas Focal Points,” a one-page table, pinpoints the Texas Focal Points revised in 2013 and lists the location of these focal points in the materials. “Scope and Sequence” is a table that shows each skill on a continuum and indicates when the skill is first introduced, when the skill is

practiced, and when the skill advances to application. “Skills Trace” provides a table for each skill that shows the progression of related skills that have previously been taught and related skills that will be taught in the future. It shows the vertical alignment to TEKS in previous and next grade levels, as well as connections to other lessons within the grade level. This alignment supports teachers in understanding what prior knowledge students should have as well as understand the level of depth and rigor needed to be ready for the next grade level. The questions and tasks build in academic rigor to meet the full intent of the primary focal areas.

In Topic 7 (“Adding and Subtracting Fractions”), learning objectives begin with understanding factors of whole numbers; division and multiplication is useful when determining if a number is prime or composite. This objective helps students use multiplication and division to find the simplest form of fractions in the next lesson. A few lessons later, students use number sense and their understanding of numerators and denominators to compare fractions. Building on this, students add and subtract fractions with different denominators.

In Topic 3, students progress from estimating products to multiplying three-digit and two-digit numbers. Students progress to multiplying decimal numbers using models. Finally, they multiply decimals without models.

In Topic 13 (“Perimeter, Area, and Volume”), students use manipulatives, then use visual representations, and finally apply concepts through problem-solving. Students use unit cubes (40 per pair) to answer a “Solve and Share” question on models and volume. Then, students use visual models to find volumes.

The materials state that their program design “combines conceptual understanding with rigorous problem solving that enables you to develop your students’ procedural fluency.” This design is achieved by using a three-part lesson structure that consists of “Problem-Based Learning,” a “Visual Learning Bridge” that introduces or refines the use of visuals, and then “Assess and Differentiate,” which allows teachers to provide specific reinforcement or extensions for all learners. Woven throughout the lessons are “nonprocedural, multi-step problems” that encourage the use of the Mathematical Process Standards and focus on students’ development of their own problem-solving models. Materials state: “Research shows that introducing new ideas by having students solve problems in which those ideas are embedded develops deeper understanding than other methods.” This research is why the opening activity in each lesson begins with a problem-solving discussion. The lessons in the instructional materials include suggestions and activities to support practice and reinforce the primary focal areas. The TE provides “Quick Checks,” “Intervention Lessons,” “Problem Solving Practice,” and “Benchmark Assessments.”

The materials provide various practice opportunities for different settings and modalities. Topic 3 (“Multiplying Whole Numbers and Decimals”) provides the teacher with guidance on strip diagrams. In the next section, “Create and Use Representations,” the materials show how a hundredths grid can be used to solve the multiplication of decimals. In Lesson 3.14, students solve problems using strip diagrams in a guided lesson and independent practice. In Topic 7 (“Adding and Subtracting Fractions”), students practice using array models (introduced in

second grade) to find factors by arranging objects into rows and columns. Then, students use familiar fraction strips to use multiplication and division to find equivalent fractions. In the final lesson of the topic, students apply a problem-solving model and use both symbols and a diagram to support understanding of the given problem. This lesson incorporates the process standards, which helps solidify the concept by connecting fractions in context with the types of problems students see in their workbooks.

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Grade 5

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

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

Partially Meets 2/4

The materials include a limited variety of the types of concrete models and manipulatives, pictorial representations, and abstract representations that are appropriate for the content and grade level. The materials provide limited strategic and integrated instruction in all components of mathematical rigor: conceptual understanding, procedural fluency, and application. The materials rely heavily on pictorial representations and provide very little support for concrete models and manipulatives. The materials do not support teachers in developing the students' progression along the CRA.

Evidence includes but is not limited to:

Throughout the materials, every lesson follows the same three-step structure. The first step is called "Problem-Based Learning," which moves the lesson content from pictorial representations to abstract representations and engages students in the content with the authentic "Solve and Share" problem. The Teacher Edition (TE) includes student work samples and questions to help students think deeply about the problem and analyze each other's work. The second step is the "Visual Learning Bridge," which supports the development of conceptual understanding using interactive features of Problem-Based Learning tasks and the step-by-step "Visual Learning" activity. There are print and digital resources for both the students and teacher to support this step in the lesson. The materials rarely include opportunities to use concrete manipulatives to begin concept development.

Throughout Topic 1, students use visual representations such as place value charts, place value grids, and number lines and connect them to abstract representation, a number written in

standard or expanded form. The problem that introduces the lesson in Topic 1, Lesson 1, describes how many millions there are in one billion. It asks that “students explicitly use the digital tools to solve the problem.” The Visual Learning Bridge on the next page, in contrast, does refer to using a traditional place value chart.

Topic 2 is focused on adding and subtracting whole numbers. The materials relied on strip diagrams (pictorial) for fourth grade but are solely computational (abstract) in fifth grade. In Lesson 4, students learn to add decimals in the hundredths by aligning their decimal points. The two possible student work samples are very similar and provide little difference in the analysis: “Sherry successfully added by aligning the decimal points in the addends.” “Pat did not align the decimal points and confused the calculation, so the sum is not reasonable.” The Teacher Edition (TE) provides an intervention if students have difficulty with the lesson. For Lesson 7, it suggests using strips of paper, each with a different section of the problem, to address difficulties in answering multi-step problems. The script that follows has students derive an answer but does not make the explicit connection or distinction between how they can utilize this representational method and apply it to future problems. In a section titled “Do You Understand?” the TE for Topic 2, Lesson 7, asks students to justify their strategy. It tells teachers to “remind students that some problems can be solved by first finding and solving one or more sub-problems and then using the answers to solve the original problems.” Materials often instruct teachers on reminding, hinting, and telling.

In Topic 6, manipulatives are not referenced in whole group instruction. In Lesson 3, students divide decimals and use place value models to support the use of the standard division algorithm. Visual representations begin in Lesson 6-3, using place value blocks to show division with decimals. Lesson 6-4 uses a strip diagram, but it is not explained. Lesson 6-5 asks students to solve with a division area model, although no instruction has been provided on using a strip diagram with decimals. This lesson also follows up the Solve and Share with instructions on utilizing a strip diagram with decimal division.

In Topic 7, Lesson 2, students represent equivalent fractions. During the Solve and Share, students must represent equivalent fractions. The page includes a set of fraction bars to support concept development. In Lesson 9, the learning objective is to solve problems by using diagrams and writing equations, but the materials section of the lesson lists no concrete manipulatives.

In Topic 13 (“Perimeter, Area and Volume”), students learn how to use unit cubes, visual models, and formulas to find volumes. This topic also spirals in Topic 14 (“Measurement Units and Conversions”) through “Today’s Challenge.” Students use online tools to address a daily problem using the same data set. Each day, the problems become increasingly more challenging. Students use prior knowledge as they work on these problems. On Day 1, students use a representation to determine the length of the string for the volume. On Day 2, students use a representation to use a formula to find the area. On Day 3, students communicate ideas by developing and explaining a formula for finding volume. On Day 4, students extend their

thinking by finding the total volume and explain using two different formulas. On Day 5, students extend their thinking by applying another contextual question.

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Grade 5

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

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

Meets 4/4

The materials support coherence and connections between and within content at the grade level and across grade levels. There are supports for students to build their vertical content knowledge by accessing prior knowledge and understanding of concept progression. The materials connect new learning to previously learned concepts, knowledge, and skills with a math background overview and online professional development video for teachers that explains how TEKS are developed.

Evidence includes but is not limited to:

The Teacher Edition (TE) “Program Overview” contains a “Skills Trace” that shows the vertical alignment of TEKS both within and across grade levels. Materials build students’ vertical content knowledge by referencing or showing how concepts progress in rigor. The three-step lesson format is highly dependent on the teacher modeling or using questions effectively to promote student discourse and connect previous learning to the current objective. Materials reference familiar models and strategies to facilitate rigor and concept development. The materials include tasks and problems that intentionally connect concepts in the “Solve and Share” problems and the “Visual Learning Bridge.” The student workbook and center activities use story problems to help students discuss and apply math to real-world problems. The materials provide opportunities for students to explore relationships and patterns within and across concepts, especially with supporting questions from the teacher and in their workbook.

Materials support teachers in a surface-level understanding of the horizontal and vertical alignment guiding the development of concepts; resources merely list TEKS and their alignment with other grades or when they occur in the school year. Materials provide little support for concept development across topics within or across school years.

Before the administration of the topic test, students tackle the essential questions of the topic verbally or in writing. This questioning permits students to tie their learning from the topic to essential understandings across the concept. The benchmark test, a culminating assessment of four topics, assesses what students have learned and allows them to see the connections across concepts. “Big Ideas in Math” is a table that categorizes mathematical topics and lists grades when the topic is addressed. For example, it shows that “Estimation” is covered in three units in grade 3, six units in grade 4, and six units in grade 5. The “Big Idea” for estimation is “Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute mentally. Some measurements can be approximated using known referents as the unit in the measurement process.”

In Topic 1, Lesson 1, students “extend their prior knowledge of place value of numbers in the millions to read and write numbers in the billions.” Students have the opportunity to work with and understand very large numbers in the same forms as previous grade levels (standard, expanded, word). The materials point out the pattern in reading, writing, and representing numbers, so this same pattern can be used to understand place value even greater than billions. In Lesson 2, students “build on their knowledge of place value with the (re-)introduction of decimal numbers.” While most of the material appears similar to what was taught in fourth grade, the vertical content knowledge and concept progression are evident through the teaching of expanded notation form. Students make the connection and see how a decimal is another way to represent a fraction with a denominator of a power of 10.

In Topic 2 (“Number Sense—Adding and Subtracting Whole Numbers and Decimals”), the first set of lessons (1–3) reviews adding and subtracting whole numbers with mental math and estimation. For the next four lessons, materials pivot entirely to adding and subtracting decimals. By tapping into what students know from the previous grade level, skills are used again and explored deeper in the current grade level.

The “Skills Trace” provides a table for each skill that shows the progression of related skills that have previously been taught and related skills that will be taught in the future. For example, in Topic 6 (“Dividing Decimals”), Skills Trace notes that the concept is built upon in grade 5 Topics 4 and 5 and leads to Topic 7 on prime and composite numbers.

In Topic 6, the “Math Background” section in the TE notes that “students should recall dividing by 10 and 100.” In Lesson 5-1, the “Solve and Share” features a character who says, “How can you use what you know about the relationship of multiplication and division to help you?” However, the student is not explicitly required to say or write the relationship. The TE instructs

the teacher that students must use the inverse properties to know which way to move the decimal, although the meaning of moving the decimal is not emphasized. The TE instructs teachers to read aloud the “Reading Mat” at the start of each topic. It states that the “Reading Mat Problem Solving Activity” provides a set of problems to be solved using the data on the map. In Lesson 5, the activity requires students to read word problems about snowy days and find the average amount of snow. However, fifth-grade students in Texas have not been taught how to average numbers. The Reading Mat contains information about the migration patterns of animals and is not required to solve any activity questions.

In Topic 7, Lesson 1, the Solve and Share problem requires students to use basic math facts to find factors of a number in order to prepare students for work in fractions. Throughout the rest of the lesson, students learn to identify prime and composite numbers and find factors more efficiently. The lessons in grades 3 and 4 on making arrays can help students arrange objects to find factors of numbers. In this topic, “Adding and Subtracting Fractions,” learning objectives focus on how prime and whole numbers have two factors; this makes division and multiplication useful when determining if a number is prime or composite. Students use multiplication and division to find the simplest form of fractions. A few lessons later, students use number sense and their understanding of numerators and denominators to compare fractions. Then, students add and subtract fractions with different denominators by using previous understanding. The “Background Knowledge” for teachers around Process TEKS within fractions explains how students formulate a plan by using a strip diagram. The section also explains how students use different methods, including models, to find equivalent fractions. The content explanation of fractions states that finding equivalent fractions is essential for adding or subtracting fractions. The content explanation shows how factoring can be used to find equivalent fractions efficiently.

In Topic 11, Math Background explains that students will analyze patterns in tables and graphs. Students develop an understanding of the differences between an additive pattern and a multiplicative pattern. Graphs are a valuable visual aid for students to distinguish between the two. Students also evaluate equations that reflect either additive or multiplicative patterns.

In Topic 15 (“Data Analysis”), Lesson 8 teaches students to read scatterplots. During the Solve and Share, the lesson explains that scatterplots are new to fifth grade; students make a connection when they are asked to use the graph that shows the ages and prices of 15 used cars at Sam’s Wheels and Deals. The problem reads, “Describe how the prices of the older cars compare to the prices of the newer cars. You can connect what you know about ordered pairs to read the age and price of each car.” Ordered pairs were taught in Topic 11 (“Ordered Pairs and the Plane”). Math Background explains that students expand on what they know about ordered pairs and the coordinate plane to work with scatterplots: “A scatterplot is a graph in the coordinate plane that displays pairs of data as dots. A scatterplot is useful for identifying and understanding the relationships between sets of data, such as the age of a car and its price. When the dots in a scatterplot form a pattern, the two sets of values have a relationship called a trend.”

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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 are built around quality tasks that address the content at the appropriate level of rigor and complexity. The materials guide students through CRA tools, models, and understandings; the rigor of the tasks increases throughout a given unit and across units over the year. However, the use of concrete manipulatives is optional in most lesson plans, and the teacher does not always model their use in a particular lesson. The materials include tasks that are meaningful to students, set in real-world contexts, and allow them to demonstrate mastery of math concepts. The materials provide guidance for the teachers on how to appropriately revise content to be relevant to their specific students, their backgrounds, and their interests. The materials provide teachers with possible student responses and or strategies to practice questions and tasks, but they do not describe which ones are the most appropriate for the task based on grade-level expectations. The materials provide teachers with common misconceptions of student responses and strategies. The materials provide teacher guidance on preparing for and facilitating strong student discourse grounded in the quality tasks and concepts.

Evidence includes but is not limited to:

Every lesson follows the same three-step structure. The first step is called “Problem-Based Learning,” which engages students in the content with the authentic “Solve and Share” problem. The TE includes student work samples and questions to help students think deeply about the problem and analyze each other’s work. The second step is the “Visual Learning Bridge” (VLB), which supports the development of conceptual understanding using interactive features of Problem-Based Learning tasks and the step-by-step “Visual Learning” activity. Error analysis is included in many lessons. There are print and digital resources for both the students and teachers to support this step in the lesson. The materials develop problem-based learning and provide the appropriate level of rigor (conceptual understanding, procedural fluency, or application) as identified in the TEKS. The materials develop the content and skill by increasing in complexity throughout the grade and through grades 3–5. They do so through a given unit and across units over the year. The “Topic Planner” for each unit explains how each individual lesson connects to the TEKS and develops the “Essential Understanding.” Materials clearly outline for the teacher the mathematical concepts and goals behind each task. At the beginning of each topic, in the TE, “Math Background” and “Essential Knowledge” outline math concepts and goals. The TEKS are reprinted for each lesson. Each topic also has a professional development video, which is a repetition of the material in the Math Background section of the TE.

Students who achieve a passing score on the “Quick Check” can do the on-level and advanced “Activity Centers,” which include games, “Problem-Solving Learning Mat” activities, “Technology Centers,” and “Math and Science” Activities. While there are many activities within the centers for each topic, it is unclear whether students have a choice in the activity each day or whether they are limited depending on the specific lesson. The TE only showcases two to three options for each lesson and does not contain any guidance for the teacher in extending students’ understanding of the Intervention Activities.

The program materials do not include a philosophy or explanation of the research that explains how the topics or lessons are sequenced. The materials follow a sequence in which topics begin with simpler tasks and objectives, which are required to master objectives at the end of a topic or in future topics. So long as teachers follow the sequence and students master each lesson, they should be able to move on to more sophisticated strategies. This progression depends on whether the teacher can diagnose and intervene with struggling students daily at the end of each lesson.

Topic 2 focuses on “adding and subtracting whole numbers and decimals,” just as it did in grade 4. Over seven lessons, the materials pose three “Essential Questions”: “How can sums and differences of decimals be estimated? What are standard procedures for adding and subtracting whole numbers and decimals? How can sums and differences be found mentally?” The Math Background details the TEKS that are covered in this topic, the lesson numbers that align with the topic, and the “Essential Understanding.” The first two lessons focus on “more

than one way to do a mental calculation” because estimating sums and differences “are replaced with other numbers that are easier to add or subtract mentally.” Then, students analyze the reasoning behind actual computations. Lesson 3 briefly reviews whole numbers, a previously taught skill in grades 3 and 4. Lessons 4–7 primarily focus on adding and subtracting multi-digit decimals, “which is similar to adding and subtracting whole numbers.” After seven lessons, the topic concludes by answering the Essential Question and explaining, “Sums and differences of decimals can be estimated by rounding or by substituting compatible numbers. Sums and differences can be found mentally by using compatible numbers and compensation.... You can add or subtract whole numbers and decimals using place value and addition and subtracting strategies.”

In Topic 2, Lesson 3, the VLB represents data collected in a table. The table shows how fast each swimmer swam their part of a relay race in seconds to the hundredths place. Already we can tell that there is less support for the CRA than there was in grade 4 because there is no actual animation representing the swimming. Presumably, it has been such a focused-on skill in the previous grade that it does not need as much of an introduction in grade 5. The problem asks about the combined time for Caleb’s and Bradley’s legs of the relay race. The VLB represents the problem through the standard algorithm. The animation, with the student, then adds each place value. Regrouping is required. The abstract representation for this problem is not similar but does push the application of the concept and skill. It asks: “André said the last two legs of the race took 3,938 seconds. What mistake did he make?” This question has students tackle the problem through individual reasoning that is then useful for whole group guided discourse. This reasoning is grade-level and content appropriate as it builds on previously taught skills and asks students to name the error. The focus then on this concept for grade 5 is no longer to learn it but to ensure the correct application of the skill and concept so that errors using it can be found by the individual student or others.

Rigor increases throughout the topics and lessons in the student consumable workbook. Concepts are introduced and practiced, and the complexity increases throughout the materials. For example, Topic 6 begins with “Patterns for Dividing with Decimals,” then progresses through “Estimating Decimal Quotients,” “Models for Dividing by a 1-Digit Whole Number,” “Problem Solving: Dividing by a 1-Digit Whole Number,” “Models for Dividing by a 2-Digit Whole Number,” and finally “Problem Solving: Reasonableness.”

In Topic 6, Lesson 6-1, students perform tasks set in real-world contexts. Students solve division problems involving a swim meet, a blueprint, and cloth. However, there is no evidence of guidance for the teacher on how to appropriately revise content to be relevant to their specific students, their backgrounds, and their interests.

There is some evidence that materials provide teacher guidance on facilitating strong student discourse grounded in the quality tasks and concepts. For example, in Lesson 6.1, the teacher is provided with these prompts: “Connect Ideas: What information are you given? (The material is 89.5 cm long, and it will be cut into 10 equal strips.) What will you divide to solve the problem? (89.5, 10) What is the relationship between the multiple of 10 you are dividing by and the

number of places the decimal point is moved? (The number of places the decimal point is moved is the same as the number of zeroes in the divisor 10 or 100.) Number Sense: Why does moving the decimal point to the left make the number have less value? (The number has fewer places to the left of the decimal point. This means there are fewer whole places, so the number has less value.)”

In Topic 7, Lesson 2, students represent equivalent fractions. The Solve and Share includes a set of fraction bars to support concept development. Step 2 of this lesson opens with the same visual. The teacher can choose to use the online version of the VLB. This version animates the problem by highlighting relevant elements in the visual and highlighting math vocabulary in a different color. It automatically pauses to allow the teacher to facilitate discussion. A follow-up story problem called “Look Back!” requires the student to show two different fractions equivalent to $\frac{6}{8}$. The use of concrete manipulatives is listed in the “Materials” section of most lesson plans, but their use in the particular lesson is not always explicitly stated in the TE. In Lesson 2, the learning objective is to represent equivalent fractions. Fraction strips are listed in the lesson Materials section. During Step 1 of the lesson, the TE states: “Students can solve the problem using fraction strips.” However, there is no other guidance as to when or how to use them in the lesson. A “Prevent Misconceptions” sidebar is embedded in the guiding questions for about 70 of the lessons. In Lesson 2, the sidebar says students sometimes believe there is only one fraction that is equivalent to a given fraction. So teachers should remind students how to represent one as a fraction and that students can find equivalent fractions by multiplying by 1 (or its fraction equivalent). An “Error Intervention” sidebar is provided during the guided practice section; it describes common errors and provides suggestions for addressing them. This type of sidebar is not included in any of the nine lessons of Topic 7. In Lesson 6, the learning objective is for students to use area models to write fractions in the simplest form. The hint offered is, “How many parts are there in the first area model? How many parts are shaded? How would you write this as a fraction?” The sample student answers simply state the correct answer. There are no additional support questions or materials to use if students are still confused at this point. In the next part of the lesson, one of the questions teachers can ask to help students analyze information is “How would you represent the number of yellow sections in the stained glass window as a fraction?” The sample student response is that each shape represents $\frac{12}{20}$. There is no other guidance for teachers to support students if they are still not able to make this connection. At the end of the lesson segment, teachers are told to point out the Essential Understanding. If students are still struggling at this point, they will likely have to participate in the intervention activity. In Lesson 9, the learning objective is to solve problems using diagrams and writing equations, but there are no concrete manipulatives listed in the Materials section of the lesson.

In Topic 15, Lesson 15-8, the materials explain that scatterplots are new to fifth grade. The Solve and Share makes a connection to prior knowledge and real-world context when students are asked to use the graph that shows the ages and prices of 15 used cars at Sam’s Wheels and Deals: “Describe how the prices of the older cars compare to the prices of the newer cars. You can connect what you know about ordered pairs to read the age and price of each car.”

Ordered pairs were taught in Topic 11. In this lesson, the Math Background section explains that students should expand on what they know about ordered pairs and the coordinate plane to work with scatterplots.

In Topic 16's "Today's Challenge," students use a common factoid to apply what they have learned from the previous week. The factoid is, "At birth, an elephant is about two and one half feet tall and weighs between 150 and 250 pounds. Male African elephants reach an average height of 10.5 feet to the shoulder and can weigh up to 15,000 pounds!" On Day 1, students draw a dot plot of the heights of the elephants born at the elephant reserve. On Day 2, students draw a stem-and-leaf plot of the elephants born at the elephant reserve. They compare the stem-and-leaf plot and the dot plot. On Day 3, students draw a bar graph. On Day 4, students draw a scatter plot. On Day 5, students make a table.

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

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

Partially Meets 2/4

The materials provide limited support for students to develop fluency in an integrated way, and there is no evidence of a cohesive, year-long plan. The materials do not provide a year-long plan for building fluency connected to the concept development and expectations of the grade level. The scope and sequence included in the materials merely lists the TEKS and the lessons in which each TEKS is addressed.

Evidence includes but is not limited to:

The “Program Overview” explains that the main goals of the materials are “understanding, fluency, and flexibility.” The program “combines conceptual understanding with rigorous problem solving that enables you to develop your students’ procedural fluency.” The “Content Guide” for the materials also affirms that “developing fluency with efficient use of the four arithmetic operations on whole numbers” is a priority for grades 3 through 5. At first read, this would imply that a year-long plan for building fluency can be found within the materials; however, such a plan was not found. The “Topic Planner” does not mention procedural fluency or support for teachers. As a curriculum designed with problem-solving at its core, it is arguable that the materials give precedence to teaching the properties of the four arithmetic operations over traditional fluency drill practice. The materials note that with the foundational conceptual understanding, students could add, subtract, multiply, and divide fluently. However, this may translate to difficult implementation for districts with cohorts of students that have not used

the materials beginning with kindergarten. It may also prove arduous for students and teachers who typically cover topics like addition at the beginning of the year with little spiraled practice throughout the year. The only repetitive practice is an infrequent application through problem-solving. The materials do not provide the teacher with resources for students who do not have computational accuracy or fluency.

The diagnostic and intervention materials found in the “Math Diagnosis and Intervention System 2.0” (MDIS) also do not allow the teacher to calculate beginning-of-the-year data on this measure or measure growth throughout the year. Focused on skills, it only recommends limited practice opportunities for specific student errors like “counting by 10s to 100” or “adding three-digit numbers.” There are also available lessons on “mental math strategies.” However, there are limited resources focused on computational fluency.

The materials do not include teacher guidance and support for conducting fluency or its structure within the program. This omission is because there is no explicit fluency practice within the program. There are no clear directions for how and when to conduct fluency activities or practice with students. There are, however, connections between concept development and fluency. Primarily, the essential understanding is that we use mental math to add whole numbers. Addition is explored heavily in Topic 2 in fourth grade. Each lesson then serves to develop students’ conceptual understanding of the operation through group and individual problem solving and discourse rather than through traditional fluency practice. The materials follow a prescribed sequence and include some opportunities for shared discourse around fluency with the operations; however, the support for discourse does not include student discussion of shared ideas. The materials do not include the 12 “Basic-Facts Timed Tests” that are included in grades 3 and 4.

Topic 2, “Adding and Subtracting Whole Numbers and Decimals,” emphasizes that the focus on content should be on building number sense and encouraging students to do mental calculations and estimation. The materials integrate fluency in the topic’s opener, “Review What You Know.” Of the topic’s 19 problems, two problems ask students to find sums, and two problems ask to solve for differences. They are not word problems. Each number is three to four digits long. The rest of the review assesses the student’s familiarity with rounding whole numbers and decimals. While the review provides students with an opportunity to practice prerequisite skills, the materials do not provide guidance surrounding what length of time is appropriate for this task or how to measure strategic and flexible thinking based on how the student solved each problem.

Topic 2 begins by discussing how to use mental math to add and subtract (Lesson 2-1) and shifts toward how to estimate sums and differences of whole numbers (Lesson 2-2). It then refreshes how to add whole numbers (Lesson 2-3) and decimals (Lesson 2-4 and 2-6). The “Essential Understanding” is that “there’s more than one way to do a mental calculation” and that mental addition and subtraction “involve changing one or more numbers so that the calculations are easy to do.” The Solve and Share asks students to solve and find the total cost of three different

pieces of software. After a class discussion on the task, the teacher's key idea is that the same properties of addition used to solve whole number addition can be used to add decimals. Similarly, there is more than one way to do mental calculations involving decimals. This idea is further reinforced in the "Visual Learning Bridge," where there is another word problem involving the purchase of several items: "Rather than adding them in order of the objects presented, we can change the order and use mental math to add the places according to what's easier to solve."

Topic 4 ("Number Sense: Dividing by 2-Digit Numbers") is followed by Topic 5 ("Building Fluency: Dividing By 2-Digit Numbers"). Yet, the only evidence that the materials provide strategies to aid fluency with the prerequisite skill is a few questions located in the "Review What You Know" section at the beginning of the topic.

In Topic 5, four of the five lessons focus on TEKS 5.3C, in which "students will solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm." In Lesson 5-3, students solve the following problem: "In one season, 14 orchards produced 7,826 pounds of pecans. On average, how many pounds of pecans came from each orchard?" The Essential Understanding for this lesson states dividing dividends with up to four digits in problems that result in three-digit quotients is an extension of the standard algorithm used when dividing with lesser numbers. The "Intervention Activity" for this lesson says to display the steps of the standard algorithm for division and have students work in pairs to solve $7,4985 \div 11$. Students come to the board to describe the steps used to solve the problem. Neither the lesson nor Intervention Activity contains lesson notes that connect fluency practice within the program and make connections to the development of a conceptual understanding of the standard algorithm for division. Estimation and the use of compatible numbers are used to build number sense in determining if answers are reasonable, but there is no discussion about students who have no fluency with multiplication or division basic facts.

The lessons in Topic 6 progress from using patterns in place value, to dividing decimals by 10 and 100, to estimating decimal quotients, to using pictorial models, area models, and the standard algorithm. This conceptual development is appropriate for the division of decimals, but the materials do not provide a year-long plan for building fluency connected to the concept development and expectations for the grade level. There is no discussion or reference to fluency routines used across the year, and there is no evidence of a system for tracking the fluency progress of students across the year.

In Topic 6, Lesson 6-6, students use the standard algorithm to solve this problem: "Cameron has a case of hamburgers. Each hamburger is the same weight. How much does each hamburger weigh? ($3.6 \div 15$)" As students work through this problem, the materials do not support procedural fluency of the division algorithm by connecting the algorithm to base-ten models, area models, decimal grids, number lines, or the ratio table. After the "Quick Check," students are put in groups to work through the Intervention Activity. The teacher guides the students to divide $5.92 \div 16$ by first estimating to decide where to put the first digit of the quotient. The

teacher continues to work with the students to divide using the standard algorithm, but there is no reference to students applying their conceptual understanding of number relationships and strategies such as decomposing division problems into partial quotients (place value) or standard algorithms using the distributive method.

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

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

Partially Meets 2/4

The materials provide limited support in the development and use of mathematical language. The materials do not demonstrate a strategic approach to developing the mathematical vocabulary of students. Learning goals are not present within the materials to address the development of mathematical vocabulary. The materials provide some opportunities for students to listen to and read math vocabulary, but there is no evidence of students being required to speak or write using mathematical vocabulary within and across lessons. The topic opener introduces the new vocabulary words, but they are not listed in the subsequent lessons of the topic. The materials attempt to embed the use of vocabulary within the context of mathematical tasks through the teacher's questions, but student responses do not require them to communicate mathematical ideas with content-specific vocabulary.

Evidence includes but is not limited to:

All of the topics follow the same structure involving vocabulary. The "Review What You Know" workbook page at the beginning of each topic includes a vocabulary section in which students match a word to its definition. These are usually words from the previous topic. After the "Topic Planner," the section titled "The Language of Math" highlights the ELPS and math vocabulary. Students build math vocabulary using the vocabulary cards, the Student Edition glossary, and the online animated glossary. "My Word Cards" can be cut out, and the students can use the example on the front to complete the definition on the back. The online glossary uses motion and sound to define the words and can be used in English or Spanish. In the "Lesson Overview," the materials highlight the mathematical vocabulary being introduced or practiced with the lesson. On Day/Step 2 ("Visual Learning") of each lesson, the video also highlights the math vocabulary word; the "Glossary" icon is at the top of this page. The math vocabulary words are highlighted throughout the student workbook.

The materials provide opportunities for students to listen, speak, read, and write during discussions in Steps 1 and 2 of each lesson and during independent or small group work in Step 3. However, math vocabulary is not specifically targeted as a learning objective in the materials, and there is no evident support for the teacher to lead an explicit vocabulary lesson. Discussion questions typically contain math vocabulary, but there is no prompt for the teacher to require students to respond using the math vocabulary.

The materials provide supplemental resources in the form of word cards. These are available at the beginning of the topic in the student workbook. The front of each card contains the vocabulary word and a visual that illustrates the concept.

The “Math Diagnosis and Intervention System” is explained briefly in the Teacher Edition (TE). There is a note that says the “RtI Level 3” lessons concentrate on vocabulary, concept development, and practice. However, this component was not available to the reviewers.

In Topic 2, the vocabulary words are *compatible numbers* and *compensation*. On the back of these cards, students complete the definition by rewriting the vocabulary word found on the front. In Lesson 2-1, the TE recommends displaying the new vocabulary word and having a discussion. It demonstrates what the teacher could do for the term *compatible numbers*. There are explicit recommendations in which students at all levels of English language proficiency (Beginning, Intermediate, Advanced, and Advanced High) can engage to develop and use their academic vocabulary in context. For this lesson, for Beginning English Learners (ELs), materials recommend displaying an example, pointing to the numbers, and explaining that these are *compatible numbers*. Students respond by explaining why the two numbers are compatible. Advanced and Advanced High ELs are challenged to write an addition expression using three decimal numbers, with two of the numbers being compatible. They then trade expressions with a partner. One partner finds and tells which numbers are compatible, while the other partner listens to see if the answer is correct. ELs at all levels are supported in answering the question, “How can you use compatible numbers to help add numbers?” Later, students use mental math to solve for the total cost of three pieces of software. During this time, the emphasis is on building understanding. The lesson provides two questions that the teacher can either ask the whole group, each table, or individually. The materials also provide hints for the teacher to give. These scaffolded supports are provided to help elicit original student ideas without telling them what to do and to encourage student thinking in all forms. While the materials do not provide teacher support regarding what the teacher should be looking for in student work at this time, it does provide two student work samples for reference. Typically, one sample answers the task, and one is an incomplete answer. Students transition to sharing and discussing their solutions. The teacher starts with students’ solutions but, if needed, can project the student work samples from the teacher guide. While every lesson encourages the teacher to start with students’ solutions, it is implied that the conversation should drive toward what the lesson wants to discuss. The teacher then summarizes and generalizes that “You can use the Commutative and Associative Properties of Addition to add decimals in the same way you use

them to add whole numbers. There is more than one way to do mental calculations involving decimals. Most techniques involve the properties of addition and strategies to make the calculations easier to solve.” Using the academic mathematical vocabulary prepares students to apply meaning to terms.

Topic 3 word cards include *underestimate*, *overestimate*, *partial product*, and *variable*.

Vocabulary cards are provided in the Student Edition. Students use the example on the front of the card to complete the definition on the back. The words *overestimate* and *underestimate* are highlighted and used in context in Lesson 3-1. No definition is given in the student text. Lesson 3-2 includes the sentence “Add the partial product.” *Partial product* is highlighted but not defined. *Variable* is highlighted and used in a sentence in Lesson 3-14: “You can use a strip diagram and a variable [to find the answer].” The term *variable* is not defined in 3-14. The TE Topic Planner simply states: “Build math vocabulary using the word cards, glossary, and online animated glossary.”

In Topic 7, included vocabulary cards are *prime number*, *composite number*, *numerator*, *denominator*, *equivalent fractions*, *simplest form*, and *common denominator*. The Review What You Know workbook page asks students to use one of the vocabulary words from the previous topic in a fill-in-the-blank sentence. Lesson 7-2 lists three of the words included on the vocabulary cards. Step 1 of the lesson does not require formal math vocabulary; students find a fraction that represents the same part whole as $\frac{4}{6}$. In step 2, the student workbook page defines the three vocabulary words at the top of the page in a single sentence in context, stating that “Fractions that have different numerators and denominators but the same amount are called equivalent fractions.” The teacher’s questioning encourages, but does not require, the use of the math vocabulary. When the teacher asks, “What do you get when you multiply any number by 1?” students may respond with “A fraction multiplied by a fraction equal to 1 results in an equivalent fraction.” When the teacher asks, “What is another name for the fraction $\frac{1}{3}$? How do you know?” The sample response says, “ $\frac{2}{6}$ is equivalent to $\frac{1}{3}$ because it names the same amount of the whole.” There is no note to require students to use *equivalent fraction* in their responses. At the end of step 2, the student workbook page includes a section called “Do You Understand?” which usually requires a more extended response from students. In Lesson 7-2, students explain why multiplying the numerator and denominator by the same nonzero number is the same as multiplying the fraction by 1; the sample answer does not incorporate the use of the math vocabulary from the lesson. The last lesson of the topic always allows for applied problem-solving. The majority of the students’ workbook pages in these lessons require an extended response but do not require the use of math vocabulary. The optional homework for Lesson 7-2 includes a section at the top that explains how to use multiplication or division to find an equivalent fraction and includes the vocabulary words from the start of the lesson.

Topic 15, Lesson 15-8, highlights the vocabulary words in the VLB day of the lesson. The vocabulary words are *scatterplot*, *trend*, and *discrete data*. The VLB video explains each vocabulary word by showing the word in orange font along with a visual representation. The

video stops along the way, asking the students some discussion questions, such as “What information is given along the x-axis?” “What information is given along the y-axis?” “Which scatterplot below shows a trend similar to the trend shown in the scatterplot about used cars? How are the trends similar?” This questioning is evidence that students have opportunities to write using the vocabulary words in this topic. On a “Quick Check,” students respond in writing to the question, “How can a scatterplot help you see a trend in data?”

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

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

Meets 4/4

The materials provide opportunities for students to apply mathematical knowledge and skills to solve problems in new and varied contexts, including problems arising in everyday life, society, and the workplace. The materials integrate real-world problem solving throughout the three-step lesson plan format and within the student workbook. An explicit problem-solving lesson at the end of each topic integrates the process standards with content and skill TEKS and also incorporates real-world story problems. A problem-solving handbook is an additional lesson component that teaches a specific problem-solving model. Also, problems involving the use of data are incorporated into the three-step lesson plans. An additional component called “Today’s Challenge” offers five additional problems that increase in rigor throughout the unit and use the same data set.

Evidence includes but is not limited to:

The teacher materials contain a “Problem Solving Handbook” that is designed to help students organize their math processes and problem-solving strategies in the problems they solve every day at the start of daily lessons. The materials suggest that the teachers display a list of strategies, tools, and techniques with explicit names that students can refer to as they participate in problem-solving discussions. The teacher materials include samples of various strategies, including using strip diagrams, drawing a picture, writing equations, and using reasoning. There is also a blackline master of a “Problem-Solving Recording Sheet,” a graphic organizer to help students show their work and make sense of problems. The recording sheet includes a list of strategies that students can use as they plan how they work through the

problems. There are a few samples of how to complete the worksheet in the explanation of this component, but the samples are not included in daily lessons.

Throughout the materials, each topic has a section called “Today’s Challenge Online,” which includes sets of five problems that increase in difficulty and use the same data. Each set also includes “Factoids” and “Write Your Own Problem” sections to extend students’ knowledge and thinking. A page of notes for each problem is in “The Today’s Challenge Teacher Guide”; it includes teaching actions organized under “Before,” “During,” and “After.” The program contains some opportunities for students to solve real-world problems in a variety of contexts. The “enVisionMATH Texas 2.0 User’s Guide” states that the “Solve and Share” problem opens each lesson with a rich problem for students to discuss and share solution strategies. Teaching actions keep students on a path to higher levels of cognitive demand. The student workbook has a mix of short-answer, multiple-choice, and long-answer problems. The story problems used throughout the workbook are often set in real-world situations.

In Topic 1, Lesson 1-1, students solve the following: “Danielle wrote 2,350,400,000 for the standard form of two billion, three hundred fifty thousand, four. What error did she make? What is the correct standard form of the number?” The homework for the lesson is leveled, allowing the teacher to differentiate between students who need intervention, those who are on level, and those who are above level. All provide multiple opportunities for students to make sense of open-ended, real-world contexts involving mathematics. One problem for the on-level homework includes a data table of the top five states (by 2010 U.S. population) and reads, “Which state’s population is greater than Florida’s population but less than Texas’s population? Explain how you found your answer.” The daily challenge centers on a Texas landmark: the Johnson Space Center in Houston, Texas. The daily challenge has students analyze a data table describing the distance, in kilometers, of several different locations from the Johnson Space Center. These locations include the International Space Station, Mars, and the moon. Each day, students solve a different problem relating to the data set. On the first day, they are to determine how far the Kennedy Space Center is from one of the planets. Students give their answers in word form and then justify their thinking.

In Topic 3, students solve problems with store profits and averages. The application to developmentally appropriate real-world contexts is evident in the materials. Each topic includes a problem-solving lesson on a specific skill. The skill in Topic 3 is “Using Reasoning.” Today’s Challenge contains a table with survey results about friends. Students must use data provided in a table to solve the daily challenge question. The data includes whole numbers and decimals.

In Topic 7, Lesson 2, for the Solve and Share problem, students represent equivalent fractions. The page includes a set of fraction bars to support concept development. One of the “Activity Centers” includes a “Math and Science” activity; this allows students to apply learning in other content areas. For example, one activity explains the difference between inherited and learned traits and then shows a data table about traits of children’s’ pets. Students write out the factors of some of the numbers they calculate from the data table.

In Topic 11, students graph ordered pairs using additive and multiplicative patterns. In the Solve and Share, students make a graph to show the growth of Sally's bean plant, Samir's puppy's growth pattern, and the height of the water in a bucket.

Today's Challenge from Topic 12 uses the context of the "position of the football and receiver"; students receive a table to analyze information using ordered pairs and a coordinate grid.

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

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

Partially Meets 2/4

The materials include some research to aid teachers in understanding mathematical concepts and the validity of the publisher's approach to the lesson. There is little evidence that cited research is current, academic, relevant to skill development in mathematics, and applicable to Texas-specific context and demographics. Materials do not provide a bibliography.

Evidence includes but is not limited to:

The author team and well-known mathematicians bring an impressive level of experience as classroom teachers, teacher educators, researchers, and authors. They have written numerous professional articles based on their research and observations, and their contributions to the program is an implementation of successful teaching methods. The program offers an instructional model based on a research foundation and has proven efficacy shown by statistically significant advantages in independent, scientific research done with randomized controlled trials. enVisionmath2.0 meets ESSA's "Promising" evidence criteria. However, the materials do not cite research throughout the curriculum that supports the design of teacher and student resources. The user guide states that "Janice Corona from Dallas, Texas, and Jim Cummins from Toronto, Canada ensured quality ELPS instruction." However, the materials provide no further explanation or context of their credentials, role, or contribution that explains how they informed the materials' design using research-backed methods. The "Math

Background” and professional development videos designed to support teacher understanding of the content are not supported by or cited with research.

The materials do not explain research or citations of research relevant to skill development in mathematics or applicable to Texas-specific context and demographics. Every topic in the materials does contain a short professional development video where a person speaks broadly and briefly about the pertinent material. While the video sometimes introduces clips of the materials, the speaker in the video is not specific about how the materials contribute to student or teacher understanding. For grades 3–5, Jane F. Schielack, PhD., does provide the short (approximately two minute) professional development videos for numeration and addition/subtraction, but viewers do not know anything about her research-based guidance informing the design of the materials.

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

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

Meets 4/4

The materials develop the student's ability to use and apply a problem-solving model. The 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 by including a problem-solving handbook. The materials prompt students to apply a transferrable problem-solving model throughout the first two steps of the daily three-step lesson format. Students are always asked to think before solving: "What information are you given? What are you asked to find? What tools can you use?" From there, problem-solving steps vary but always end with generalizing and applying to a new problem. The materials provide guidance to support teachers and prompt students to reflect on their approach to problem solving.

Evidence includes but is not limited to:

The materials include a problem-solving handbook at the start of both the Teacher Edition and Student Edition. The steps used in the handbook align directly to the Process TEKS: "Analyze, Plan, Solve, Justify, Evaluate." The handbook also includes a step in which students discuss what tools, such as real objects or manipulatives, or techniques, such as mental math or models, can be used to solve a problem. The handbook includes a blackline master to guide students through the process. This document is a graphic organizer that can be used to solve any type of problem.

Each lesson includes a "Solve and Share" as step 1. Students work independently to solve the problem and then share their work, strategy, and results. Each topic ends with an entire

problem-solving lesson on a specific problem-solving skill, such as solving two-step problems and making a table. Characters in the Student Edition and Teacher Edition provide hints and problem-solving advice. Step 2 of every lesson concludes with students solving a variety of problems; all of these tend to include word problems. Some word problems are multiple-choice, and others are free-response questions. All, in varying degrees, require the students to apply the skills learned from the lesson using the problem-solving model.

In Topic 1, Lesson 1-5, students learn that math explanations can use words, pictures, numbers, and symbols. The lesson embeds the “Analyze, Plan, and Solve” components of the problem-solving model. This model is the first topic taught, so the materials model how to use a problem-solving model early in the year.

In Topic 5, Lesson 5-3, the Solve and Share begins with using estimation to determine a quotient. As the discussion continues, students summarize the information they are given and what they are asked to find in order to solve the problem. To close, students generalize, extend, or apply similar thinking to a new problem.

In Topic 7, Lesson 7-1, in the Solve and Share, students apply number sense strategies. The materials ask students to discuss the information they have been given to solve the problem and paraphrase what they are asked to do. During the VLB, the materials ask students to create and use a representation to model how arrays can help them find factors of a number.

In Topic 10, Lesson 10-4, students write an equation to explain how long Hector might spend walking his dog in a month if he spends d minutes every day. The emphasis is on building understanding. The materials ensure that this is developmentally appropriate for grade-level students by posing a problem that all students can access with various problem-solving approaches. This problem ensures that students can discuss, per the lesson’s structure, which of their strategies are the most efficient and successful in producing a solution that integrates the knowledge and skills the lesson wants to highlight.

In Topic 14, Lesson 14-6, students are asked what food has a greater mass, an onion or an apple, if six onions have a mass of 900 grams, and eight apples have a mass of one kilogram. The materials provide multiple opportunities for students to make sense of open-ended, real-world contexts involving mathematics. One problem in the homework reads: “How is converting grams to milligrams similar to converting pounds to ounces? How is it different?”

In Topic 15, Lesson 15-4, the Solve and Share begins with a discussion of what tools students will use to solve the problem, which in this case is information in a data table. As the discussion continues, students summarize the information they are given and what they are asked to find in order to solve the problem. To close, students generalize and extend or apply similar thinking to a new problem. In Lesson 15-8, students use prior knowledge about graphs to look for a relationship in a set of paired data. As they make connections and analyze information in the

graph, the lesson progresses with students understanding what a scatterplot is and what the purpose is for this particular type of graph. Students are involved in using process standards of “Analyzing, Connecting, and Justifying the Solution.” Lesson 15-10 is the last lesson of the topic, and it focuses on problem solving. The materials explicitly model the components of using a problem-solving model as students analyze data in a scatterplot, plan how to solve the problem, and solve it. Then, students justify their answers.

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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.

Partially Meets 2/4

The materials provide limited opportunities for students to select appropriate tools for tasks, concept development, and grade. The materials provide some opportunities for students to select and use real objects, manipulatives, representations, and algorithms as appropriate for the stage of concept development, grade, and task. The materials provide limited opportunities for students to select and use technology for solving tasks because even though they are available, it is unclear whether students can access them during lessons or independent enrichment time. The materials provide teacher guidance on appropriate tools for tasks, but there are only six mentions of the word *efficient* in the Teacher Edition (TE).

Evidence includes but is not limited to:

The materials primarily provide the teacher with the same materials as the students. They provide both teachers and students with the same problem-solving handbook, the same word problems (with the inclusion of the answer key), and the same “Visual Learning Bridge.” There is little guidance about the tools introduced within the materials. While every planner does discuss the math processes and the content, it does not explain which tools are appropriate and efficient for which tasks. The professional development video that accompanies each topic does not explain the role these tools play in assessing and developing a student’s conceptual understanding. There is little to no variation between grades 3, 4, and 5 regarding online tools or the “Problem Solving Handbook.”

The “Background” section in the TE “Topic Planner” explains the process standards used within the topic. The Problem Solving Handbook provides multiple strategies and approaches for problem-solving. Problem-solving tools, as listed in the handbook, include tools, manipulatives, paper and pencil, and the internet. Problem-solving strategies include mental math and number sense. Strip diagrams are heavily emphasized in the nine-page handbook, receiving four pages of explanation and examples.

The materials provide students with opportunities to learn to use grade-appropriate tools for solving tasks and understanding concepts, but students have few opportunities to select or compare tools for a given task. The lessons are sequenced so that tools or strategies become increasingly more sophisticated, incorporating representations or even mental math strategies, but the lessons typically ask for a specific tool. The final lesson in each topic is always about problem-solving, yet these lessons are more focused on application in real-world settings rather than making connections across types of tools or strategies for the various problems.

The materials make references to using manipulatives during most lessons, but the use of digital tools is most often found in the third step of the daily lesson, in which students participate in center activities or a teacher-directed remediation lesson. One of the center activities includes a technology center, in which students can access one of six online games included in the program. There is also a set of online math tools with 12 different virtual manipulatives, including counters, place value blocks, number lines, and number charts. It is unclear from the materials whether students can access these tools during whole group instruction, so it may depend on the technology access within individual schools and districts. The materials make no effort to guide the teacher or have students discuss when virtual manipulatives or real hands-on tools would be more appropriate or efficient.

A set of digital tools accompanies every grade level on the materials’ website. Both students and teachers have access to this digital tool suite. These manipulatives are used for concept exploration and attainment for the primary focal area(s) of the grade level. These tools can be manipulated digitally, which provides students with the opportunity to learn and use grade-appropriate technology for solving tasks and understanding concepts. While students can be provided with paper workbooks, each student can also solve each problem through the digital platform.

In Topic 3, Lesson 3-2, students connect what they know about multiplying by 10 to solve the problem presented in the “Solve and Share.” In Topic 4, students use a variety of division models to support their understanding. They use a diagram to explain how they can find the correct quotient. The “Math Background” section of the topic explains that estimation and compatible numbers “are a more efficient method.”

In Topic 7, students create and use representations for renaming a pair of fractions, so they have the same denominator to reinforce that equivalent fractions represent the same amount. The materials also state that the “simplest” way to find a common denominator for two fractions is to multiply the denominators.

In Topic 13, students use unit cubes to find the volume of a rectangular prism. As the lesson progresses, students learn to use the formula to find the volume. At the end of the lesson, students can use the online place value blocks tool to solve a volume problem.

In Topic 15, Lesson 15-9, students determine if there is a relationship between the two sets of values in a table. Students use grid paper to make a scatterplot. As the lesson progresses, students learn how to use a coordinate grid to create a scatterplot and how to describe the trend in the data. This lesson progresses from concrete (grid paper) to a more formal, abstract model using a coordinate grid.

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

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

Meets 4/4

The materials include teacher prompts on student usage of appropriate techniques (mental math, estimation, number sense, generalization, or abstraction) to solve problems. There is evidence that the materials also support teachers in understanding the appropriate strategies that could be applied and how to guide students to more efficient strategies. They also provide opportunities for students to use multiple strategies to solve problems.

Evidence includes but is not limited to:

The “Topic Planner” describes the content of each lesson by listing the TEKS and ELPS, “Essential Understandings,” materials and resources, and suggestions for professional development videos to help teachers build their background knowledge of the content or their teaching skills. The “Math Background” section explains how process standards and content TEKS are developed with visual models and relational thinking. Each lesson includes a specific background section that describes how previous learning will be used in the context of the new lesson with either the same models or applied to new ones.

In the “Problem-Solving Handbook” section at the front of the Teacher Edition (TE), there is a generalization that says, “Because many problems can be efficiently and accurately solved in different ways, students are likely to use different strategies for solving problems. When discussing solutions, look for and have students share different approaches.” Step one of every lesson reminds teachers to have students share their responses.

For example, in Topic 3, students use multiples of ten, models, estimation, and the standard algorithm. The materials progress through a series of more sophisticated solving techniques with models used to support understanding. “Solve and Share” problems often prompt students to solve “any way you choose.” Students are not asked to solve in multiple ways or analyze which methods are most efficient or appropriate for certain situations.

In Topic 7, Lesson 7-5, the lesson objective is for students to find common denominators of fractions using area models. In the first part of the lesson, students represent and find fractions of the same whole with different denominators using “any method they choose.” There are no prompts for the teachers to have students share why they believe their model or strategy might be easier than another to use for this task. Both of the sample hints show shaded regions of squares. The second part of the lesson asks a similar problem and includes models of shaded rectangles to help solve each problem. The story problems in the Student Edition (SE) ask students to find common denominators in nine of the 12 problems, but the page begins by showing two multiplication strategies to find common denominators. In this instance, students can select any strategy or model they choose to find the common denominators, but there is no discussion or connection made between the different strategies shown within the lesson.

In Topic 13, Lesson 13-5, Solve and Share, students construct models to find the number of cubes that make up a rectangular prism. After they build their prism, they are guided to draw the prism. Then, students learn how to find the volume of a rectangular prism using representations, unit cubes, and multiplication. In Lesson 13-8, students analyze a composite solid figure, identify the rectangular prisms that make up the figure, and use formulas to calculate its total volume. Students find the volume of a composite solid by separating it into rectangular prisms and finding and combining their volumes. The teacher asks, “How is finding the volume of a rectangular prism like finding the area of a rectangle? How is it different?” The teacher models how to decompose a solid figure and how to use the formula for volume. Then, the teacher models how to add all the smaller volumes to find the larger figure’s volume. The teacher concludes by asking, “How else could you divide the solid figure into two rectangular prisms?”

In Topic 14, Lesson 14-1, the Solve and Share begins with students using strip diagrams to convert customary units of length. As the lesson progresses, students convert one unit of length to another using multiplication or division. The materials prompt the students to use a strip diagram and multiplication or division to convert.

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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 provide opportunities for students to share strategies and approaches to tasks to develop students' self-efficacy and mathematical identity. The materials support students to see themselves as mathematical thinkers who can learn from solving problems, make sense of mathematics, and productively struggle; students can sometimes choose any method to solve a problem. The materials provide support for students in understanding that there can be multiple ways to solve problems and complete tasks through class discussions. The materials provide support and guidance for teachers in facilitating the sharing of students' approaches to problem solving with a brief list in the "User's Guide."

Evidence includes but is not limited to:

The materials foster a mathematical community in the "Solve and Share" at the beginning of each lesson. Students solve a problem and share their results. Materials explain: "Give students time to struggle. Research shows that as they think, conceptual understandings emerge." There are tips for facilitating problem-based learning. Teachers are instructed to make sure students know that they expect them to do the thinking and have students share their thinking with a partner, small group, or the whole class. Teachers also show that they value students' thinking even when they struggle. Materials also foster a mathematical community by providing the students with opportunities to work together in a game format several times within each topic. The Solve and Share has a "Share and Discuss Solutions" step. Students share their strategies almost daily as a part of the initial Solve and Share problem, during guided work, and during intervention or center work.

The ancillary materials include a User's Guide. In the section explaining the features of step 1 in the daily three-step lesson format, a callout box says, "In step one, be a facilitator as students solve a problem!" Underneath, there are "Tips for facilitating problem-based learning"; these briefly explain, in one sentence each, how to "Set expectations, Foster communication, Be encouraging, Use the language of the process standards." In step 1 of the lesson cycle, the materials always prompt teachers to have students share their solutions and then show the sample hints if needed. The prompts focus on thinking about the problem before any attempt to solve it, asking, "What is the question asking? What information do we already know? What tools can we use to solve?" This prompt helps students gain confidence in their ability to work on the problems on their own. As students begin the guided and independent practice pages in the Student Edition (SE), the materials allow students to attempt problem solving on their own before sharing with a partner or their class. The prompts for teacher intervention are phrased to show that the materials allow the students to struggle independently before the teacher intervenes: "If students are having difficulty..., then...."

There are images of characters within the SE that encourage students to see themselves as mathematical thinkers.

In Topic 6, Lesson 6-1, the Solve and Share begins the lesson with students using the process of moving the decimal to multiply by 10 to move the decimal to divide by 10. Students solve this problem any way they choose, and teachers support them during their productive struggle with guiding questions and hints as they build understanding. Then, students share and discuss their solutions, summarize, and generalize.

In Topic 7, students use estimation, number sense, and number line strategies to solve equations with fractions. The lessons begin with estimation, which is then tied with number sense strategies. The number line and fraction bar representations are used later in the topic. The sample hints offered at the beginning of the lesson highlight the same strategy printed in the Student Edition (SE).

In Topic 8, students use the strategies from the previous topic to solve equations with mixed numbers. The lessons begin with estimation, which is then tied in with number sense strategies. The number line and fraction bar representations are used later in the topic. The sample hints offered at the beginning of the lesson highlight the same strategy printed in the SE. In Lesson 8-3, students use fraction strips to add mixed numbers with like denominators. The materials provide support for the teacher to monitor students as they develop solution strategies. The teacher can use the "Build Understanding" and "Give Hints as Needed" sections to assist students, asking questions such as "Which strips will you need to model the problem? What do you know about adding like terms that can help you solve the problem? Why should you simplify your answer of four and five-fourths?"

In Topic 9, Lesson 9-5, the Solve and Share begins the lesson with students dividing a unit fraction by a non-zero whole number. The students solve the problem any way they choose. The two student work samples show two different strategies: a pictorial model and paper folding. Then, the students are explicitly taught two strategies for this type of problem; they learn to use a model and a number line.

In Topic 12, Lesson 12-1, the Solve and Share begins the lesson with students designing a play area for puppies and drawing as many different shapes for the play area as they can create. The shapes must have straight lines that all connect; students label the number of sides for each shape. The materials guide the teacher to support the students, monitoring them as they develop solution strategies. Provided guiding questions include “What are you asked to do? How can you make the shapes? What is a play area? How many sides can the play area have? Explain.” Then, students share and discuss their solutions, summarize, and generalize: “Polygons are closed plane figures composed of line segments joined at their endpoints. You can describe and classify a polygon by its sides and angles.”

In Topic 13, Lesson 13-7, the Solve and Share begins the lesson with students solving a real-world problem involving volumes of a rectangular prism. The students are encouraged to solve this problem in any way they choose; they use prior knowledge of volume formulas to find a strategy to solve the problem. As students are productively struggling, the materials support them with “building understanding” questions. Teachers provide hints as needed, asking, “What strategies can you use to solve the problem? What hidden question do you need to answer before you can solve this problem?”

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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.

Partially Meets 2/4

The materials prompt students to effectively communicate mathematical ideas, reasoning, and their implications, using multiple representations. While some prompts are not general enough to transfer to another task, the strategies presented can be used to solve problems independently, even if a particular lesson favors one particular model or strategy. A mixture of problems throughout each lesson requires short answers or fill-in-the-blank responses; there are also open-ended problems that call for an explanation of student thinking. However, there is little support for students to put their thinking into words using mathematical vocabulary. The materials do not prompt oral communication or the exchange or defense of mathematical reasoning. The materials provide prompts for teachers that are almost exclusively focused on concept attainment.

Evidence includes but is not limited to:

The materials provide opportunities for students to communicate mathematical ideas during the “Solve and Share” tasks (step 1 in the three-step daily lesson). Students also have opportunities to communicate mathematical ideas in their Student Edition (SE) when they show their thinking on the “Guided Practice” and “Independent Practice” problems. The materials contain tasks that can be solved using a variety of mathematical representations, though some lessons within a topic only highlight one strategy at a time. During the “Visual Learning Bridge” in step 2, there is a final problem titled “Convince Me” that asks students to explain their reasoning to solve a problem. However, these problems do not usually ask for a specific strategy or representation, nor do they require written responses; they do allow students an opportunity to organize their thoughts, show their thinking, and share with others.

In Topic 2, Lesson 2-6, students are given board measurements of 1.15 and 0.7 and must find the total length of the boards. Materials state, as they do in each Solve and Share for every lesson in every grade level, to “solve this problem in any way you choose.” After this, a character on the page prompts, “How can you create and use representations to model this problem?” The “Share” part of the teacher prompts include “Start with the student’s solution. Then project and analyze Anna’s work as needed.”

In Topic 3, Lesson 3-2, a problem states that a charity collected 163 cans of food every day for 14 days. Students must find how much food was collected in the first 10 days, in the last four days, and in all. Materials prompt the teacher to share and discuss solutions in each Solve and Share. The teacher is not prompted to have students share and explain their own thinking. Throughout the materials, students communicate mathematical ideas by writing. Activities do not require students to communicate verbally. The only place that students communicate with other students is possibly during the Solve and Share, but oral communication only happens if the teacher asks for it, not as a natural progression built into the lesson. All other communication in the lesson throughout Topic 3 is written communication, in which the student writes an answer in a workbook. The materials reviewed are largely a written, worksheet-driven approach to learning. Partner games focus on procedural fluency, but they do not require the communication of mathematical ideas in any format.

In Topic 4, Lesson 4-4, students use mental math to estimate quotients. The materials prompt the students to solve them in any way they choose but then state that students can use number sense, estimation, and multiplication to solve the problem. The lesson provides “Building Understanding” questions and hints to give as needed to guide the students. Students share their solutions, and materials provide sample student work. The lesson continues as students are explicitly taught how to divide by a multiple of ten. The lesson prompts the teacher to ask questions while modeling the division process. At the end of the lesson, students complete the Convince Me question, “For the example above, show how you can check that the quotient is correct. Explain your answer.”

In Topic 8, Lesson 8-1, students identify what fraction or mixed number is represented by a point on a number line. The Teacher Edition (TE) states that students can solve the problem using any method they choose. Teacher prompts include “What do you know? What are you asked to do? Between which two numbers is a point located?” Both of the sample student solutions show a number line and written explanations. The Convince Me problem asks, “What number can be written for $9/3$?” The answer key only has the number 3 written. There are no samples that include other strategies or written explanations that could be used to solve the problem or that the teacher can use to prompt students. The SE pages include 25 questions where students can simply write a fraction in the simplest form or match a fraction to a point on a number line. There are only six open-response questions and one multiple-choice question. Although the questions could be solved with any prompt, the answer keys only include equations and no support for the teacher to prompt students to show thinking with

other strategies or a written explanation. In this topic, a “Quick Questions” game asks students to read a question aloud then discuss and agree on a correct answer. This game has the most discourse of all games reviewed in grade 5.

In Topic 9, Lesson 9-3, during the Solve and Share, students solve a problem involving multiplying a fraction by a whole number, which results in a mixed number. The TE states that students can use any method they choose to solve the problem. Prompts include “What information is given in the problem? What do you need to find? What fraction of the ribbon does Julie use? What could you multiply to find the answer?” These prompts help students solve the problem, but they do not help students communicate their math thinking. The Convince Me problem in this lesson asks students to find $6 \times \frac{4}{9}$, and then use repeated addition to justify the answer. This problem does ask students to explain their thinking with an implied opportunity to use multiple strategies; however, it does not require a formal written response. The answer key only shows the equation and does not offer other strategies the teacher could use to encourage multiple representations. Fourteen of the problems in the SE ask students to complete an equation. There is also one multiple-choice question and seven story problems that are open-ended enough that students could use any of the strategies from the lesson; however, the sample responses only show equations. On the two workbook pages, representations printed on the page include a single picture of base-ten blocks, which were not shown in this particular lesson.

In Topic 9, Lesson 9-6, during the Solve and Share, students use an area model to solve a problem involving the division of whole numbers and unit fractions. The two sample student solutions show different strategies. One shows a picture, a written explanation, and an equation. The second example shows the equation solved incorrectly with a limited explanation of the answer. The Convince Me problem in this lesson asks students to use an area model to find two divided by $\frac{1}{4}$. Students then find the quotient by multiplying the reciprocal of the fraction. This problem does ask students to explain their thinking, and there is an implied opportunity to use multiple strategies; however, it does not require a formal written response. Eight of the problems in the student book ask students to complete an equation. The other eight problems are story problems, which are open-ended enough that students could use any of the lesson strategies; however, the sample responses only show equations. Out of the two pages, representations printed on the page include fraction strip models, which were shown in the lesson, and number lines, which were not shown in this particular lesson.

In Topic 12, Lesson 12-4, the Solve and Share begins the lesson with students drawing two parallel lines and then connecting them to make a four-sided figure. Students classify it and share their thoughts with a partner. As students work through this problem, the lesson materials provide teacher guidance on building understanding and giving hints as needed. The materials prompt the students to share their solutions and view sample student work. The lesson continues as students are explicitly taught which quadrilaterals are special cases of their shape. The lesson reminds students that a good explanation can include words, pictures,

symbols, and numbers; however, the lesson does not contain explicit instruction using mathematical vocabulary.

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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 partners, in small groups, and whole class. The materials integrate discussion throughout to support students' development of content knowledge and skills. The materials offer limited guidance for teachers in structuring and facilitating discussions as appropriate for the concept and grade level.

Evidence includes but is not limited to:

The materials intentionally provide opportunities for students to engage in mathematical discussions in a variety of different groupings (e.g., whole group, small group, peer-to-peer). The "Solve and Shares" at the beginning of each lesson provide opportunities for students to share their problem-solving. This sharing can be done in small groups or whole groups, which provides opportunities for students to share and discuss with others. The Teacher Edition (TE) contains guided questioning for concept attainment; however, there is no guidance for math procedures or norms. The materials do not provide sentence stems, sentence frames, or rubrics for active listening or responding.

The "Convince Me" section of Lesson 3-9 asks students to use grids and an equation to find the product of .27 and 5. Students compare their answers. The "Extend Your Thinking" section of the same lesson requires students to answer a question using a bar graph and asks them how they know the answer. The Teacher Edition (TE) has a sample answer; however, there is no

guidance for sharing the thinking via mathematical discourse. The guidance simply states, “Have students explain how they arrived at their answers.”

In Topic 5, Lesson 5-3, students use estimation to determine where to place the first digit in the quotient in a problem with a four-digit dividend and a two-digit divisor. The TE guides teachers to “build understanding and give hints as needed.” Students share their solutions; the teacher shares sample student work, summarizes, and generalizes. In the “Look Back” section, students explain if they think the exact answer is greater than or less than their estimate. In the “Visual Learning Bridge” (VLB), the teacher explicitly teaches students to solve division problems involving four-digit dividends and two-digit divisors to find three-digit quotients. In the “Do You Understand?” section, students estimate how many pounds would have come from each orchard. The lesson concludes with guided practice, independent practice, and problem-solving on workbook pages. Teachers provide an intervention lesson for students who have not mastered this skill. The materials for this lesson provide some opportunities for student discussion throughout each step of the lesson.

In Topic 8, Lesson 8-7, students practice adding and subtracting mixed numbers to solve real-world problems. The opening Solve and Share problem asks students, “What information are you given? What are you asked to find? Which strategy can you use? Explain. What hidden question do you need to answer to solve the problem?” The questions during the VLB are a mix of open and closed responses “What information can you gather from the problem? What information can you get from the picture?” These two prompts might allow for more than one student to respond so the teacher could facilitate a discussion with the class. In the third part of the lesson, students who score high enough on the “Quick Check” can work on the “Problem Solving Reading Mat” with the teacher. The activity page asks students to look at a table on the worksheet and answer questions about it. During the reading of the Problem Solving Reading Mat, students learn about three major types of rocks.

In Topic 11, Lesson 11-4, students use tables of related number pairs to graph coordinates on a coordinate grid. In the opening Solve and Share problem, students use the information to complete a table with values and then graph points in the first quadrant of the coordinate plane. Prompts from the teacher include “What information are you given? What are you asked to do? How do you use the equation to complete the table? What point on the coordinate grid corresponds to the x-value of 1 and the Y-value of 3?” In the second part of the lesson, the VLB, has teacher prompts to facilitate whole-class discussion. Prompts include “How does the term ‘linear equation’ help you think about the problem? Why is multiplication used in the equation? In Step 2, how do you know what numbers to write in the table?” In the third part of the lesson, students who score high enough on the Quick Check can complete the “Math and Science Activity.” This worksheet explains how planets in the solar system rotate at different speeds. Students use information from the paragraph to write an equation to represent how many hours it takes the Earth to rotate. The second question on the page asks students to write another equation using information from a data table.

In Topic 13, Lesson 13-3, students use the formula for the area of a rectangle after they break apart a composite shape into rectangles to find the total area. At the end of the Solve and Share experience, students are asked to communicate how breaking up a composite figure into parts can help to find the area of the whole figure. During the VLB, teachers explicitly teach students to use the area formula for a rectangle to help find the area of composite shapes. Then, students show a different way to break apart the garden and explain. Teachers provide an intervention lesson for students who have not mastered this skill. The materials for this lesson provide opportunities for student discussion throughout each step of the lesson.

In Topic 15, Lesson 15-3, in the TE, prompts for discussion include questions such as “What information can we get from the dot plot?” and “Why do we find $\frac{1}{2}$ inch times 5?” This question prompts discourse at the beginning of the lesson. All scaffolding prompts are directed at whole group interaction. Small groups are utilized for ability-grouped students, but only the “Struggling Learners” portion has any teacher support.

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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.

Partially Meets 2/4

The materials provide limited opportunities for students to justify mathematical ideas using multiple representations and precise mathematical language. The materials do not assist teachers in teaching students to construct arguments using grade-level-appropriate mathematical ideas. Questions from the Teacher Edition (TE) or Student Edition (SE) that attempt to incorporate the Process TEKS are superficial and do not provide guidance for the teacher or student to construct written or oral arguments or incorporate justifications in their responses.

Evidence includes but is not limited to:

The materials do not support students in sharing their ideas with peers, small groups, or the class in a routine way. Although the materials support precise mathematical language in the form of word cards for each topic, they do not support the application of the precise mathematical language when students justify their arguments. The materials provide limited routines and structures teachers can use to facilitate student construction of arguments. The routine is evidenced in the “Solve and Share,” where students solve a problem at the beginning of each lesson. They can use representations of their choice to solve the problem; however, students are not required to share their solution or to justify it.

The materials provide limited opportunities for students to construct and present arguments that justify mathematical ideas using multiple representations. Step two of the lesson, the “Visual Learning Bridge” (VLB), is where most questions using the Process TEKS are found. However, the teacher’s prompts facilitate discussion and are supported with routines to have students construct a formal argument with sentence stems or writing support. In these

prompts, there are no other question prompts or sentence stems students can use to create a written or oral argument. Students are not asked to use multiple representations or share their ideas with peers. The materials do not assist teachers in facilitating students to construct arguments using grade-level-appropriate mathematical ideas.

In Topic 3, Lesson 3-4, the Solve and Share asks students to write a real-world problem using the equation 36×208 . Materials provide sample student work. Students are not asked to solve the problem. Students are asked to construct an argument about whether an exact answer or an estimate is needed for the presented problem. Materials also instruct students to explain how they know and provide an exact answer. The TE states: “Start with the student’s solutions. Then project Jessica’s work as needed.” The work that is to be projected does not answer the question. It shows that Jessica worked out the problem using the standard algorithm and wrote a concluding sentence that the tickets would be \$528. It does not explicitly say that an exact answer is needed, nor does it say how Jessica knows an exact answer is needed. The sample work does not answer the posed question.

In Topic 4, Lesson 4-3, students think about the relationship between division and multiplication to find a side’s length in an area model. Students share their solutions; two sample student solutions are available if needed. The “Look Back” section asks students to create and use representations to tell how multiplication can be used to find the length of the missing side. As the lesson continues during the VLB, students are explicitly taught how to use an area model to represent the division of three-digit by two-digit whole numbers. After the teacher models, students use the model to find the quotient of 408 divided by 12 during the “Convince Me” section. The lesson concludes with guided practice, independent practice, and problem solving. Twenty of the 21 questions are open-ended and involve reasoning, representing, connecting, analyzing, communicating, and extending thinking.

The materials do not provide prompts for the teacher to assist students when constructing arguments. For example, in the Topic 4 “Today’s Challenge,” on Day 3, materials state that the combined weight of passengers on Uranus must be between 200 and 225 pounds. A chart shows that the weight on Uranus relative to Earth is 0.89. Students are to find possible Earth weights for three passengers that will fit within the parameters. The questions also ask teachers to “Explain how you know these weights will work.” Materials provide no teacher answer key or sample student answers.

In Topic 5, Lesson 5-1, the Solve and Share begins the lesson with students connecting the process of dividing by a one-digit divisor with the process for dividing by a two-digit divisor. The materials assist teachers in helping students construct arguments by giving hints and sharing sample student work. The “Summarize and Generalize” section supports teachers by helping students capture the essential skills. For this lesson, students generalize that they can use estimation and what they know about dividing with one-digit divisors to help them divide by two-digit divisors. They also generalize that “Multiplication and division have an inverse relationship. You can use strategies based on place value, multiplication, and subtraction to

divide whole numbers.” There are other opportunities for students to explain their learning in the Look Back and Convince Me sections, but there is no evidence that the materials list discussion questions or sentence stems to elicit different types of responses from students as they present their arguments.

In Topic 8, Lesson 8-4, the “Construct Arguments” asks, “In this problem, do the whole number parts need to change when finding equivalent fractions? Explain.” There are no other question prompts or sentence stems students can use to create a written or oral argument with a beginning, middle, and end or with a why, what, or how they solved the problem.

In Topic 9, Lesson 9-3, the “Justify” prompt is only a support for the teacher to help students make a generalization of the learning: “Different methods can be used to multiply a whole number.” “Point out that the product of $6 \times \frac{4}{9}$ is less than 6. Explain to students that, when a whole number and a fraction less than 1 are multiplied, the product is less than the whole number.”

In Topic 10, Lesson 10-2, the Justify prompt refers to one of the questions on the guided practice page of the student workbook; it says: “Have students tell what operation they would do first if parenthesis were removed. (Division) Have them explain their answers. (Answers will vary).” There are no other question prompts or sentence stems students can use to create a written or oral argument. Students are not asked to use multiple representations or share their ideas with peers.

In Topic 14, Lesson 14-6, the Solve and Share begins the lesson with students using number sense to help them find a relationship between metric units of milligrams and grams to solve a problem. Students share their solutions; two sample student solutions are available if needed. The Look Back section asks students to analyze relationships as they answer how many kilograms Rhonda measured. They write two equations to show their work. In the VLB, students are explicitly taught how to convert one metric unit of mass to another by using multiplication or division. The Convince Me section has students explain which operation to use when converting kilograms to milligrams. The lesson concludes with guided practice, independent practice, and problem-solving. Twenty-nine of the 30 questions are open-ended and involve explaining, connecting, using number sense, and extending thinking.

In Topic 15, Lesson 15-6, students find the least and greatest data values on a stem-and-leaf plot. Students write their answers in the workbook. Materials do not explicitly ask students to share their arguments with others or to illustrate their answers. The TE notes for exercises 8 and 18 state, “Have students explain their reasoning.”

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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.

Partially Meets 1/2

The materials include developmentally appropriate diagnostic tools (e.g., formative and summative progress monitoring) and some guidance for teachers and students in their administration but do not include resources for students to monitor their own progress. The materials do include diagnostic tools to measure all content and process skills for the grade level, as outlined in the TEKS and Mathematical Process Standards.

Evidence includes but is not limited to:

The materials provide some guidance to ensure consistent and accurate administration of diagnostic tools. The “Math Diagnosis and Intervention System 2.0” (MDIS) includes a “Teacher’s Guide for 3-6,” which provides an individual record form and a class record form. The overview of this guide briefly details four areas. For assessment, it explains that an “Entry Level Assessment Form A” is given for a student entering a grade; “Form B” is used as a diagnostic test to check performance after providing instruction or intervention. For diagnosis, teachers use the “Class Record Form”; the MDIS gives a brief explanation of how to use the form to make placement decisions. “Intervention” lessons can be used for the content taught during the year. For monitoring, there is an “Individual Record Form” to help record student progress. Further in the MDIS, there are in-depth details explaining these four areas and instructions for how to use the system. The materials also include tips or recommendations to support consistent and accurate administration of the diagnostic tools.

Every lesson also contains a “Quick Check” that can be done either online or in the Student Edition. The online version is a set of five multiple-choice questions that are scored online. In the student book, three of the problems in the independent practice pages are selected to be used as the Quick Check. These can be used to help prescribe differentiated instruction in step three of the lesson; however, materials do not provide record-taking resources for the teacher to track student responses or their progress in the use of various strategies and representations. The TE shows the assessments with an answer key. The TE does not provide administration guidance or even explanations of how to arrive at the correct answer. This lack is an issue throughout the materials. There is an “Item Analysis for Diagnosis and Intervention” table that shows which intervention system to utilize for each question. Benchmarks are shown in the same way. No guidance suggests to the teacher what score on the test would result in an intervention. Intervention is a worksheet.

Additionally, the materials include both a beginning-of-the-year placement test and an end-of-the-year test, each of which has 40 questions, which are a mix of multiple-choice and griddable problems. After every four topics, there is a benchmark test composed of 24 questions, which are also a mix of multiple-choice and griddable problems. The materials state that these can be used as a predictor of success on state assessments. The instructional materials provide a “Texas Assessment Resources for Teacher’s Guide.” This guide contains performance tasks pages for students to complete and includes 4-point scoring rubrics that outlines the four levels of achievement for students’ understanding of the concepts and skills in that topic as well as answer keys. Each task is composed of four to six open-response questions that look similar to those asked during the lessons or on the independent practice pages. The Texas Assessment Resource Guide also includes two “Practice Test Forms” with 48 questions each that model the format and rigor of the STAAR exam. The materials include online Quick Checks that are editable; they are pre-formatted to include five questions, with topics such as “Making a Savings Plan” and “Metric Units of Capacity.” When testing online is complete, students can see a score summary and review the question, their answer, and the correct answer. Materials do not provide explanations for finding the correct solutions.

Materials include the MDIS, Booklets A–J, which are identical across grade levels. A–E are targeted for grades 1 through 3. Booklets F–J are for grades 4 through 6. The digital link through the main portal is only a five-page PDF. However, if teachers find the Teacher’s Guide through the link at the end of the TE, the system includes an 83-page Teacher’s Guide that has a program overview, limited directions on how to use the system, and recording forms for the class or individual student. When accessed through the “e-TE” tab at the end of the TE, there are provided TEKS correlations.

In Topic 5, Lesson 4, the “Solve and Share” begins the lesson with students using estimation to tell whether a quotient is reasonable or not. The teacher gathers information about student progress, asking questions to “build understanding” and “give hints as needed.” To conclude this investigation, students communicate how their estimate helped them find the quotient. This lesson is an opportunity for students to demonstrate their competence with estimation;

however, the materials do not elaborate on the expectation of how students should respond, such as with verbal or nonverbal responses or concrete, pictorial, and abstract representation of content and skills. As the lesson continues during the “Visual Learning Bridge” (VLB), students use estimation to decide if a quotient is reasonable. The materials’ methods of assessment are appropriate to the developmental status and experiences of children. For example, during this part of the lesson, the materials guide the teacher to ask various questions to check understanding anecdotally. Another anecdotal-type question is asked during the “Do You Understand? Convince Me!” section; students explain how they know the estimate is too high in the Solve and Share. After the VLB, students complete a Quick Check. The materials identify three key questions to assign points to; if students earn 0–3 points, they join the teacher for an intervention activity. This topic has five lessons and concludes with a topic assessment. There are nine questions about estimation that trace back to this lesson. The itemized answer key references “Intervention System” #G73–75 for the nine estimation questions.

In Topic 13, Lesson 2, students use grid paper to draw a rectangle and find the area in square units. In Lesson 4, students find the quotient when dividing a decimal by a one-digit whole number. For both of these lessons, during the Solve and Share and VLB, materials support the teacher with questions in the margins in the TE. This lesson is followed by a Quick Check. If students earn between 0–3 points on the Quick Check, they participate in the intervention activity in “Assess and Differentiate.” Each topic ends with a topic assessment; the item analysis answer key references an Intervention System lesson number from the MDIS. The materials do not include a separate assessment guide that supports the teacher in understanding the types of informal assessment tools included. The materials do not include checklists and anecdotal note-taking forms that support the teacher in collecting consistent and purposeful data. The formal assessment tool is not supported by a user guide that gives an overview of the assessment, outlines the time to administer each task, provides step-by-step guidance for administering each measure, and provides information to support the teacher in understanding the benchmarks. Formal assessment tools do not include scripts to ensure the administration is consistent and standardized across examiners.

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

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

Partially Meets 1/2

The materials include limited guidance for teachers and administrators to analyze and respond to data from diagnostic tools. 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. Online diagnostic tools and paper-based assessments yield meaningful information for teachers to use when planning instruction and differentiation. The materials provide a variety of resources and some teacher guidance on how to leverage different activities to respond to student data. The materials provide guidance for administrators to support teachers in analyzing and responding to data. The materials include an online assessment and intervention system; however, these materials were not submitted for review, and so their quality and alignment to the indicators cannot be reviewed.

Evidence includes but is not limited to:

The materials do not include detailed trajectories of learning to support the teacher in understanding the progression of content and skill development. This information is needed to support teachers while interpreting assessment results and individualizing instruction. The materials do not offer suggestions to provide scaffolds for the content, process, or product of the concepts and skills being addressed within each unit. Overall, the materials lack support for

teachers to adjust instruction to meet student needs within mathematics based on data from developmentally appropriate assessments.

The materials include an “RtI Tier 2” set of intervention activities, center games, and leveled homework pages that teachers can use to adjust instruction to meet students’ needs. These materials can be used during step 3 of the daily lessons. Placement into each of these activities is based on a five-question “Quick Check” given to students at the end of step 2 each day. An intervention lesson and leveled homework pages accompany every instruction lesson. The number of center games (worksheets) and online games varies with each topic. The materials also include an “RtI Tier 3” resource called the “Math Diagnosis and Intervention System 2.0” (MDIS), which interprets students’ responses from online assessments to recommend activities for reteaching and intervention. The materials do not include guidance to support teachers in understanding the results of diagnostic tools and do not provide teachers with results that are easy to interpret. The information gathered from the diagnostic tools provides limited help to teachers in planning instruction and differentiation. After each Quick Check, materials provide an intervention activity, as well as enrichment activities for students mastering the content. Not every lesson in the materials has an accompanying intervention lesson; however, each of the math domains and primary focal areas has several lessons to support the concept or skill development. The lessons follow much the same format as the intervention lessons from Tier 2. The majority of alternative scaffolds favor teacher-directed questions or multi-step fill-in-the-blank questions with representations students can reference. For example, an intervention lesson that helps students add three numbers shows a place value block representation of each number on the page with fill-in-the-blank questions to add each place (ones, then tens, then hundreds), as well as a place value chart to show an alternative strategy. After adding three sets of numbers, the visual support is removed; students must add eight more sets of numbers stacked in the standard algorithm and then answer two story problems.

The materials include recommendations to support teachers in providing additional support to students struggling to master the curriculum. However, almost always, the materials provide the teacher with just one type of support. Materials provide worksheet-based activities to reteach, intervene, or challenge advanced learners. Intervention seems to be a repeat of the lesson, presented in a very similar way as the original lesson. Sometimes a more hands-on approach is employed.

The “Record Forms” included in the Teacher Edition only serve to mark what questions students miss on a test and the TEKS alignment of each set of questions. Teachers receive a checklist template that can be used to track students’ progress, but the results are not always easy to interpret. The information gathered from the diagnostic tools can help teachers plan instruction and differentiation, but the usage of these tools is very time-consuming. The material suggests that the teacher should “group students who need help with the same mathematical concepts.” They also give some directions as to whether student performance on the diagnostic test can work in previous-grade-level or the next-grade-level materials. The resource also states: “If a student passes an intervention lesson, he or she is ready for the next level of intervention of the concept. If the student does not pass, repeat the intervention

lesson.” If a teacher does not use the online assessment, he/she must pull several different resources together to find the appropriate Tier 3 intervention. First, the student data must be recorded on the individual or class record forms. Then, the teacher must look in the intervention materials to check the alignment of the TEKS from the questions they missed and find the matching intervention. Although each topic has an assortment of assessment opportunities, such as questions in the side margins, “Do You Understand” questions, Quick Check questions, and topic tests, the materials do not include guidance to support teachers in understanding results of diagnostic tools as they relate to the grade level and the level of support needed. The assessment results are not easy to read, nor do they support efficient and effective data analysis. It is not evident if the materials contain customizable reports to allow teachers to see developmental gaps at the individual and class levels.

The materials state that their online assessment system identifies students’ skill gaps and recommend paths for intervention; however, a full preview of the system was not submitted for review.

The materials provide guidance for administrators to support teachers in analyzing and responding to data. On the “Online Assessment” system, materials state: “Individual and class views of progress are provided in an easy-to-view format. TEKS reports show mastery of individual TEKS.” Assignment reports show the status of resources that have been assigned to students. Assessment reports show performance on items in the online assessments. Usage data reports show how much time students are spending in the online course. However, the online assessment program was not submitted for review. Materials do not provide guidance for administrators to support teachers in analyzing and responding to data. Materials include data that can be analyzed for individual students, classes, and the school. Digital assessments are taken online and auto-scored.

Materials support teachers with guidance and direction to respond to individual students’ needs in *some* areas of mathematics, based on measures of student progress appropriate to the developmental level. Each lesson offers Tier 1 (normal classroom instruction), Tier 2 (small group worksheet-based reteaching), and Tier 3 (MDIS). For example, in “Intervention Booklet C,” “Computation with Whole Numbers Grades K–3,” page 110 begins with teacher notes and answer keys for each topic. After the teacher guide, blackline masters of the student worksheets are available. This intervention guide does provide the teacher with a 20-minute mini-lesson, although most of that time is worksheet based. There are, however, some parts of the lesson that are teacher-driven, and materials provide notes about error prevention and how to help if students continue to struggle.

In fact fluency, teachers are provided with blackline masters of timed-facts quizzes. The only instructions for teachers are printed at the bottom of the page. For example, the multiplication timed practice says, “Use anytime after Topic 5.” Materials provide no suggestions for how to improve fact fluency; no suggestions for how, when, or how often to work on fact fluency; and

no advice or research-based facts on why fact fluency is important and what fact fluency looks like at this (or any other) grade level.

The publisher Realize On-Demand Training website offers guidance for teachers and administrators to analyze and respond to data from diagnostic tools, including the following:

Administrators

[Progress Monitoring and Reporting](#)

[Realize Reports Administrator Guide](#)

[Realize Reports: Getting Started for Administrators](#)

[Realize Administrator Assessments Recorded Webinar](#)

[Realize Reports FAQ](#)

[Realize: Data and Security FAQs](#)

Teachers

[Class and Student Data](#)

[Review and Score Assignments](#)

[Item Analysis Report](#)

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Grade 5

4.3 Materials include frequent, integrated formative assessment opportunities.

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

Meets 2/2

The materials include frequent, integrated assessment opportunities. The materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress. These include daily summative assessments, end-of-topic assessments, and quarterly summative assessments. There is also a formative assessment at the start of each topic. The frequency of progress monitoring is appropriate for the age and content skill.

Evidence includes but is not limited to:

The materials include an appropriate frequency of assessments that reflect the variable rate of student learning at this age. The materials for each grade level provide an online “Placement Test” at the start of the year and an online “End of Year Test,” each of which has 40 questions that are a mix of multiple-choice and griddable problems. There is a review before each topic. Every lesson also contains a “Quick Check” that can be done either online or in the Student Edition (SE). The online version is a set of five multiple-choice questions that are scored online. In the SE, three of the problems in the independent practice pages are selected to be used as the Quick Check. These can be used to help prescribe differentiated instruction in step three of the lesson. There is an assessment after each topic; it occurs about every 2–3 weeks. Also, quarterly assessments can be found after every four topics. This benchmark test is composed of 24 questions that are a mix of multiple-choice and griddable problems. The materials state that these can be used as a predictor of success on state assessments.

The “Texas Assessment Resource Guide” at the end of the Teacher Edition also includes a performance task for each of the 16 topics in the program. Each task is composed of 4–6 open-response questions that look similar to those asked during the lessons or the independent practice pages. The guide also includes two “Practice Test Forms” with 48 questions each that model the format and rigor of the STAAR exam.

The materials include routine and systematic progress monitoring opportunities. The progress monitoring materials allow teachers to track progress using a spreadsheet to track individual students or an entire class. Assessments can be taken online and have a read-aloud feature. Answer choices include griddables and multiple-choice problems that are auto-scored. Online assessments can also be edited. Printable assessments for each topic come in two forms: multiple choice and fill in the blank. The materials also state that the “Online Program Assessment System” can be used to edit the assessments included with the materials and that any district- or teacher-created assessments can be uploaded into the system; however, this resource was not made available for review.

Progress monitoring occurs daily through the Quick Check in the workbook. Monitoring occurs at the end of every topic with a topic test. Cumulative monitoring occurs every four topics. Checklists can help teachers keep track of progress. Online assessments may or may not provide digitally aggregated data. The frequency of progress monitoring in the materials is appropriate for the age and content skill. At this grade level, a daily assessment of 3–5 questions is appropriate. The five-question Quick Check at the end of every lesson is an appropriate daily progress monitoring tool. A chapter or unit test is also appropriate for this grade level. An assessment called “Show What You Know” can be administered before each topic to allow the teacher to modify instruction for students who have already mastered the content. The end-of-topic tests are suitable to measure summative progress and to compare growth when TEKS are spiraled in future topics.

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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 recommended targeted instruction and activities for students who struggle to master the content, as well as for those who have mastered the content; they provide enrichment activities for all levels of learners. The overall lesson design supports diverse learners. Supports within each lesson include the use of hands-on or visual supports to help students develop conceptual understanding. There are lessons and support materials for struggling, on-level, and advanced students during and after each lesson. Intervention activities within the lesson reinforce the same model and problem-solving strategy used in the main lesson. Activities for on-level and advanced students provide extension within the same topic and encourage application to real-world tasks and discussion between peers.

Evidence includes but is not limited to:

Throughout the grade 5 instructional materials, each lesson is divided into three parts. Part one includes reviewing foundational skills, teaching the skill, reteaching, and an extension. The reteaching piece is meant for students who have not mastered the content, and the extension is for students who have mastered the content. Part two is the “Visual Learning Bridge,” which supports the development of conceptual understanding, using interactive features of “Problem-Based Learning” tasks, leveled games, and a step-by-step “Visual Learning” activity. Some of the lessons have leveled games, which are played in small groups of two or four. In addition, there are print and digital resources for both the students and teachers that support each lesson. These resources allow the teacher to assess student learning and determine if students need intervention or enrichment. The third step of the lesson is called “Assess and Differentiate,” which includes a diagnostic page in the student workbook and allows teachers to reinforce and

extend students' learning. This step relies on the teacher using the provided "Quick Check" assessments from the previous portion of the lesson to prescribe differentiated instruction. An "Intervention Activity" is included for students who did not master the lesson content; it includes visual or hands-on practice followed by a "Reteach" worksheet that has step-by-step guidance for solving problems in order to strengthen concept attainment. There are also activities that are explicitly referenced as differentiated instruction for on-level and advanced students in the Teacher Edition (TE).

The TE contains a "Content Learning" section that includes prerequisite skills and future skills for every learning objective throughout the materials. In the TE, each lesson includes an "Essential Understanding" section, a "Math Background" section, and a "Skills Trace," which helps identify the skills from the previous grade level that align with lessons in the current grade level in order to scaffold. This scaffolding document gives an overview of the skills that were learned in fourth grade that will help students master the fifth-grade content in each lesson. It also shows the fifth-grade skills that will be used as a foundation for sixth-grade content and skills. For students who continue to struggle to master content, the instructional materials include a "Math Diagnosis and Intervention System" that the teacher can access by vertical grade-level band (K–3, 4–6) or by topic (the primary focal areas of K–5 mathematics as outlined in the TEKS). A teacher who is looking to address student gaps in place value, for example, can look at "Booklet A" and choose the lesson that addresses the discrete skill. Each intervention lesson focuses on three things: concept development, practice, and assessment. Concept development identifies in one sentence what the student will learn in the lesson. The rest of the concept development gives the teacher directions and questions to ask the student(s). The practice includes an error intervention that highlights the common mistake the student(s) may make. It also highlights what teachers can do if they have additional time and how they can add on to the lesson.

The materials provide opportunities for the teacher to check which students mastered the concept and which students are struggling. In Topic 7, Lesson 2, the Quick Check assessment uses the student workbook page from step 2, which included guided practice, independent practice, and problem-solving practice. The pages include 24 practice problems; three are marked in the TE to be used as the Quick Check. Two of the problems are worth one point, and the third problem is worth three points. Materials recommend that students who score three or fewer points participate in the intervention activity. The intervention has teachers guide students through a set of questions by writing five different fractions on separate index cards. The teacher models how to multiply fractions to make an equivalent fraction. In Topic 12, "Two-Dimensional Shapes," students identify polygons and determine whether they are regular or not. Then, they identify and classify polygons. Finally, teachers assess and differentiate. Based on the previous day's Quick Check, materials prescribe differentiated instruction. Students receive given polygons and labels to match and then complete a reteach worksheet.

"Advanced Activity Centers" are found in the third step of the lesson throughout the materials and are geared toward students who mastered the lesson content based on the weekly Quick

Check. The materials include extension activities for students to explore and apply new learning in a variety of ways. Teachers assign games, “Problem-Solving Learning Mat” activities, “Technology Centers,” or “Math and Science Activities” for students to apply learning across other content areas. There are print and digital resources for both the students and teachers to support this step of the lesson.

The Activity Center choices provide a variety of online games, partner games, and small group games, as well as a research topic that allows students to apply the skills they learned in a variety of ways. Games in Topic 1 have students play dice games to select numbers to write in various forms. There are a variety of online games for students to practice individual math concepts. One game, “Fraction Frenzy,” requires students to select the correct operation and fraction in order to move a crane to the correct fraction on a number line so it can collect a robot. Every use of the crane depletes energy in the tank, thus encouraging students to make careful calculations so as not to waste energy; students must collect five robots to win the round. The game is rich with visual supports, including a simple fraction number line to help calculate the correct number of fraction pieces students need to collect a robot. Games in Topic 7 allow students with a solid conceptual understanding of operations with fractions to apply that knowledge to play dice games to solve various fraction equations.

In addition to the Activity Center, the materials provide opportunities for students that have mastered the grade-level content. Students examine their own work and the work of others so that they can analyze multiple strategies. Each lesson includes guided practice, independent practice, and problem-solving. The materials provide an extension activity at the beginning of the lesson and leveled homework labeled for advanced learners. At the end of the student practice, there are three bolded sections: “Explain,” “Justify,” and “Extend Your Thinking,” which require students to write descriptive answers rather than a numerical answer. Lessons also include a section called “Convince Me” where students justify or explain their thinking.

In the On-Level and Advanced Activity Centers, the TE references cross-curricular activities for each lesson. The “Math and Science Project” for Topic 1 asks students to research pollinating insects in the United States. In the report, students can make estimations of the number of foods or insects pollinating different categories of crops. The Math and Science Project for Topic 7 asks students to research the term *learned traits* to then list 10 learned traits they have acquired. In their reports, students can create a bar graph and sort the traits: “Skill, Behavioral, or School.”

The materials include one cross-curricular project for each topic. The materials provide recommended targeted instruction and activities for students who have mastered the content. These opportunities occur for each topic throughout the year in the topic opener, under the “Assess and Differentiate” section. In Topic 12, students have the opportunity to research ecosystems. They list three different ecosystems and describe any changes that humans might have made to each one. After the Quick Check, students who performed well complete the Advanced Activity Centers.

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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. The guidance and support to teachers to help them meet the diverse learning needs of all students, specifically addressing teaching approaches, instructional strategies, and flexible settings utilized to support the mastery of content. The materials support multiple types of practices (e.g., guided, independent, collaborative) and provide guidance and structures to achieve effective implementation.

Evidence includes but is not limited to:

Each lesson is divided into three steps. The first step is called “Problem-Based Learning,” which engages students in the content with the authentic “Solve and Share” problem. The Teacher Edition (TE) includes student work samples and questions to help students think deeply about the problem and analyze each other’s work. The “User’s Guide” section of the TE states that, during the Solve and Share, teachers can foster communication by having students share their thinking with a partner, small group, or the whole class. This section also explains the six different “Teaching Actions” embedded in the Solve and Share problem. The first two teaching actions are used before beginning the problem in order to start developing students’ understanding of the content required for the task. Teaching Action 3 is used during the Solve and Share when students are “stumped.” Actions 4 and 5 are used after the Solve and Share as part of a whole-class discussion. Teaching Action 6, “Extend,” is optional. The second step is the “Visual Learning Bridge” (VLB), which supports the development of conceptual understanding using interactive features of Problem-Based Learning tasks and the step-by-step “Visual

Learning” activity. There are print and digital resources for both the students and teachers to support this step in the lesson. The VLB relies heavily on making connections between visual representations and symbols. Materials sometimes suggest concrete manipulatives depending on the topic and lessons.

In Topic 1, Lesson 3, students “use number sense and decimal place value to help compare and order decimals.” To build understanding, the teacher asks, “What do you know?” and “What are you asked to do?” The lesson suggests two hints to provide if students are struggling. The teacher then shares and discusses solutions, summarizes, and generalizes the learning: “Place value can be used to compare and order whole numbers and decimals.”

In Topic 13, Lesson 5, students construct models using 40 unit cubes to find the number of cubes that make up a rectangular prism. In pairs, students make a rectangular prism using unit cubes, draw the prism, and then determine the total number of unit cubes. Materials provide hints to the teacher for struggling students and extension activities for early finishers: “What information can the views help you find?” “How can you find the volume of the prism?” After students share their answers, the teacher summarizes and generalizes: “You can describe a rectangular prism by its length, width, and height. The number of cubic units in a rectangular prism determines its volume.” The next day, students are explicitly taught the concept; the online video reinforces this lesson. Then, students have guided, independent, and problem-solving practice on the Quick Check.

The materials show support for flexible grouping: Each topic begins with a problem-based activity that is whole group. The VLB is the next step. Students work in a whole group and possibly with partners. After the Quick Check, students are grouped for interventions. Intervention can be auto-assigned after a Quick Check, topic test, or benchmark test taken online. Customizable interventions are also available online.

Guided practice is supported in the TE with suggested questions and error analysis. Collaborative practice is achieved with center games, but the materials note that these games can be played independently. “Reading Mats” provide opportunities for group or independent practice. In the “Topic Planner,” instructions tell the teacher to read aloud the Reading Mat before beginning the unit. The guidance for using the Reading Mats states, “Have students read the Reading Mat for Topic 3 and have students complete Problem Solving Activity 3.10.” The worksheet is related in topic to the Reading Mat but can be completed without ever using the Reading Mat. Independent practice is primarily achieved in the Student Edition with an independent practice section and two pages of homework. Students may also be assigned an independent research project.

The materials include recommendations for diagnosing student needs and assigning an appropriate intervention. The teacher guide for Topic 2, Lesson 3, recommends assigning “Reteaching Set C” on p. 91 as Tier 1 intervention (reteach) for struggling students, but there is a limited number of these intervention sets. Every lesson has an “Intervention Activity” for

students who scored 0–3 points on the Quick Check. In Lesson 2-3, students use centimeter grid paper, are reminded of the steps for adding using the standard algorithm, and use the grid lines to line up the digits correctly. For Lesson 2-4, the Intervention Activity suggests that students use decimal grids to represent the sums of two decimals.

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

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

Meets 2/2

The materials include supports for English Learners (ELs) to meet grade-level learning expectations. The materials include some accommodations for linguistics (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency. The daily lesson format includes time for daily differentiation in which students of all levels can be provided with acceleration or reteach opportunities. Concepts spiral appropriately throughout the year and appropriately increase in depth and rigor for the grade level. The materials include linguistic accommodations for students who are learning English. The accommodations provide effective strategies that are scaffolded for individualized levels of English language proficiency. The materials encourage the strategic use of students' first language as a means to develop linguistic, affective, cognitive, and academic skills in English. The majority of graphic organizers in the "ELPS Toolkit" include modifications that have native language support.

Evidence includes but is not limited to:

According to the "User's Guide," the Teacher Edition (TE) provides daily ELPS instruction that is used with a specific part of the lesson, such as the "Solve and Share," "Visual Learning Bridge" (VLB), or "Do You Understand?" sections. One or more English Language Proficiency Standards (ELPS) are taught in each lesson. Leveled instruction includes suggestions for students at Beginning, Intermediate, Advanced, and Advanced High levels of English language proficiency. EL consultants Janice Corona from Dallas, Texas, and Jim Cummins from Toronto, Canada ensured quality ELPS instruction. The ELPS Toolkit provides additional support for ELs, offering

more activities for support. Each lesson provides instruction on one or more ELPS for ELs at the Beginning, Intermediate, Advanced, and Advanced High levels of English proficiency. The VLB in each lesson provides EL support. The “Visual Learning Animation Plus” provides motion and sound to help lower language barriers to learning. Questions that are read aloud also appear on screen to help ELs connect oral and written language. The VLB often has visual models to help give meaning to math language. Instruction visually organizes important ideas. The “Animated Glossary” is always available to students and teachers while using digital resources. Motion and sound help communicate the meanings of math terms. The glossary is in English and Spanish to help students connect Spanish math terms they may know to English equivalents.

At every grade level, the materials include the ELPS Toolkit, which is an 80-page ELPS guide. The guide includes an “ELPS Overview,” “Student Expectations for English Language Learners,” and “Proficiency Level Descriptors.” The ELPS Toolkit contains “Professional Development Articles” and “Graphic Organizers.” The articles cover essential principles for building EL lessons, strategies for teaching ELs, vocabulary knowledge, and strategies. The materials encourage the strategic use of students’ first language as a means to develop linguistic, affective, cognitive, and academic skills in English. The graphic organizers included in the ELPS Toolkit include modifications for native language supports. For example, on the “Frayer Model,” the materials suggest students write the definition in their native language. This model is suggested in several of the graphic organizers. When students complete the “Vocabulary Word Map,” the materials suggest they partner with those speaking the same native language and with one student who is more proficient in English. When using the “Think, Pair, Share” strategy in a lesson, the ELPS Toolkit suggests the teacher pair Beginning and Intermediate ELs with more advanced or native English speakers.

The ELPS Toolkit explains best practices and graphic organizers to use with ELs. The first article, written by Jim Cummins, “English Language Learners in the Math Classroom,” explains the need for explicit language support in the math classroom to help students develop language skills needed to be regarded as a fluent native speaker of English. The article lists five instructional principles central to teaching ELs effectively, which the materials say are the basis of the “ELL Curriculum Framework” included in the materials. Strategies include identifying and communicating content and language objectives, front-loading the lesson, providing comprehensible input, enabling language production, and assessing for content and language understanding. The publisher used these five principles to infuse seven specific instructional strategies throughout the curriculum: model thinking aloud, partner talk, word lists, sentence frames, rephrasing, suggesting a sequence of steps to solve problems, and repetition. The Toolkit describes each of the five principles in detail. Both linguistic and non-linguistic supports and graphic organizers are included in the program.

Professional Development Articles also include “Five Essential Principles for Building ELL Lessons”; “Strategies for Teaching English Language Learners”; “Welcoming Newcomers to the Mainstream Classroom”; “Sheltering Instruction for English Language Learners”; “Vocabulary

Knowledge and Strategies”; “Multilingual Thinking Words”; and “Teaching Math to Culturally and Linguistically Diverse Students.”

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Grade 5

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 materials provide a year-long plan for content delivery that is cohesively designed to build upon students' current level of understanding and provides clear connections between lessons and grade levels. The materials include guidance to support the teacher in understanding the vertical alignment for all focal areas in math TEKS in preceding and subsequent grades. The materials include routine and systematic progress monitoring opportunities that accurately measure and track student progress.

Evidence includes but is not limited to:

Every topic begins with a "Math Background" section that explains how process standards and content TEKS are developed with visual models and relational thinking. Each lesson includes a specific background section that describes how previous learning will be used in the context of the new lesson with either the same models or applied to new ones. For example, in Topic 7, "Adding and Subtracting Fractions," the background knowledge for teachers around Process TEKS within fractions explains how students formulate a plan by using a strip diagram. The section also explains how students use different methods, including models, to find equivalent fractions. The content explanation of fractions states that finding equivalent fractions is essential for adding or subtracting fractions. The content explanation shows how factoring can be used to find equivalent fractions efficiently.

In the Teacher Edition (TE) "Program Overview Guide," the materials provide several tools to support teachers and ensure concept development for students. The "Big Ideas" are the conceptual ideas of the program that provide conceptual cohesion across lessons, topics, and

grades as well as across TEKS and reporting categories. Big Ideas connect “Essential Understandings” that occur within and across lessons. The Math Background at the start of each topic shows the Big Ideas and Essential Understandings for the topic. For example, one of the Big Ideas is “basic facts and algorithms.” This Big Idea is found in the following fifth-grade topics: 2, 3, 4, 5, 6, 7, 8, and 9. Another tool, “Grade 5 Contents,” lays out the focal points and TEKS found in each topic. The “Grade 5 Pacing Guide” lists the number of days it takes to complete each topic. The materials also contain a “Scope and Sequence” for each concept, grades K–5. The chart is shaded to show the grade in which a particular concept has been introduced, practiced, and applied. The materials have a “Skills Trace” document for each grade and topic. This tool supports the teacher in understanding the vertical alignment for all focal areas in Math TEKS in preceding and subsequent grades. For example, in the grade 5, Topic 13 (“Perimeter, Area, and Volume”) Skills Trace, the middle column lists the fifth-grade TEKS 5.4H (“solve problems related to perimeter”); the “Looking Back” column connects to grade 3, Topic 12, TEKS 3.6B (“identify cones, cylinders, spheres, triangular and rectangular prisms, and cubes”); the “Looking Ahead” column connects to grade 5, Topic 14, TEKS 5.7 (“select appropriate units, strategies, and tools to solve measurement problems”).

Every lesson also contains a “Quick Check” that can be done either online or in the Student Edition (SE). The online version is a set of five multiple-choice questions that are scored online. In the SE, three of the problems in the independent practice pages are selected to be used as the Quick Check. These can be used to help prescribe differentiated instruction.

The “enVisionMath 2.0 Content Guide” includes Big Ideas in Math, “Texas Focal Points,” a Skills Trace, and a Scope and Sequence. Explicit pacing guidelines are not provided; however, the materials appear to be set up for a sequential progression, one lesson per day. The materials provide reviews and practice throughout the curriculum. All 16 grade 5 topics begin with a “Review What You Know” page; every topic concludes with a review and test; every four topics include a test covering all four topics. “Today’s Challenge” also frequently includes the spiraling of the curriculum. Practice materials build upon previously taught content. All lessons begin with guided practice, followed by independent practice, and then homework. Materials contain consistent reviews in each topic in the form of a one-page Review What You Know, which contains a vocabulary review and mathematical concept review.

There is also an online professional development video at the start of every topic that explains what is covered in the topic and how it connects to other topics in the current and previous grades; it also shows how the visual models can be used to help students develop conceptual understanding. For example, the video for Topic 7 states the connection to fraction work in the previous grades provides a visual understanding to be able to solve various operations with fractions.

The Scope and Sequence lists color-coded strands that correspond to the TEKS; a visual chart displays when the strand is introduced, practiced, and applied throughout grades K–5. The

materials include a “Correlations Guide” that breaks the TEKS into smaller objectives and lists both the SE and TE pages that address those TEKS and objectives.

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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 and administrators. The materials provide a scope and sequence outlining the TEKS as well as the vertical alignment of the TEKS. There are some supports and pacing guidance throughout the materials that serve as a guide for teachers and administrators to monitor progress learning as well as implement the program.

Evidence includes but is not limited to:

The materials include a scope and sequence aligned to the grade-level math TEKS; it outlines the order in which the TEKS are taught. Another document describes the connections of TEKS across grade levels. The materials include an overview of how they provide support to teachers, describing the resources the materials contain. The "Scope and Sequence" indicates a majority of lessons support the development of the TEKS, especially the primary focal areas in each grade level. The materials include a sufficient amount of lessons and activities to support a full academic year of learning and include time for pre-teaching and re-teaching content and skills based on periodic formative assessments. The materials include a school year's worth of math instruction, including realistic pacing guidance and routines. The pacing guides and lesson plans give evidence that the materials include lessons and activities for a full year of instruction. The units can be reasonably implemented within the time constraints of a school year, and the activities and routines within each lesson can reasonably be completed within the length of time suggested.

The materials include a “Correlations Guide” that breaks the TEKS into smaller objectives and lists both the Student Edition (SE) and Teacher Edition (TE) pages that address those TEKS and objectives.

The “Topic Planner” describes the content of each lesson, listing the TEKS and ELPS, “Essential Understandings,” materials and resources, and suggestions for professional development videos to help teachers build their background knowledge of the content or their teaching skills. Each lesson includes sidebars with additional questions to support students in making direct connections between mathematical content. Some sidebars remind teachers to encourage students to use a concrete model or a representation or to specifically reference a whole class lesson or activity to activate prior learning of a topic.

The Scope and Sequence lists color-coded strands that correspond to the TEKS; a visual chart displays when the strand is introduced, practiced, and applied throughout grades K–5. The “Skills Trace” document highlights the current-grade-level TEKS listed in order by topic as well as correlated TEKS from the previous and next grade levels in an easy-to-read, three-column format.

The TE has a “Program Overview Guide,” which supports teachers in understanding how to use the materials as intended. The materials have a “Getting Started” guide to support teachers in the first steps of using the materials; it contains a list of the included materials, an explanation of the lesson structure, recommendations for storage to access materials easily, and tips to prepare for instruction. The materials also have a “User’s Guide” to support teachers; this includes a list of the included materials and their purpose, an explanation of the lesson structure, assessment resources, support for EL students, and guidance on finding additional professional development. In the Program Overview Guide, materials provide several tools to support teachers and ensure concept development for students. “Big Ideas” are the conceptual ideas of the program that provide conceptual cohesion across lessons, topics, and grades as well as across TEKS and reporting categories. Big Ideas connect “Essential Understandings” that occur within and across lessons. The “Math Background” at the start of each topic shows the Big Ideas and Essential Understandings for the topic.

While the materials do not include resources specifically stated to help administrators support teachers in implementing the materials as intended, the implementation and overviews for teachers would suffice in helping administrators support teachers in implementing the materials effectively. The materials include tools to support navigating the resources, including a table of contents in each unit, as well as tabbed pages to identify weeks within units easily and to separate lessons from blackline masters and assessment tools.

The pacing guides and yearly plans give evidence that the materials include lessons and activities for a full year of instruction. In the Program Overview Guide, a pacing document shows the total number of days for each topic. The document shows a total number of 120 days

for instruction. Pacing assumes one lesson per day. Additional time may be spent, as needed, on review, remediation, differentiation, and assessment. The materials include a school year's worth of math instruction, including realistic pacing guidance and routines. It includes 16 on-grade-level topics and one "Step Up" topic that contains 10 days of activities and TEKS for the next grade level. The Step Up topic focuses on a different skill each day. Each lesson follows the same three-step format. The first step is to be completed in 10–15 minutes. Step two is to be completed in 20–30 minutes. Step three is to be completed in 15–30 minutes. This timing means each lesson can be completed in 45–75 minutes, which can accommodate any math block set by LEAs.

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Grade 5

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 allows 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 support teachers in identifying the developmental progression of content and skills to ensure that students are supported with instruction organized to optimize their learning. The materials also provide a suggested sequence of units that considers the interconnections between the development of conceptual understanding and procedural fluency and provides recommendations about the required order of units if implementation requires a change in the suggested order of units.

Evidence includes but is not limited to:

In the “Program Overview,” there are many tools to ensure the sequence of content is taught in an order consistent with the developmental progression of mathematics. This overview discusses the “Big Ideas” in mathematics for each grade level and highlights the “Texas Focal Points.” A “Skills Trace” document shows which TEKS are taught prior to the current grade level and which TEKS will be taught in the next grade. The “Scope and Sequence” document lists the TEKS throughout grades K–5. It highlights when the TEKS will be introduced, practiced, and applied. The “Pacing Guide” identifies the suggested number of days to spend on each topic. Each lesson component is given a time frame (Step 1: 10 to 15 min; Step 2: 20 to 30 min; Step 3: 15 to 30 min.)

The materials provide support for LEAs to consider how to incorporate the materials into a variety of school designs. The daily lessons allow for instruction each day to range from 45 to 75 minutes so that teachers can decide whether to spend more time in the first step of the lesson as concepts are introduced or in the third part of the lesson, which allows for differentiation. The materials in step 3 incorporate other content areas such as reading and science and can be used as stations during other blocks of content instruction. The arrangement of lessons by topic allows LEAs to shift topics in order to allow for cross-curricular lesson plans that may occur in project-based learning or STEM-focused classrooms. The online assessment program also allows for teacher- and district-created assessments to be entered into the system and included in reports used for planning instruction and differentiation. The online component offers flexibility in planning, teaching, learning, and progress monitoring. It is easy to navigate, assign resources, search, customize, plan, assess, and analyze data. The interactive rich-media lessons cover 100% of TEKS and ELPS. The lesson plans are customizable and can be organized by day, week, or month. District-created content or teacher's content can be uploaded. The materials can be aligned with the district framework. Topics or lesson content can be resequenced to match district-level curriculum guides or individual teacher's scope and sequence preference. Blackline masters can be edited for "Daily TEKS Review" and online assessments.

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Grade 5

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 provide guidance on fostering connections between home and school. The materials provide support to develop strong relationships between teachers and families. The materials specify activities for use at home to support students' learning and development.

Evidence includes but is not limited to:

The materials' resource section provides teachers with one home-school connection for each topic, for a total of 16. The home-school connection begins with a very short letter (addressed "Dear Family") that provides a quick overview of the topic and includes an activity to do at home. The letter summarizes the TEKS included in the topic and suggests an activity to reinforce concepts at home. Letters are available in English and Spanish.

In Topic 8, the letter suggests that families create either a mixed number or an improper fraction by tossing a number cube three times. For example, if 1, 5, and 6 are tossed, they can represent $1\frac{5}{6}$ or $\frac{15}{6}$.

In Topic 13, the parent letter explains that students will be learning about perimeter, area, and volume and will use and understand formulas for perimeter, area, and volume. After the learning description, there is a "Think Inside the Box" activity for the family. This page gives families an overview of the content in the topic. The recommendations encourage the development of strong relationships between teachers and families. The home-school connection was found in the online resources.

Each topic also has a “Math and Science Project.” The materials provide suggestions and examples of exemplary family engagement practices such as family math nights or school math events.

The materials provide a paper copy of the TE and Student Edition workbook. These are also found online as an “eText.” The “Today’s Challenge,” “Solve and Share,” and “Visual Learning Animation Plus” sections of the lesson are interactive online. Students use a text box, writing tool, and eraser to show their work. The animated glossary and math tools are also available online. These online materials allow parents to work with their children on specific skills.

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

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

Meets 2/2

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

Evidence includes but is not limited to:

The materials are designed to support student learning; the daily three-step lesson format has predictable routines for students to follow. The Teacher Edition (TE) is designed with clear, designated places for important information; information is located consistently in the same place for each phase of a lesson or topic. The TE includes instructional support; information is clearly stated and easily identified on the pages. The sample student pages included are still readable, and the callout boxes are easy to read. The TEKS and “Math Background” sections consistently appear at the beginning of each topic. Supports for English Learners are on the first page of every lesson, along with the “Essential Understanding,” TEKS, and suggested materials. The materials adhere to “User Interface Design” guidelines.

The materials include appropriate use of white space and design that supports and does not distract from student learning. For example, the repetitive format makes accessing content easy. For example, in Topic 14, Lesson 1, the “Solve and Share” begins the lesson with students using a strip diagram to solve a problem involving the relationship between two customary units of length. As the lesson progresses, in the “Visual Learning” section, students convert one unit of length to another using multiplication or division. The materials for this lesson have clean, easily readable, and recognizable pictures and graphics that support student learning.

There is a picture of a number line and a jumping frog when students are determining other ways to describe the same distance. The two strip diagrams are easy to read as well. The font is clear and easy to read. Items with photographs and colorful pictures do not distract from the text on the page or interfere with learning.

Pictures and graphics are supportive of student learning and engagement without being visually distracting. The materials have clean, easily readable, and recognizable pictures and graphics for students that support student learning. The characters in the materials clearly offer encouragement, hints, and prompts. The diversity of the characters is a real strength of the program. The pictures and graphics for student use adhere to User Interface Design guidelines. The vocabulary cards are easy to read, and the pictures in the whole class lessons support concept development.

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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 materials' technology component aligns with the curriculum's scope and approach to mathematics skill progression. The materials contain technological components that enhance learning. The technology components align with the scope and sequence of materials and highlight skills related to the primary focal areas. The technology components support the materials' progression of math content and skills introduction and practice and are often used as part of the daily three-step lesson format. The materials contain digital features to enhance and not replace or detract from classroom learning.

Evidence includes but is not limited to:

The materials contain an online student textbook, online teacher textbook, some online games, digital "Today's Challenge," online "Visual Learning Bridge," digital and editable assessments, an active e-book, and online tools.

The materials include a variety of online games for students to practice individual math concepts. These are typically an option for students during math centers at the end of the lesson block. The Teacher Edition does not state that they are to be used daily, but they are often listed 2–3 times within a topic. The materials state the games "provide practice on the lesson content or prerequisite content." The games are rich with visual supports and animations and offer hints when students press the help button within the game.

For example, "Fraction Frenzy" requires students to select the correct operation and fraction in order to move a crane to the correct fraction on a number line so it can collect a robot. Every use of the crane depletes energy in the tank, thus encouraging students to make careful

calculations so as not to waste energy. Collecting five robots wins the round. “Cosmic Caravan” requires students to make an array of the correct size in order to power a rocket. In “Galaxy Hunt,” students explore place value by collecting atoms of different values up to the millions place in order to reach a target. In “Robo Launch,” students launch robots into machines to see how they change. Once they know the operation a machine performs, they must guess the value of a mystery robot. In “Goblin Globbs,” students explore place value relationships by gobbling ten thousand and thousand globs to reach a target number. In the “Amazing Savings” game, students need to save enough cheese so they can collect a key and unlock a door to the next level. They can also spend cheese on special items within the game. “AddIt” has students practice adding three numbers with multiple digits using colorful shapes.

The materials contain technological components that enhance learning and align with the scope and sequence of the program. The materials provide a consistent process for each lesson: “Solve and Share,” then “Visual Learning,” then “Assess and Differentiate.”

Step 1, Solve and Share, introduces a lesson by giving students a problem in which some important math ideas are embedded. Students solve the problem in any way they choose. The Solve and Share is online and most helpful during “Teaching Action #4,” which is “Share and Discuss Solutions.” Students can share their solutions using the draw pad; the teacher can also write on the screen during the whole class discussion. The Solve and Share is assignable online to individual students. The teacher can also share sample student work.

Step 2 has an online component called “Visual Learning Animation Plus Online.” During this step, there is direct instruction with the provided guiding questions. The animation and audio enhance learning, which is hosted by the avatar. There is a pause after a question, allowing for interaction.

The online component also has links to an animated glossary and math tools. As students navigate through the digital platform, the Solve and Share portion show math tools found on the right side of the page (e.g., writing tool, text box). The tools are also available in Visual Learning (Step 2).

Materials do not provide guidance on how to use technology to support students. It is worth noting that online technology consistently had connectivity and loading issues and, at times, was completely inaccessible.